BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) for a Permit to Construct Electrical Facilities With Voltages Between 50 kV and 200 kV: Moorpark-Newbury 66 kV Subtransmission Line Project	)))))	Application No. _____

PROPONENT'S ENVIRONMENTAL ASSESSMENT
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VOLUME 1 of 3

This PEA is being filed separately from the Application and is being submitted as an Archival DVD and CD-ROM.

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Abbreviations and Acronyms

°C	Celsius
A	ampere
AASHTO	American Association of State Highway and Transportation Officials
ACSR	aluminum conductor steel-reinforced
AE	Agricultural Exclusive
A-E	Agriculture Exclusive
AF	acre-feet
AGR	agricultural supply
AL	Advice Letter
amsl	above mean sea level
ANSI	American National Standards Institute
A-P Zones	Alquist-Priolo Earthquake Fault Zones
APLIC	Avian Power Line Interaction Committee
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
BGEPA	Bald and Golden Eagle Protection Act
BMPs	Best Management Practices
BP	before present
CAAQS	California Ambient Air Quality Standards
CadnaA	Computer Aided Noise Abatement
CAL FIRE	California Department of Forestry and Fire Prevention
CalARP	California Accidental Release Prevention
California CAA	California Clean Air Act
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife (formerly California Department of Fish and Game, CDFG)

CDOC	California Department of Conservation
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfs	cubic feet per second
CGS	California Geological Survey
CH_4	methane
CHL	California Historical Landmarks
CHP	California Highway Patrol
CJUTCM	California Joint Utility Traffic Control Manual
cm	centimeters
CMA	Congestion Management Agency
CMP	Congestion Management Plan
CMWD	Calleguas Municipal Water District
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent
COSCA	Conejo Open Space Conservation Agency
CPHI	California Points of Historical Interest
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Ranks (formerly known as the California Native Plant Society List)
CSSC	California Species of Special Concern
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CVC	California Vehicle Code
CWA	Clean Water Act

dB	decibels
dBA	A-weighted decibel
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
ENA	Electrical Needs Area
EPRI	Electric Power Research Institute
ESA	Environmentally Sensitive Area
EXPI	Extended Phase I
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FGC	Fish and Game Code
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FRC	fault return conductor
FTA	Federal Transit Administration
GHG	greenhouse gas
GIS	geographic information system
GO	General Order
GPS	Global Positioning System
GWP	global warming potential
H_2S	hydrogen sulfide
HCTP	Hill Canyon Wastewater Treatment Plant
HMBP	Hazardous Materials Business Plan
HRI	California State Historic Resources Inventory listings
HRMP	Habitat Restoration and Monitoring Plan
HSWA	Hazardous and Solid Waste Act
HUC	hydrologic unit code
Hz	Hertz
IEEE	Institute of Electrical and Electronics Engineers

in/sec	inches per second
IND	industrial service supply
IOU	investor-owned utility
IPCC	Intergovernmental Panel on Climate Change
kcmil	thousand circular mil
KOP	key observation point
kV	kilovolt
LARWQCB	Los Angeles Regional Water Quality Control Board
L_{eq}	equivalent sound level measurements
L_{max}	maximum noise level
LOS	level of service
LPNF	Los Padres National Forest
LSTs	lattice steel towers
LWS	lightweight steel
LZ	Landing Zone
MEER	Mechanical Electrical Equipment Room
mg/L	milligrams per liter
mgd	million gallons per day
mm	millimeter
MMT	million metric tons
mph	miles per hour
MRZ	Mineral Resource Zone
$MTCO_2e$	metric tons of carbon dioxide equivalent (CO_2e)
MUN	municipal and domestic supply
MVA	megavolt-amperes
MW	megawatts
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standard
NAHC	Native American Heritage Commission
NERC	North American Energy Reliability Corporation

NESC	National Electrical Safety Code
NO	nitric oxide
NO_2	nitrogen dioxide
NO_x	nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWPs	Nationwide Permits
O&M	operation and maintenance
O_3	ozone
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OHWM	ordinary high water mark
OS	Open Space
OSHA	Occupational Safety and Health Administration (OSHA)
PAs	Participating Agencies
Pb	lead
PEA	Proponent's Environmental Assessment
PGA	peak ground acceleration
PM_{10}	particulate matter with a mean diameter of less than 10 microns
$PM_{2.5}$	particulate matter with a mean diameter of less than 2.5 microns
PPV	peak particle velocity
PROC	industrial process supply
PTC	Permit to Construct
PTs	potential transformers
PVC	polyvinyl chloride
RA	Rural Agricultural
RCRA	Resource Conservation and Recovery Act
RMS	root mean square

ROG	reactive organic gases
ROW	right-of-way
RWQCBs	Regional Water Quality Control Boards
SAA	Streambed Alteration Agreement
SAC	stranded aluminum conductor
SARA	Superfund Amendments and Reauthorization Act
SCAQMD	South Coast Air Quality Management District
SCCAB	South Central Coast Air Basin
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison Company
SDS	Safety Data Sheets
SF_6	sulfur hexafluoride
SLR	single lens reflex
SMARA	Surface Mining and Reclamation Act of 1975
SMMNRA	Santa Monica Mountains National Recreation Area
SO_2	sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasures
SRA	Scenic Resource Area
SRRE	Source Reduction and Recycling Element
SVLRC	Simi Valley Landfill and Recycling Center
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
TMDLs	Total Maximum Daily Loads
TNW	Traditional Navigable Water
TPQ	total planning quantity
TQ	threshold quantity
TSCA	Toxic Substances Control Act of 1976
TSP	tubular steel pole

UCMP	University of California Museum of Paleontology
UFC	Uniform Fire Code
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VCAPCD	Ventura County Air Pollution Control District
VCTC	Ventura County Transportation Commission
VCWPD	Ventura County Watershed Protection District
VdB	Decibel notation for vibration velocity level
WDR	Waste Discharge Requirements
WEAP	Worker Environmental Awareness Plan
WECC	Western Electricity Coordinating Council

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1.0 PEA SUMMARY

This Proponent's Environmental Assessment (PEA) describes the Southern California Edison Company's (SCE) Moorpark-Newbury 66 kV Subtransmission Line Project (Project) and evaluates the potential environmental impacts of the Project.

This PEA, which is a supporting document to SCE's Permit to Construct (PTC) Application for the Project, includes the information required in the California Public Utilities Commission's (CPUC) "State of California Public Utilities Commission Information and Criteria List, Appendix B, Section V;" the CPUC's "Working Draft Proponent's Environmental Assessment (PEA) Checklist for Transmission Line and Substation Projects" dated November 2008; the California Environmental Quality Act (CEQA) Guidelines (Title 14, California Code of Regulation Section 15000 *et seq*); and the CPUC's requirements for a PTC pursuant to General Order (GO) 131-D (D.94-06-014, Appendix A, as modified by D.95-08-038). The CPUC requires applicants to provide this information for review to assist the CPUC in complying with the mandates of CEQA. This PEA is designed to meet the above-mentioned CPUC requirements.

1.1 Project Components

In 2005, SCE initiated the Project in Ventura County (Figure 1.1-1). The Project was first identified to address forecasted overloads on a section of the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line (a.k.a. Moorpark-Newbury tap). In addition, the Project also would enhance reliability and operational flexibility in the Electrical Needs Area (ENA).[1] The ENA is defined as the area served by Newbury Substation and Pharmacy Substation within the Moorpark 66 kV Subtransmission System (Figure 1.1-2).

The Project is located between SCE's Moorpark Substation and Newbury Substation within a portion of SCE's existing Moorpark-Ormond Beach 220 kV Transmission Line right-of-way (ROW) and within a portion of SCE's existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW, and includes the following major components:

- Construction of approximately 1,200 feet of new underground 66 kV subtransmission line entirely within Moorpark Substation.

[1] SCE's subtransmission planning process is designed to ensure that the required capacity and operational flexibility of the subtransmission system is available to safely and reliably meet the projected peak electrical demands during both normal and abnormal system configurations.

Power flow analysis of the 66 kV subtransmission network is performed annually to determine the adequacy of the existing subtransmission lines to serve the peak electrical demand of the distribution substations and customer substations during both normal and abnormal electrical system configurations. When the projected peak electrical demand exceeds the maximum operating limits of the existing electrical facilities or appropriate voltage levels cannot be maintained during normal or abnormal configurations, a project is proposed to keep the electrical system within specified loading and voltage limits.

- Construction of approximately 5 miles of the new Moorpark-Newbury 66 kV Subtransmission Line on new TSPs on the south and east sides of SCE's existing Moorpark-Ormond Beach 220 kV Right-of-Way (ROW).
- Construction of approximately 3 miles of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW. Existing single-circuit lattice steel towers (LSTs) would be replaced with new TSPs; the TSPs would be double-circuited, carrying both the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the new Moorpark-Newbury 66 kV Subtransmission Line. The existing single-circuit Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line in this section would be reconstructed and reconductored to accommodate the installation of the new Moorpark-Newbury 66 kV Subtransmission Line.
- Construction of approximately 1 mile of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW into Newbury Substation. Existing single-circuit wood poles would be replaced with new lightweight steel (LWS) poles; within Newbury Substation, four wood poles would be replaced with four TSPs. The existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line would be reconstructed and transferred to the new LWS poles and TSPs in a double-circuit configuration to accommodate the new Moorpark-Newbury 66 kV Subtransmission Line.
- Construction of new 66 kV subtransmission line positions and associated infrastructure within Moorpark Substation and Newbury Substation to facilitate the termination of the new Moorpark-Newbury 66 kV Subtransmission Line.
- Transfer of existing distribution circuitry and telecommunication facilities to new subtransmission poles as necessary.

1.2 Project Location

The Project is approximately 9 miles in length, and traverses portions of the City of Moorpark, unincorporated areas of Ventura County, and the City of Thousand Oaks. The Project consists of constructing a new 66 kV subtransmission line in existing ROW between SCE's Moorpark Substation (located at the intersection of Gabbert Road and Los Angeles Avenue in the City of Moorpark) and Newbury Substation (located on Lawrence Drive near Corporate Center Drive in the City of Thousand Oaks).

1.3 Project Need and Alternatives

As discussed in Chapter 2: Project Purpose and Need and Objectives, the Project is needed to meet the following objectives:

- Add 66 kV subtransmission line capacity to meet forecasted electrical demand while providing long-term, safe and reliable electrical service in the ENA.
- Maintain sufficient voltage at the 66 kV substation buses during normal and abnormal system conditions.

- Provide greater operational flexibility to transfer load between 66 kV subtransmission lines and substations serving the ENA.
- Maintain and improve system reliability within the ENA.
- Utilize existing facilities constructed to date for the Project to minimize environmental impacts and shorten the construction schedule.
- Utilize existing ROW and manage existing ROW in a prudent manner in expectation of possible future needs.
- Design and construct the project in conformance with SCE's applicable engineering, design, and construction standards for substation, transmission, subtransmission, and distribution system projects.

SCE evaluated several system and subtransmission line route alternatives to the Project. However, as presented in Chapter 5: Detailed Discussion of Significant Impacts, only the Project as proposed by SCE and described in Chapter 3: Project Description most completely achieves the Project Objectives for the Project and avoids the technical, environmental, and reliability impacts and challenges (both present and future) associated with the system and route alternatives.

1.4 Project History, Controversy, and Major Issues

In 2005, SCE initiated the Moorpark-Newbury 66 kV Subtransmission Line Project. On October 2, 2008, SCE filed Advice Letter 2272-E, notifying the CPUC of the proposed construction of the Moorpark-Newbury 66 kV Subtransmission Line Project. Advice Letter 2272-E explained that the Project would be exempt from Permit to Construct requirements pursuant to GO 131-D, Section III, Subsection B.1.g. ("Exemption g."). In response to protests to the Advice Letter, the CPUC in February 2009 issued Executive Director's Action Resolution E-4225, finding that SCE's Moorpark-Newbury 66 kV Subtransmission Line Project qualified for Exemption g and dismissed the protests.

Thereafter, the Executive Director's issuance of Resolution E-4225 was appealed and the CPUC prepared Commission Resolution E-4243 for consideration at the June 18, 2009 Commission Business Meeting. As originally drafted, Resolution E-4243 would have affirmed Resolution E-4225. However, in response to a subsequent request from a local official, the CPUC removed Resolution E-4243 from the June 18, 2009 Commission Business Meeting agenda, and in September 2009, held a public participation hearing where comments from the public were received. In addition, SCE participated in a series of meetings with interested stakeholders and a local official during 2009 and 2010. Following these additional meetings, Resolution E-4243 (updated to reflect the meetings and hearing which took place during 2009 and 2010) was heard and approved by the Commission at a Business Meeting in March 2010. As approved, Resolution E-4243 affirmed the findings of the previously issued Resolution E-4225, found that SCE's Moorpark-Newbury 66 kV Subtransmission Line Project qualified for Exemption g, and dismissed the protests. In dismissing the protests, Resolution E-4243 stated that the protests "…did not allege facts that would trigger the Exception Criteria contained within GO 131-D, Section III, Subsection B.2.a.-c." By its own terms, Resolution E-4243 went into effect on the day it was approved.

However, in April 2010, several individuals filed an Application for a Rehearing of the Commission's approval of Resolution E-4243. Because that Application for Rehearing did not request a stay of construction, and because the CPUC did not issue a stay of construction, SCE informed the CPUC Energy Division that it planned to start construction of the Project in fall 2010. Consistent with that communication, construction of the Project commenced in October 2010, with a planned operational date of June 2012. However, in November 2011, all construction activity was halted due to the issuance of CPUC Decision 11-11-019 (D.11-11-019). This Decision ordered SCE to cease construction activity, provide certain specified information and file a PTC Application if it wishes to build the Project.

SCE still wishes to build the Project, particularly because electrical system forecasts developed for each of the years since construction was initiated continue to demonstrate that the Project is needed.

Accordingly, because SCE has determined that the Project is still needed to address a projected voltage drop and a projected overload condition (either of which would trigger the need for the Project), SCE has prepared this PEA to accompany SCE's PTC Application pursuant to D.11-11-019. SCE plans to complete the Project within approximately 10 months of issuance of a PTC by the CPUC.[2]

There are no technical, engineering, or significant environmental impact challenges associated with the Project. However, the history of the Project suggests that additional challenges may be initiated by interested stakeholders.

1.5 Agency Coordination

SCE has met and/or had conversations and/or consulted with representatives from the U.S. Fish and Wildlife Service (USFWS); California Department of Fish and Wildlife (CDFW); CPUC; City of Thousand Oaks; the Conejo Open Space Conservation Agency (COSCA—a joint powers agency established by the City of Thousand Oaks and the Conejo Recreation and Parks District); the City of Moorpark; and the County of Ventura. Communication with these agencies (and others) occurred primarily subsequent to SCE's filing of Advice Letter 2272-E in 2008. In addition, SCE also had communications with the Native American Heritage Commission (NAHC) and individual Native Americans. Summaries of these communications are presented in the following subsections as well as in Appendix C to this PEA.

1.5.1 U.S. Fish and Wildlife Service

Prior to filing Advice Letter 2272-E, SCE sent to Mr. Chris Kofron on July 15, 2008 a letter describing the results of focused surveys for the coastal California gnatcatcher conducted in the Project area.

[2] The proposed construction schedule does not include delays due to inclement weather and/or stoppages necessary to protect biological resources (e.g., nesting birds).

Prior to the start of construction, on August 30, 2010 SCE sent to Ms. Diane K. Noda a letter that provided information regarding the Project and the biological resources present within the Project area. The letter also informed USFWS that no federal regulatory permits were needed for the project that would create a nexus for Section 7 consultation with USFWS. A rare plant survey report and coastal California gnatcatcher protocol survey report were included with the letter.

1.5.2 California Department of Fish and Wildlife

As noted above, prior to the start of construction, on August 30, 2010 SCE sent to Ms. Diane K. Noda of the USFWS a letter that provided information regarding the Project and the biological resources present within the Project area; May Meyers of the CDFW (known at the time as California Department of Fish and Game or CDFG) was sent a copy of that letter.

As described further in Section 4.4, during construction, SCE communicated and coordinated with the then-CDFG to obtain a Streambed Alteration Agreement (SAA). A site visit, attended by CDFG staff member Rick Mayfield was conducted on September 23, 2011. Further communications and coordination resulted in an SAA being finalized on April 25, 2012. Reports and notices have been subsequently provided to CDFW as required in the SAA.

1.5.3 California Public Utilities Commission

On August 26, 2008, SCE met with Chloe Lukens, former Supervisor of the CPUC Energy Division's Transmission Siting and Environmental Permitting Section, and Ken Lewis, former Manager of the Energy Division's Transmission Siting and Environmental Permitting Section, to discuss proceeding exempt from the CPUC's permitting requirements and to discuss the outcome of various biological surveys. SCE representatives also provided a presentation at that meeting. During the meeting, the Energy Division representatives recommended that SCE consider providing copies of the biological surveys to the Energy Division when SCE files the Advice Letter. Accordingly, on September 30, 2008, two days prior to filing Advice Letter 2252-E, SCE followed up and provided the biological surveys to Ms. Lukens and Mr. Lewis via email, along with a copy for reference of the presentation about the Project that SCE had previously provided at the August 2008 meeting.

After Advice Letter 2252-E was protested, SCE responded to various requests for information over the course of the next year and a half while the CPUC reviewed the Advice Letter and protests. As discussed above in Section 1.4, later after the CPUC's issuance of Resolution E-4243, SCE ultimately notified the Energy Division it planned to start construction in fall 2010. At the time, SCE offered updated biological survey information to the Energy Division. SCE later provided updated biological surveys and monitoring reports to the CPUC in early November 2011 in response to a request from the Energy Division.

On February 14, 2012, after the issuance of D. 11-11-019, SCE convened a conference call with Mary Jo Borak, Supervisor of the CPUC Energy Division's Transmission Siting and Environmental Permitting Section; Mike Rosauer, CPUC Energy Division Transmission Siting and Environmental Permitting Section Project Manager; and Jack Mulligan and

Aerocles Aguilar of the CPUC Legal Division to discuss D. 11-11-019 and the CPUC's expectations for SCE's PTC application.

On April 11, 2013, in anticipation of completing the Administrative Draft PEA and for the purposes of providing an update to the Energy Division about the Project, SCE conducted a conference call with Mr. Rosauer. Thereafter, on June 3, 2013, SCE provided an Administrative Draft PEA to the CPUC and its environmental consultant, Environmental Science Associates (ESA). SCE later received comments on the Administrative Draft PEA from the CPUC on July 2, 2013. SCE had an additional conference call with Mr. Rosauer, along with and Matt Fagundes and Claire Myers from ESA on July 24, 2013, to discuss reformatting SCE's PEA. Thereafter, SCE informed the CPUC and ESA in August 2013 of its likely PTC filing date in late October 2013.

1.5.4 Native American Heritage Commission and Tribal Coordination

At the request of SCE, the NAHC conducted a search in late 2007 of the Sacred Lands File to identify cultural resources or areas of concern to Native Americans within the vicinity of the Project Area. The NAHC's search "failed to indicate the presence of Native American cultural resources in the immediate project area", and provided a list of 11 Native American individuals/organizations that may have knowledge of cultural resources in the Project Area.

SCE sent letters to all recommended contacts in December 2007. (Copies of these letters are also included in PEA Appendix C.) A response noting interest was received from the Owl Clan, Qun-tan Shup. Mrs. A-lul'Koy Lotah expressed concern for Chumash cultural sites "located in the New Source Line proposed project site and up to a 5 mile radius around the proposed project areas."

As described in Section 4.5, prior to the start of past construction activities, SCE conducted Extended Phase I (EXPI) limited subsurface investigations in 2008 at each of three cultural resource areas. Although not directed to do so by the NAHC or other regulatory agency, SCE invited a Chumash Nation archaeological monitor to be present during these investigations; the archaeological monitor was on-site during the subsurface investigations.

A second NAHC inquiry was made in November 2012; NAHC provided a list of 22 Native American individuals/organizations that may have knowledge of cultural resources in the Project Area. (See November 20, 2012 letter from Dave Singleton, NAHC to Christopher Doolittle, SCE re: Sacred Lands File Search and Native American Contacts list for the proposed Sacred Lands File Search and Native American Contacts list of the proposed "Moorpark-Newbury 66kV New Source Line Project;" located in Ventura County, California, attached to the PEA in Appendix C.) Ten of these individuals/organizations were on the list received in 2007, and 12 were on the list received in 2012 but not on the list received in 2007. SCE has sent letters to all 22 individuals/organizations; one response has been received to date. (A copy of this letter is also included in PEA Appendix C.) Ms. Isabella Ayala, the Ventura County Regional Representative, Coastal Band of the Chumash Nation, requested that she be contacted if the Project would impact Native American cultural resources.

1.5.5 County of Ventura

Prior to filing Advice Letter 2272-E, SCE provided an information briefing about the project to Steve Williams, Real Estate Services Manager, in August 2008. As required by GO 131-D, when SCE filed the Advice Letter, notice was provided to Ventura County via a letter along with the Notice of Proposed Construction to Kim Prillhart, Planning Director for the County.

Thereafter, following the filing of Advice Letter 2272-E and prior to the CPUC issuance of Resolution E-4243, SCE held multiple meetings with individual members of the Board of Supervisors as well as the entire Board of Supervisors between October 2008 and September 2009. Following the issuance of CPUC Resolution E-4243 and prior to the start of construction on the Project, SCE provided additional updates to representatives of the County of Ventura during the second and third quarters of 2010.

Following the CPUC's issuance of D.11-11-019 and the cessation of construction activities, SCE continued to provide regular updates to representatives of the County of Ventura about the project. The latest update was given during the third quarter of 2013.

1.5.6 COSCA

Prior to filing Advice Letter 2272-E, SCE provided an information briefing about the Project to COSCA Manager Kristen Foord in August 2008.

Thereafter, following the filing of Advice Letter 2272-E and prior to the CPUC issuance of Resolution E-4243, SCE held multiple meetings with COSCA staff, including a site visit with COSCA Manager Kristin Foord and Associate Planner Shelly Austin. Details from the site visit were shared with Thousand Oaks Community Development Director John Prescott. Mr. Prescott communicated to SCE that based on staff reports, he felt the Project would have minimal environmental impacts to the COSCA property.

Following the issuance of CPUC Resolution E-4243 and prior to the start of construction on the Project, SCE provided regular updates to COSCA staff.

As described above in Section 1.5.2 and further in Section 4.4, during construction, SCE communicated and coordinated with the then-CDFG to obtain a SAA; a component of this SAA was an off site mitigation fee payable to COSCA by SCE to fund restoration, enhancement, or preservation activities. A site visit was conducted on September 23, 2011. Further consultation and coordination with COSCA representatives resulted in the development of an In-Lieu-Fee Mitigation Memorandum of Agreement (MOA) dated October 2011. This MOA was authorized by the COSCA Board of Directors during the March 14, 2012 meeting.

Following the CPUC's issuance of D.11-11-019 and the cessation of construction activities, SCE provided additional updates to COSCA staff. The latest project update was provided during the third quarter of 2013.

1.5.7 City of Moorpark

As required by GO 131-D, when SCE filed Advice Letter 2272-E, notice was provided to the City of Moorpark via a letter along with the Notice of Proposed Construction to Community Development Director David Bobardt.

Thereafter, following the filing of Advice Letter 2272-E and prior to the CPUC issuance of Resolution E-4243, SCE held multiple meetings with representatives of the City of Moorpark between October 2008 and October 2009. Meetings were held with several individual City Councilmembers; the full City Council; and City staff members, including City Mayor Janice Parvin, Assistant City Manager Hugh Riley and Community Development Director David Bobardt. Following the issuance of CPUC Resolution E-4243 and prior to the start of construction on the Project, SCE provided additional updates to representatives of the City of Moorpark during the second and third quarters of 2010.

Following the CPUC's issuance of D.11-11-019 and the cessation of construction activities, SCE provided additional updates to representatives of the City of Moorpark. The latest project update was provided during the third quarter of 2013.

1.5.8 City of Thousand Oaks

Prior to filing Advice Letter 2272-E, SCE provided an information briefing about the Project to city planner/COSCA Manager Kristen Foord in August 2008.

As required by GO 131-D, when SCE filed Advice Letter 2272-E, notice was provided to the City of Thousand Oaks via a letter along with the Notice of Proposed Construction to Community Development Director John Prescott.

Following the issuance of CPUC Resolution E-4243 and prior to the start of construction on the Project, SCE provided additional updates to representatives of the City of Thousand Oaks during the second and third quarters of 2010. Following the CPUC's issuance of D.11-11-019 and the cessation of construction activities, SCE provided additional updates to representatives of the City of Thousand Oaks during the second and third quarters of 2013.

1.6 PEA Contents

This PEA begins with a discussion of the purpose, need, and objectives of the Project (Chapter 2: Project Purpose and Need and Objectives), and then presents the project description (Chapter 3: Project Description). The PEA then includes a presentation of existing environmental conditions and an evaluation of the potential environmental impacts and potential cumulative impacts of the Project (Chapter 4: Environmental Impact Assessment Summary). A listing of Project features designed to minimize environmental impacts, a discussion of alternatives, and an assessment of growth-inducing impacts is provided in Chapter 5: Detailed Discussion of Significant Impacts.

Chapter 4: Environmental Impact Assessment Summary includes an evaluation of the potential environmental impacts of the Project. Potential impacts are assessed for all environmental factors contained in the most recent CEQA Environmental Checklist Form[3] as shown below:

Section 4.1, Aesthetics
Section 4.2, Agriculture and Forestry Resources
Section 4.3, Air Quality
Section 4.4, Biological Resources
Section 4.5, Cultural Resources and Paleontological Resources
Section 4.6, Geology, Soils and Seismic Potential
Section 4.7, Greenhouse Gases
Section 4.8, Hazards and Hazardous Materials
Section 4.9, Hydrology and Water Quality
Section 4.10, Land Use and Planning
Section 4.11, Mineral Resources
Section 4.12, Noise
Section 4.13, Population and Housing
Section 4.14, Public Services
Section 4.15, Recreation
Section 4.16, Traffic and Transportation
Section 4.17, Utilities and Service Systems
Section 4.18, Cumulative Analysis

1.7 PEA Conclusions

The Project was planned and engineered to avoid or minimize environmental impacts. As presented in Chapter 3: Project Description, the Project design incorporates general and resource-specific features to avoid or minimize potential environmental impacts; these features were implemented during past construction activities, and would be implemented during future construction activities.

The assessment contained in Chapter 4: Environmental Impact Assessment Summary concludes that the Project would have either a less than significant impact or no impact in all environmental resource categories. No growth-inducing or cumulative impacts are identified for the Project.

[3] CPUC "Working Draft Proponent's Environmental Assessment (PEA) Checklist for Transmission Line and Substation Projects," dated November 2008

1.8 Public Outreach Efforts

1.8.1 Formal Outreach

SCE followed the noticing requirements prescribed in GO 131-D, Sections III.B.1 and XI.B, when SCE filed Advice Letter 2272-E in 2008.

Similarly, prior to the filing of the PTC application accompanying this PEA, SCE followed the consultation and noticing requirements prescribed in GO 131-D, Sections IX.B.1.d and XI.A.

1.8.2 Informal Outreach

Prior to filing the Advice Letter, SCE reached out to officials at the City of Thousand Oaks, the County of Ventura, and other entities as discussed in Section 1.5 and in Appendix D to this PEA, and continued communication through the duration of the Project until SCE stopped work in late 2011. As noted also in Section 1.5 and in Appendix D, SCE provided updates after the suspension of construction and then resumed communications in 2013 as SCE prepared to file its PTC Application.

In October 2008, shortly after the Advice Letter was filed, SCE gave a presentation to the Santa Rosa Valley Municipal Advisory Council (MAC) and the Ventura County Board of Supervisors, and attended a Thousand Oaks City Council meeting to provide information and answer questions about the Project. Following the presentation to the Santa Rosa Valley MAC, SCE received and responded to a number of inquiries from area residents for information about the project. In many cases, SCE met with property owners in person to answer their questions about the Project. SCE also received and responded to several inquiries from local media outlets, including the Ventura County Star newspaper and radio station KVTA.

In December 2008, SCE was invited by Ventura County Supervisor Peter Foy to give a presentation at a Town Hall meeting of the Moorpark Home Acres.

From February 2009, following the CPUC's issuance of Resolution E-4225, through the issuance of Resolution E-4243 in March 2010, SCE continued to participate in meetings with interested stakeholders and local officials. In August 2009, SCE gave a presentation to the Moorpark Chamber of Commerce. In September 2009, SCE attended a meeting with Ventura County Supervisor Linda Parks and residents from the Santa Rosa Valley community, and met with Chris Collier, a field representative with then-Assemblymember Audra Strickland's office.

Following the issuance of Resolution E-4243, SCE began pre-construction activities and outreach for the Project. Specifically, SCE provided updates to the City of Moorpark, Ventura County, and City of Thousand Oaks regarding construction activities. In November 2010, SCE sent letters to property owners where encroachment issues had been identified informing them of SCE's desire to discuss the encroachments and work closely with them to ensure that SCE crews have proper access to the electrical facilities to conduct operations and maintenance activities.

In November and December 2010, SCE notified jurisdictions and impacted property owners of SCE's intent to conduct geotechnical surveys along the Project route for final engineering.

In conjunction with SCE's filing of its PTC Application, SCE will send a letter to property owners along the Project route to inform them about the filing and SCE's desire to complete construction of the Project. This letter will also contain information regarding the Project website established by SCE and a toll-free hotline number that SCE will establish for the public to get more information and updates about the Project.

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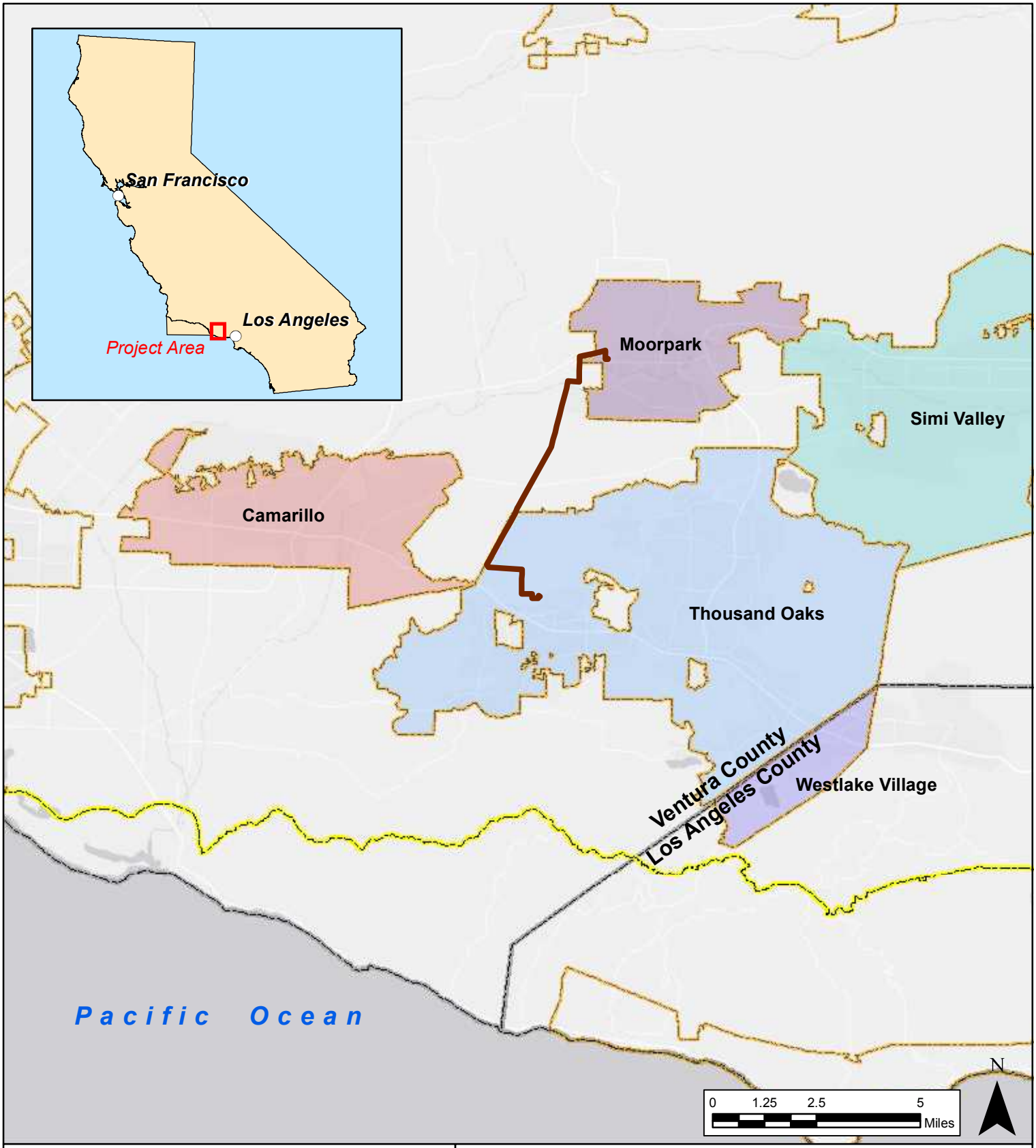

Project Alignment
City Boundaries
Coastal Zone Boundary
County Lines

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

REGIONAL MAP

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Figure
1.1-1

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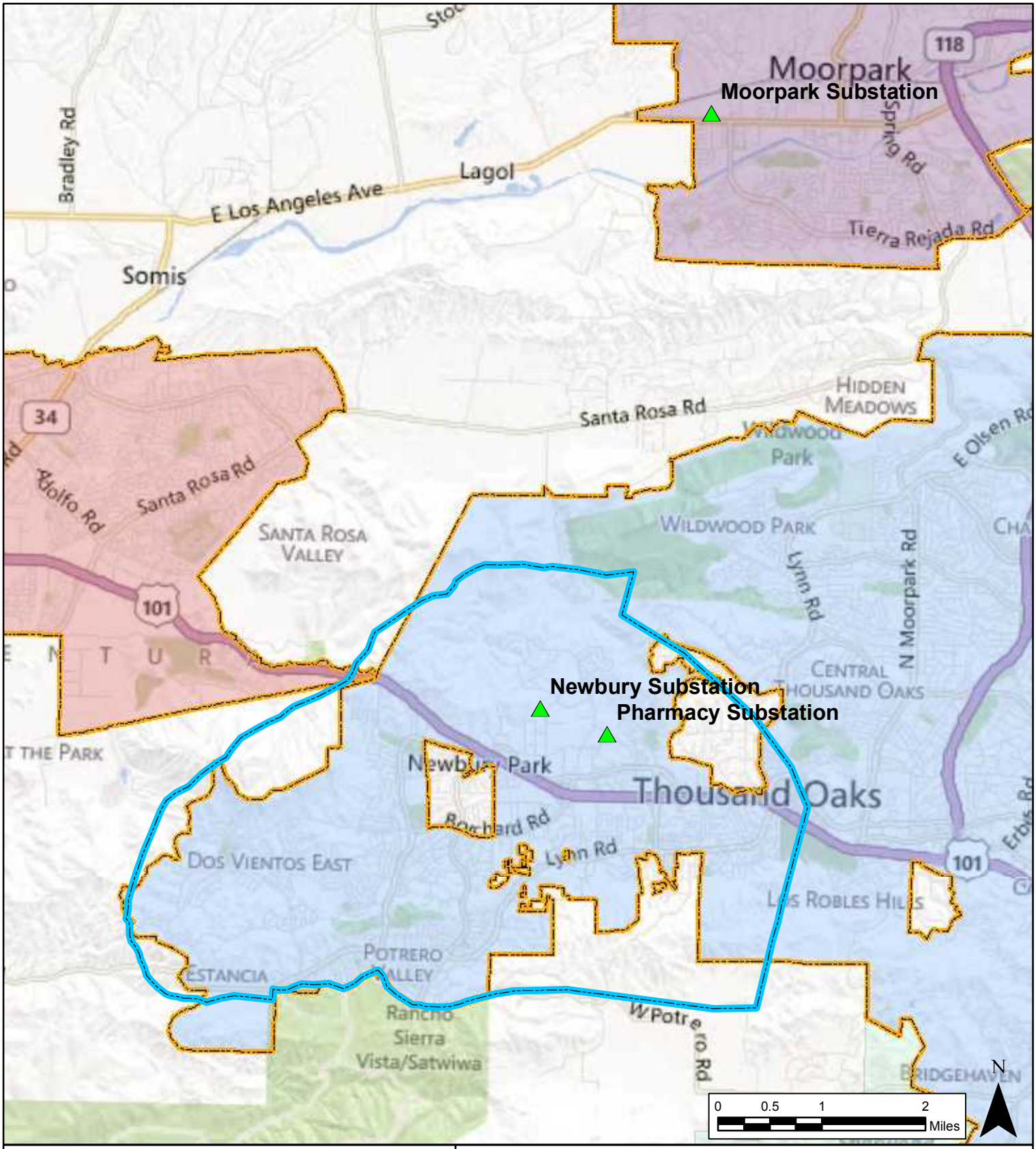

SCE Substations
Electrical Needs Area
City Boundaries

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ELECTRICAL NEEDS AREA

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Figure
1.1-2

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2.0 PROJECT PURPOSE AND NEED AND OBJECTIVES

This Chapter defines the purpose, need for, and objectives of SCE's Moorpark-Newbury 66 kV Subtransmission Line Project (Project), as required by the California Public Utilities Commission's (CPUC) "State of California Information and Criteria List, Appendix B, Section V;" the CPUC's "Working Draft Proponent's Environmental Assessment (PEA) Checklist for Transmission Line and Substation Projects" dated November 2008; and the California Environmental Quality Act (CEQA) Guidelines (Section 15000 *et seq*). Additional information regarding the Project's purpose and need is provided in SCE's Application to the CPUC, in accordance with CPUC General Order (GO) 131-D.

2.1 Overview

2.1.1 Project Purpose

The purpose of the Project is to ensure the availability of safe and reliable electric service to meet customer demand in the ENA by addressing: 1) a projected voltage drop that would exceed the acceptable 5% limit on the 66 kV bus at Newbury Substation under abnormal system conditions;[4] and 2) a projected overload on the Moorpark-Newbury tap of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line under a normal system configuration.[5]

2.1.2 Project Need

In 2005, SCE was required to remove a portion of SCE's Camgen-Colonia-Newbury-Thousand Oaks 66 kV Subtransmission Line due to loss of property rights. This subtransmission line had been used to interconnect electricity generated by a third-party generator (Camgen), which is located on the California State University Channel Islands campus in Camarillo. The removal of this interconnection resulted in a loss of approximately 28 megawatts (MW) of generation that previously had served the Moorpark 66 kV Subtransmission System. This loss of generation resulted in a situation where a larger portion of the electricity serving the ENA would have to be served from other sources within the Moorpark System, including the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line. The additional burden on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line was projected to cause an overload in 2005 on the Moorpark-Newbury tap of the

[4] An abnormal condition (otherwise known as N-1) is defined as all operating elements in service with one operating element de-energized (for example, due to an unplanned outage or fault). SCE maintains operating criteria standards for both normal and abnormal conditions. Relevant here, with respect to abnormal conditions, SCE has established a policy whereby voltage drop should not exceed 5% on any 66 kV subtransmission bus even in the event of the loss of an operating system element.

[5] Normal operating system conditions are defined as all major elements (e.g., substation transformers, 66 kV subtransmission lines, generation units) of the electrical system in-service and operational.

Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line under normal operating system conditions.

SCE also subsequently identified projected overloads on the Moorpark-Newbury tap in years 2006, 2007, 2008, 2009 and 2010. Thereafter, in SCE's 2011and 2012 system planning forecasts, because construction of the Project had already commenced, the forecasts assumed that the Project would be operational for years 2011 and beyond, and therefore neither the 2011 nor the 2012 forecast identified an overload on the Moorpark-Newbury tap.

However, as discussed in Chapter 1: PEA Summary, the Project was not completed due to the issuance of D.11-11-019, and therefore the benefits of the Project were not realized. Accordingly, for purposes of this PEA, SCE remodeled its 2011 and 2012 forecasts with the assumption that the Project had *not* been operational since 2011. In each of those remodeled forecasts, analysis showed projected overloads on the Moorpark-Newbury tap in 2014. In addition, SCE's 2013-2022 forecast also assumes that the Project has not been constructed. In this updated analysis, SCE projects that in 2020 there would be a voltage drop that would exceed the acceptable 5% limit on the 66 kV bus at Newbury Substation under abnormal system conditions (i.e., during the loss of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line). In this updated analysis, SCE also projects an overload would occur in 2021 on the Moorpark-Newbury tap of the Moorpark-Newbury 66 kV Subtransmission Line during normal operating system conditions.[6]

The Moorpark 66 kV Subtransmission System is a network of 66 kV subtransmission lines that provide electrical service to the distribution substations and customer substations located within and adjacent to the ENA. The amount of electrical power that can be delivered to the ENA is limited to the maximum amount of electrical demand that the 66 kV subtransmission lines can serve before any individual subtransmission line's operating capacity limit is exceeded. Two source 66 kV subtransmission lines (the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the Newbury-Thousand Oaks 66 kV Subtransmission Line) serve the ENA. The limiting component of the source lines serving the ENA is the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line, which has an operating limit of 920 amperes (A) during a normal system configuration.

Table 2.1-1 shows the maximum operating capacity limit for the normal system configuration and historical projected demand for the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line at the time of the forecast. As discussed above, and reflected in Table 2.1-1, SCE initially forecasted that an overload would occur on the Moorpark-Newbury tap of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line in 2005.

[6] The forecasted line overloads on the Moorpark-Newbury tap on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line are not expected to occur until 2021 due to reduced projections of demand associated with electric vehicle charging and the longer than expected economic downturn in the area which would also trigger the need for the Project.

Table 2.1-1: Historical Projected Overloading of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line (During Normal System Conditions)

Forecast Year	Line Capacity	Projected Load	% Loading	Year of Projected Overload
2005	920 A	952 A	103.5%	2005
2006	920 A	942 A	102.0%	2006
2007	920 A	963 A	105.0%	2007
2008	920 A	926 A	100.7%	2008
2009†	920 A	967 A	105.1%	2009
2010†	920 A	950 A	103.2%	2010
2011‡	920 A	939 A	102.2%	2014
2012‡	920 A	929A	100.9%	2014
2013	920 A	937 A	101.8%	2021*

Notes:

† SCE's Moorpark System 66 kV subtransmission line forecasts for 2009-2018 and 2010-2019 were completed in megavolt-amperes (MVA), but have been reproduced in amperes (A) here for consistency and ease of reference.

‡ As discussed above, SCE's original Moorpark System 66 kV subtransmission line 2011-2020 and 2012-2021 forecasts assumed that the Project had been constructed and operational since 2011. Therefore, those forecasts did not identify a date by which overloads on the Moorpark-Newbury tap would occur. In contrast, the data in this table reflect the remodeled Moorpark System 66 kV subtransmission line 2011-2020 and 2012-2021 forecasts (which take into account the fact that the Project has not been constructed and has not been operational) and demonstrate that those remodeled forecasts would have projected an overload in 2014.

* Although the line overload is forecasted to occur in 2021 under normal system conditions, the Project is needed in 2020 to address a forecasted voltage drop of 5.18% that would exceed the acceptable 5% limit during an abnormal (N-1) system condition.

Accordingly, the Project is needed to address overload conditions on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line which are forecasted to occur in 2021 and in subsequent years (as shown below in Table 2.1-2).

Table 2.1-2: Projected Loading on the Existing Moorpark-Newbury Segment of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line (During Normal System Conditions) from the 2013-2022 Forecast

Year	Line Capacity	Projected Load	% Loaded
2013	920 A	842 A	91.7%
2014	920 A	845 A	92.0%
2015	920 A	855 A	93.1%
2016	920 A	876 A	95.3%
2017	920 A	890 A	96.9%
2018	920 A	899 A	97.9%
2019	920 A	891 A	97.0%
2020	920 A	914 A	99.6%
2021	920 A	937 A	101.8%
2022	920 A	957 A	104.2%

In addition, based on SCE's most recent Moorpark System 66 kV subtransmission line forecast (covering the 2013-2022 time period), SCE anticipates a voltage drop of 5.18% would occur on the Newbury Substation 66 kV bus in 2020 during peak electrical demand conditions (high case) and under abnormal operating system conditions. This drop would exceed the acceptable 5% limit during an abnormal condition (i.e., during the loss of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line). Therefore, the Project would be needed to correct this condition.

Accordingly, the Project is needed to (1) address overload conditions on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line which are forecasted to occur in 2021 and in subsequent years (as shown in Table 2.1-2), and (2) to provide additional capacity to serve the ENA to remedy these capacity and voltage drop conditions.

2.2 Project Objectives

To meet the Project Purpose and Need, the Project Objectives are as follows:

- Add 66 kV subtransmission line capacity to meet forecasted electrical demand while providing long-term, safe and reliable electrical service in the ENA.
- Maintain sufficient voltage at the 66 kV substation buses during normal and abnormal system conditions.
- Provide greater operational flexibility to transfer load between 66 kV subtransmission lines and substations serving the ENA.
- Maintain and improve system reliability within the ENA.
- Utilize existing facilities constructed to date for the Project to minimize environmental impacts and shorten the construction schedule.
- Utilize existing ROW and manage existing ROW in a prudent manner in expectation of possible future needs.
- Design and construct the project in conformance with SCE's applicable engineering, design, and construction standards for substation, transmission, subtransmission, and distribution system projects.

Each of the Project Objectives is more thoroughly described as follows.

2.2.1 Add 66 kV Subtransmission Line Capacity to Meet Forecasted Electrical Demand While Providing Long-Term, Safe and Reliable Electrical Service in the ENA

Under Federal Energy Regulatory Commission (FERC), North American Energy Reliability Corporation (NERC), Western Electricity Coordinating Council (WECC), and CPUC rules, guidelines or regulations, SCE has the responsibility to ensure that electrical transmission, subtransmission, and distribution systems have sufficient capacity to maintain safe, reliable, and adequate service to customers. To ensure the availability of safe and reliable electric service, SCE has established a set of standards and criteria by which it determines when new projects are needed. The safety and reliability of the systems must be maintained under normal conditions when all facilities are in service, and also maintained under abnormal conditions when facilities are out of service due to equipment or line failures, maintenance outages, or outages that cannot be predicted or controlled which are caused by weather, earthquakes, traffic accidents, and other unforeseeable events.

As discussed above in Section 2.1.2, only two source 66 kV subtransmission lines (the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the Newbury-Thousand Oaks 66 kV Subtransmission Line) serve the ENA. The limiting component of the source lines serving the ENA is the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line, which has an operating limit of 920 A during a normal system configuration. The new Moorpark-Newbury 66 kV Subtransmission Line would provide additional capacity to serve the ENA for the foreseeable future.

2.2.2 Maintain Sufficient Voltage at the 66 kV Substation Buses During Normal and Abnormal System Conditions

As presented above, SCE's most recent Moorpark System 66 kV subtransmission line forecast (covering the 2013-2022 time period) anticipates a voltage drop of 5.18% would occur on the Newbury Substation 66 kV bus in 2020 during peak electrical demand conditions (high case) and under abnormal operating system conditions. This drop would exceed the acceptable 5% limit during an abnormal condition (i.e., during the loss of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line). Such a voltage drop could result in residential and industrial customers experiencing outages.

Construction of the new Moorpark-Newbury 66 kV Subtransmission Line would provide additional capacity to serve the ENA to remedy this condition. In addition, the additional source line (the new Moorpark-Newbury 66 kV Subtransmission Line) to Newbury Substation associated with the Project would provide an additional subtransmission path for continued reliable service in the event of an abnormal system situation (for example a fault or a planned outage). Adding this third line to the existing two source lines would reduce the amount of transient voltage drop seen by customers during fault conditions at the Newbury Substation 66 kV bus as well as steady state voltage drop during abnormal events during peak conditions.

2.2.3 Provide Greater Operational Flexibility to Transfer Load Between 66 kV Subtransmission Lines and Substations Serving the ENA

The Project would provide greater operational flexibility by creating a third 66 kV subtransmission line into the Newbury Substation. Having three source lines into Newbury Substation provides greater operating flexibility within the Moorpark 66 kV Subtransmission System to ensure continuity of service during planned and unplanned outages because three lines provide more options for switching than two lines. This would facilitate scheduling of maintenance outages as well as provide increased options of switching during emergency events.

Further, the new Moorpark-Newbury 66 kV Subtransmission Line would provide operational flexibility as this third source line would be available to carry additional load to ensure continued service to the ENA should one of the other two source lines be de-energized for maintenance or in the event of a fault on the line.

2.2.4 Maintain and Improve System Reliability Within the ENA

In addition to providing adequate capacity to the ENA under normal operating conditions, the new Moorpark-Newbury 66 kV Subtransmission Line would also provide additional long term reliability to serve the ENA. For instance, during abnormal (N-1) conditions (such as a fault on one of the two source lines feeding Newbury Substation), the new Moorpark-Newbury 66 kV Subtransmission Line would provide greater reliability in the form of an additional (third) source line to serve the ENA.

2.2.5 Utilize Existing Facilities Constructed to Date for the Project to Minimize Environmental Impacts and Reduce Construction Schedule

As discussed in Chapter 1: PEA Summary, construction of the Project began in October 2010 and was halted in November 2011. During these past construction activities, 22 of 44 tubular steel poles (TSPs) planned for installation were installed, 27 of 29 lightweight steel (LWS) poles planned for installation were installed, and a portion of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line was reconductored. In addition, the large majority of work planned for Moorpark Substation and Newbury Substation was completed. The Project as described in Chapter 3: Project Description would wholly utilize the facilities constructed to date, minimizing environmental impacts associated with removing existing infrastructure or installing additional infrastructure in other locations. Additionally, utilization of these existing facilities would reduce the construction schedule compared with alternatives that would require construction of new facilities.

2.2.6 Utilize Existing ROW and Manage Existing ROW in a Prudent Manner in Expectation of Possible Future Needs

Constructing within an existing ROW, as proposed for the Project, is consistent with the policy of the CPUC, as reflected in the Garamendi Principles,[7] which encourage use of existing ROW when construction of new lines is required. Collocating electric facilities in the same ROW maximizes the use of utility property and existing easements, and minimizes the potential environmental impacts that could be caused if each line were to be constructed in a separate ROW. The chosen placement of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing ROW also preserves space within that ROW for the construction of potential future transmission or subtransmission lines.

2.2.7 Design and Construct the Project in Conformance with SCE's Applicable Engineering, Design, and Construction Standards for Substation, Transmission, Subtransmission, and Distribution System Projects

SCE strives to construct substations in a consistent manner, meaning that the substation layouts, switch rack designs, equipment, and operating requirements at each substation are consistent and familiar to the field personnel that are required to operate and maintain the equipment at multiple substations. These standards are developed and revised as necessary based on experience to ensure we are building safe, reliable and operable substations on a consistent basis. In addition, the consistent design ensures that upgrades to existing substations and/or construction of new substations are constructed in a manner that provides the lowest total cost of ownership.

The same concept applies to transmission lines, subtransmission lines, and distribution lines. During emergency conditions, the consistent design allows SCE to bring in "out of town" field crews to help restore power to SCE's customers. SCE obtains this consistent design through the development and use of standards. In addition, SCE's standards provide a base to evaluate the merits of proposed changes which are evaluated to determine impact on safety, reliability, operations, maintenance, construction and cost.

[7] Senate Bill 2431 (Chapter 1457, Statutes of 1988)

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3.0 PROJECT DESCRIPTION

This chapter provides a detailed description of Southern California Edison Company's (SCE) Moorpark-Newbury 66 kV Subtransmission Line Project (Project).[8]

The Project has been divided into discrete geographic Project Sections to facilitate discussions in this Proponent's Environmental Assessment (PEA):

- Project Section 1 includes all work conducted within the fenceline at Moorpark Substation in the City of Moorpark.
- Project Section 2 spans from Moorpark Substation to near the border of the City of Thousand Oaks; most of Project Section 2 is located in unincorporated Ventura County (including the Santa Rosa Valley), with a portion of Project Section 2 located in the City of Moorpark. Project Section 2 is approximately 5 miles in length.
- Project Section 3 spans from just north of the City of Thousand Oaks border to a point within Conejo Open Space Conservation Agency (COSCA) lands in the Conejo Canyons area; the end of Project Section 3 is the point at which the subtransmission route changes direction from east to south in the City of Thousand Oaks. Project Section 3 is approximately 3 miles in length.
- Project Section 4 spans from the end of Project Section 3 to the termination of the Project infrastructure within Newbury Substation in the City of Thousand Oaks. Project Section 4 is approximately 1 mile in length.

3.1 Project Location

Geographical Location: The Project is located generally between State Route (SR)-118 (Los Angeles Avenue) to the north, Highway 101 to the south, and west of SR-23, in the City of Moorpark, City of Thousand Oaks, and in portions of unincorporated Ventura County between the two cities (Figure 3.1-1).

Moorpark Substation is located on the northwest corner of the intersection of SR-118 (Los Angeles Avenue) and Gabbert Road in the City of Moorpark. Newbury Substation is located off Lawrence Drive, between Lavery Court and Corporate Center Drive, in the City of Thousand Oaks. The existing and proposed 66 kV subtransmission lines between the two substations and associated with the Project are and would be located in the City of Moorpark, the City of Thousand Oaks, and in portions of unincorporated Ventura County.

[8] SCE will be submitting GIS files as per the CPUC Checklist in a separate submittal to the CPUC Energy Division. These GIS files are CEII.

General Land Use: Land uses adjacent to the Project vary: land uses around Project Section 1 (Moorpark Substation) include light industrial and residential; in Project Section 2, land use is predominantly agriculture and residential; the lands crossed by Project Section 3 are open space lands; and lands adjacent to Project Section 4 are open space, with light industrial and institutional uses prevalent near Newbury Substation.

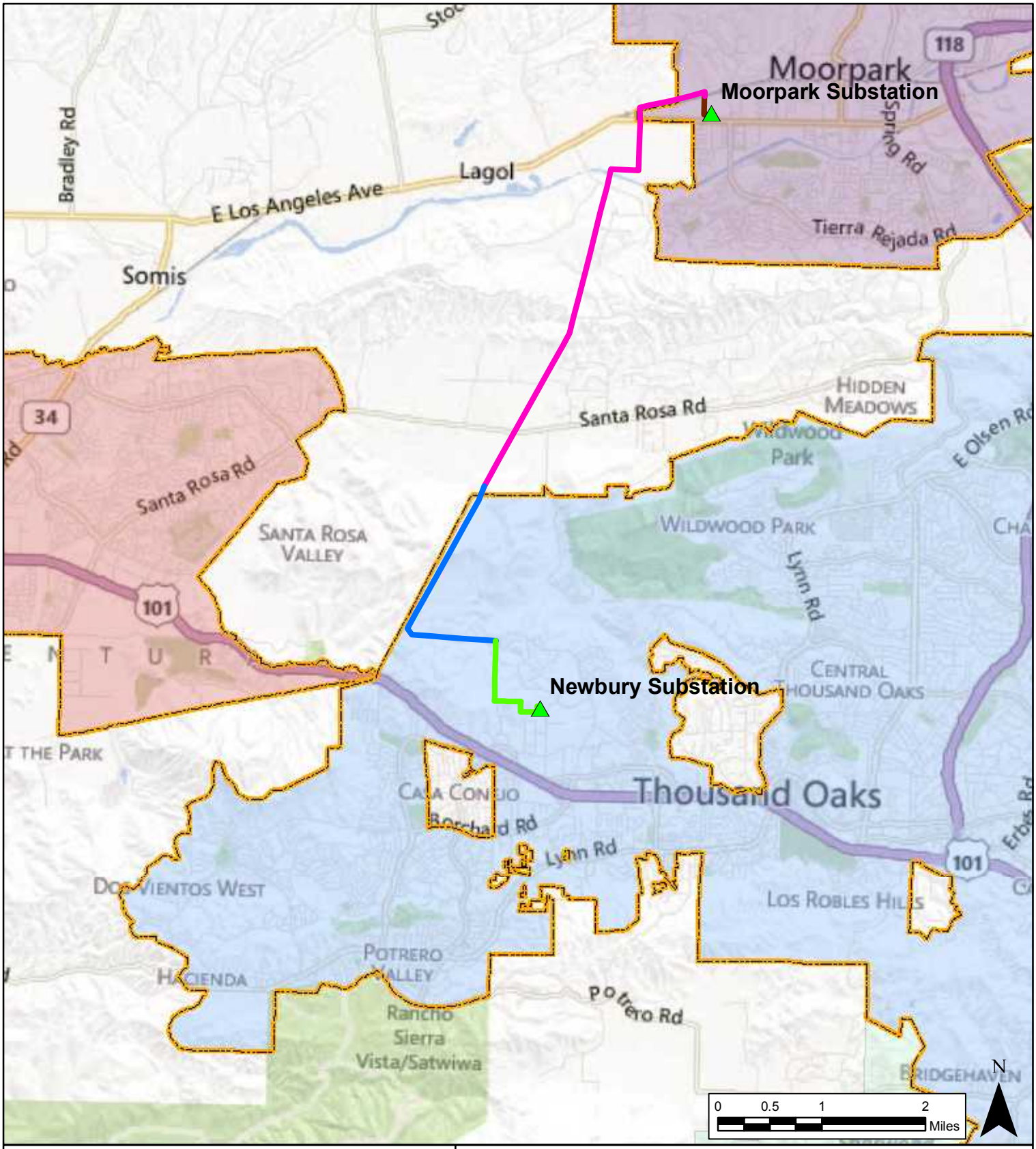
Property Description: The 66 kV subtransmission upgrade components of the Project would be built within existing rights-of-way (ROWs), existing easements, fee-owned property, and public ROWs; the substation components of the Project would be built on existing SCE fee-owned property. The subtransmission components of the Project traverse a varied topography, straddling east-west running valleys and ridges of the Transverse Range including Little Simi Valley, Las Posas Hills, Santa Rosa Valley, and Mountclef Ridge. Project elevations range from approximately 230 to 1,100 feet above sea level. The Project spans four streambed resources: an unnamed north-south flowing drainage located north of Los Angeles Avenue, Arroyo Simi, Arroyo Santa Rosa, and an unnamed tributary to Conejo Creek.

3.2 Existing System

The Moorpark System is comprised of the 220/66/16 kV Moorpark Substation, approximately eleven 66/16 kV distribution substations, and various 66 kV customer-dedicated substations and poletop substations (Figures 3.2-1a and -1b provide schematic diagrams of the existing and proposed Moorpark Subtransmission System with the exception of customer-dedicated substations not associated with the Project). The Moorpark System also includes various 66 kV subtransmission lines, 16 kV, 4 kV and 2.4 kV distribution circuits. The Moorpark System serves customers located in the communities of western Simi Valley, Moorpark, Thousand Oaks, Newbury Park, Westlake Village, Agoura, Agoura Hills, Oak Park, Hidden Hills, Topanga Canyon, Calabasas, Malibu, and portions of eastern unincorporated Ventura County as well as portions of western unincorporated Los Angeles County.

3.3 Project Objectives

The Project purpose, need, and objectives are presented in Chapter 2: Project Purpose and Need and Objectives.



SCE Substations

Project Sections

- Project Section 1
- Project Section 2
- Project Section 3
- Project Section 4
- City Boundaries

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PROJECT SECTIONS AND SUBSTATIONS

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Figure
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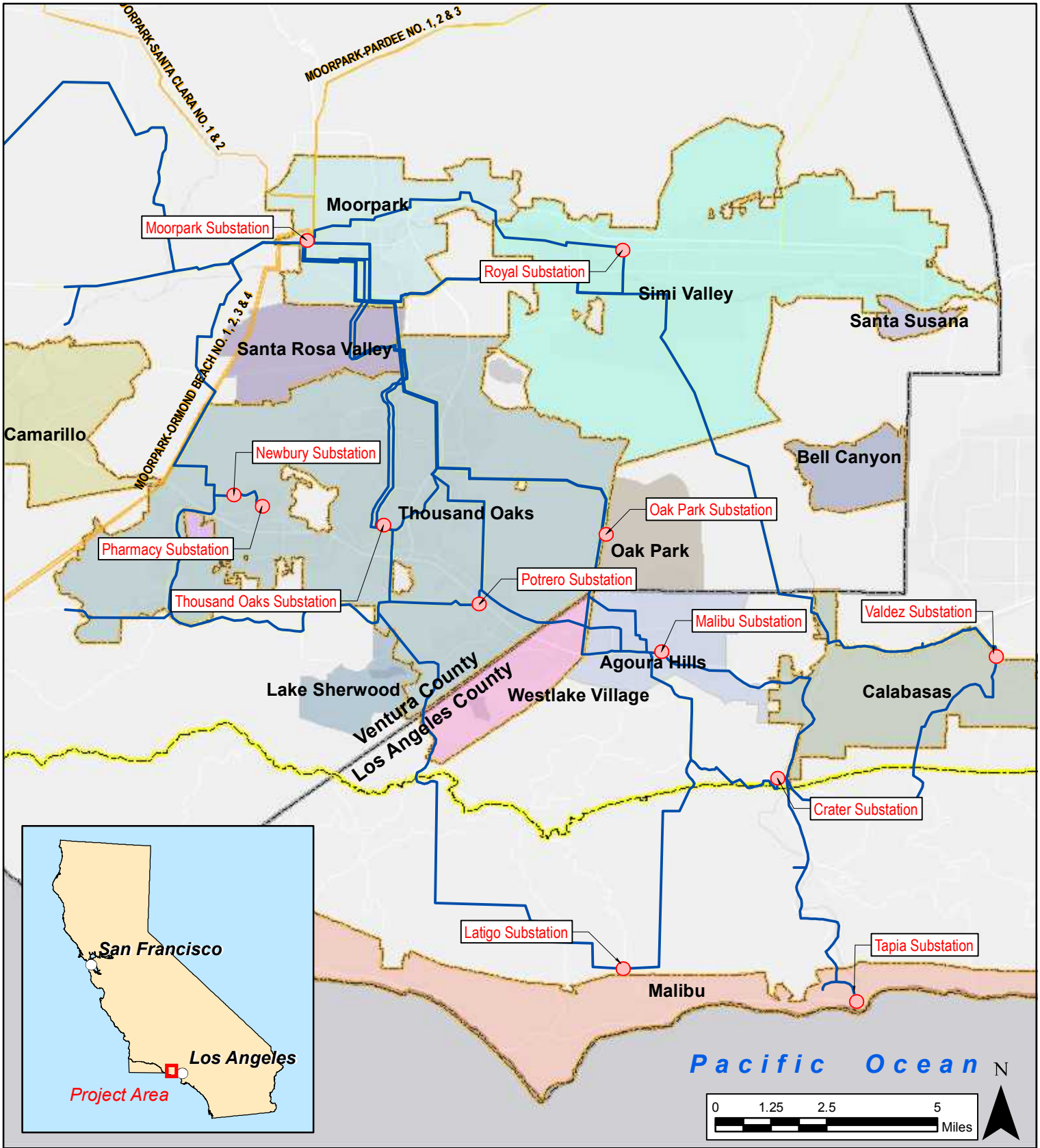

- Substations
- Moorpark Subtransmission System
- Coastal Zone Boundary
- County Lines
- City Boundaries

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MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
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EXISTING MOORPARK 66 kV SUBTRANSMISSION SYSTEM

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Figure
3.2-1a

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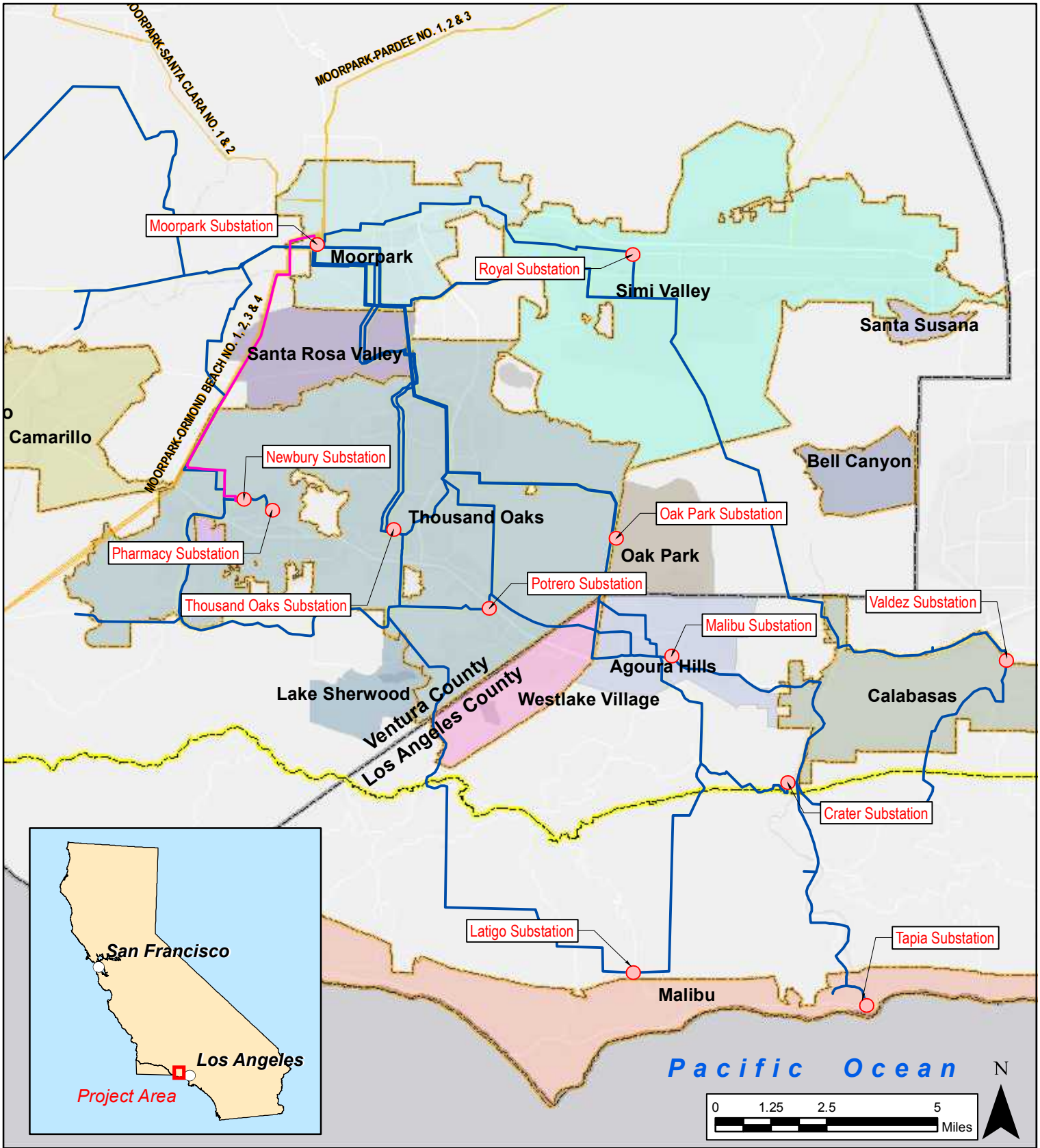

- Substations
- Proposed Moorpark-Newbury 66 kV Subtransmission Line
- Moorpark Subtransmission System
- Coastal Zone Boundary
- County Lines
- City Boundaries

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
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PROPOSED FUTURE MOORPARK 66 kV SUBTRANSMISSION SYSTEM

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Figure
3.2-1b

ARCADIS: SCEMN_102, 09/27/13, R03

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3.4 Proposed Project

The Project consists of constructing new, and reconstructing existing, 66 kV subtransmission line elements within existing SCE ROWs; no new substations would be constructed as part of the Project.[9] As described in Chapter 1: PEA Summary, the purpose of the Project is to correct projected voltage issues at Newbury Substation and line overloads on the Moorpark-Newbury tap of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line. The Project would result in a capacity increase of 1,090 amperes (A) or 125 megawatts (MW)[10] in the Moorpark System; however, the Project is not designed to expand electrical service to areas not currently served by SCE. The components of the Project are displayed on Figures 3.4-1a and -1b and include:

- Construction of approximately 1,200 feet of new underground 66 kV subtransmission line entirely within Moorpark Substation.
- Construction of approximately 5 miles of the new Moorpark-Newbury 66 kV Subtransmission Line on new tubular steel poles (TSPs) on the south and east sides of SCE's existing Moorpark-Ormond Beach 220 kV ROW.
- Construction of approximately 3 miles of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW. Existing single-circuit lattice steel towers (LSTs) would be replaced with new TSPs; the TSPs would be double-circuited, carrying both the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the new Moorpark-Newbury 66 kV Subtransmission Line. The existing single-circuit Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line in this section would be reconstructed and reconductored to accommodate the installation of the new Moorpark-Newbury 66 kV Subtransmission Line.
- Construction of approximately 1 mile of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW into Newbury Substation. Existing single-circuit wood poles would be replaced with new lightweight steel (LWS) poles; within Newbury Substation, four wood poles would be replaced with four TSPs. The existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line would be reconstructed and transferred to the new LWS poles and TSPs in a double-circuit configuration to accommodate the new Moorpark-Newbury 66 kV Subtransmission Line.

[9] To provide a comprehensive understanding of the Project, all components of the Project are described in this Chapter. The description of the components previously constructed is drawn from construction and engineering documents, and discussions with construction and management personnel involved with the work. The description for work yet to be conducted is based on engineering documents. Exact details would be determined following identification of field conditions prior to the resumption of construction activities; availability of labor, material, and equipment; and compliance with applicable environmental and permitting requirements.

[10] This conversion is provided per the CPUC's "Working Draft Proponent's Environmental Assessment (PEA) Checklist for Transmission Line and Substation Projects," dated November 2008. Unity power factor has been assumed in converting the line rating to megawatts.

- Construction of new 66 kV subtransmission line positions and associated infrastructure within Moorpark Substation and Newbury Substation to facilitate the termination of the new Moorpark-Newbury 66 kV Subtransmission Line.
- Transfer of existing distribution circuitry and telecommunication facilities to new subtransmission poles as necessary.

The following sections of Chapter 3: Project Description describe both the past construction activities completed in the 2010/2011 timeframe and future construction activities to complete the Project. The remaining portions of the Project that remain to be constructed would be completed in one phase; no additional phases are proposed or reasonably foreseeable.

3.4.1 Summary of Project Components by Project Section

The proposed Moorpark-Newbury 66 kV Subtransmission Line elements have been subdivided into four geographically-defined Project Sections to facilitate California Environmental Quality Act (Pub. Resources Code § 21000 et seq., CEQA) analysis. These Project Sections are identified on Figure 3.1-1 and described below. Figures 3.4-1a and -1b illustrate graphically the past and future work described in Sections 3.4.1.1 through 3.4.1.4. Figures 3.4-2a through 3.4-2d identify existing transmission and subtransmission lines located in the vicinity of these Project Sections.

3.4.1.1 Project Section 1

Project Section 1 is located entirely within the fenceline at Moorpark Substation. Project Section 1 begins at the 66 kV switchrack, runs underground through conduit installed in a duct bank to a riser TSP, and then exits the substation overhead.

Between October 2010 and November 2011, the following past activities were performed in Project Section 1:

- Installed a single TSP riser pole on the substation property (pole location 1)
- Constructed 700 feet of duct bank consisting of six 5-inch conduits and two underground vaults. Approximately 20 feet of the duct bank was installed in 28-inch steel casing under the SCE railroad spur located within Moorpark Substation

Subtransmission related construction work in Project Section 1 is largely complete; however, the following future activities remain to be performed as part of the Project:

- Construct approximately 500 feet of duct bank consisting of six 5-inch conduits
- Install and splice subtransmission cable
- Terminate new subtransmission cable at a line position in the 66 kV switchrack

3.4.1.2 Project Section 2

Project Section 2 originates at the fenceline of the Moorpark Substation and terminates near the City of Thousand Oaks boundary. Project Section 2 is located entirely within SCE's existing Moorpark-Ormond Beach 220 kV ROW. The ROW exits Moorpark Substation at the northwest corner of the substation, proceeds west from Moorpark Substation for approximately 4,800 feet, assumes a southerly routing near Montair Drive, crosses SR-118 (Los Angeles Avenue) and continues south across open space and lands used for agricultural purposes.

When fully constructed, Project Section 2 would consist of approximately 5 linear miles of a new overhead 66 kV subtransmission line installed on TSPs that would be located within SCE's existing Moorpark-Ormond Beach 220 kV ROW. The TSPs would be located within the south and east sides of the ROW, adjacent to the existing 220 kV structures (Figure 3.4-2b and -2c). The TSPs would be single-circuited, carrying the Moorpark-Newbury 66 kV Subtransmission Line.

Between October 2010 and November 2011, the following past activities were performed in Project Section 2:

- Installed 24 TSP foundations (pole locations 2-25)
- Installed 21 complete TSPs (pole locations 2-22)
- Installed partially 1 TSP (only base of pole installed) (pole location 23)

Future activities in Project Section 2 include:

- Install two TSP foundations (pole locations 26-27)
- Install the upper section of one partially-installed TSP to complete construction (pole location 23)
- Install four TSPs (pole locations 24-27)
- Install approximately five circuit miles of 954 aluminum conductor steel-reinforced (ACSR) (from poles 1 to 28)
- Install marker balls on conductor where determined to be appropriate

3.4.1.3 Project Section 3

Project Section 3 extends from the termination of Project Section 2 (north of the boundary of the City of Thousand Oaks) and is routed south and east to its termination at the northern terminus of Project Section 4. With the exception of approximately 400 feet at its northern end, all of Project Section 3 is located in open space lands managed by COSCA.

When fully constructed, Project Section 3 would consist of approximately 3 linear miles of overhead 66 kV subtransmission lines installed on TSPs. The TSPs would be double-circuited, carrying both the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the Moorpark-Newbury 66 kV Subtransmission Line.

Between October 2010 and November 2011, the following past activities were performed in Project Section 3:

- Excavated holes for three TSP foundations and then subsequently filled them with slurry (pole locations 29-31)
- Constructed five TSP foundations (pole locations 33-37)

Future activities to be completed in Project Section 3 include:

- Install eight TSP foundations (five new foundations at pole locations 28, 32, and 38-40; and complete the three that were slurried at pole locations 29-31)
- Install 13 TSPs (pole locations 28-40)
- Remove 14 existing lattice steel towers (LSTs)
- Install approximately 3 miles of double circuit 954 ACSR on new TSPs as follows:
  - Install approximately 3 circuit miles of new 954 ACSR on new TSPs for the new Moorpark-Newbury 66 kV Subtransmission Line
  - Reconductor approximately 3 circuit miles of the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line by removing 653 ACSR and installing 954 ACSR on new TSPs
  - Install marker balls on conductor where determined to be appropriate

3.4.1.4 Project Section 4

Project Section 4 extends from the southern terminus of Project Section 3 to Newbury Substation. When fully constructed, Project Section 4 would consist of approximately 1 linear mile of overhead 66 kV subtransmission lines installed on TSPs and LWS poles. The TSPs and LWS poles would primarily be double-circuited.

Between October 2010 and November 2011, the following past activities were performed in Project Section 4:

- Installed 27 LWS subtransmission poles (pole locations 41 through 67)
- Removed 27 wood subtransmission poles (pole locations 41 through 67)
- Transferred the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line from wood subtransmission poles to newly-installed LWS poles
- Installed a portion of 954 stranded aluminum conductor (SAC) for the new Moorpark-Newbury 66 kV Subtransmission Line
- Installed a portion of the total length of fault return conductor (FRC)
- Transferred existing distribution lines and third-party facilities to new subtransmission structures

Future activities remaining in Project Section 4 include:

- Install approximately 0.5 mile of 954 SAC for the new Moorpark-Newbury 66 kV Subtransmission Line
- Install an additional length of FRC
- Install four TSP foundations at Newbury Substation
- Install four TSPs at Newbury Substation (pole locations 68, 70, 71, and 73)
- Install two LWS poles at Newbury Substation (pole locations 69 and 72)
- Remove six wood subtransmission poles at Newbury Substation
- Transfer existing subtransmission, distribution and telecommunications facilities to new structures
- Install marker balls on conductor where determined to be appropriate

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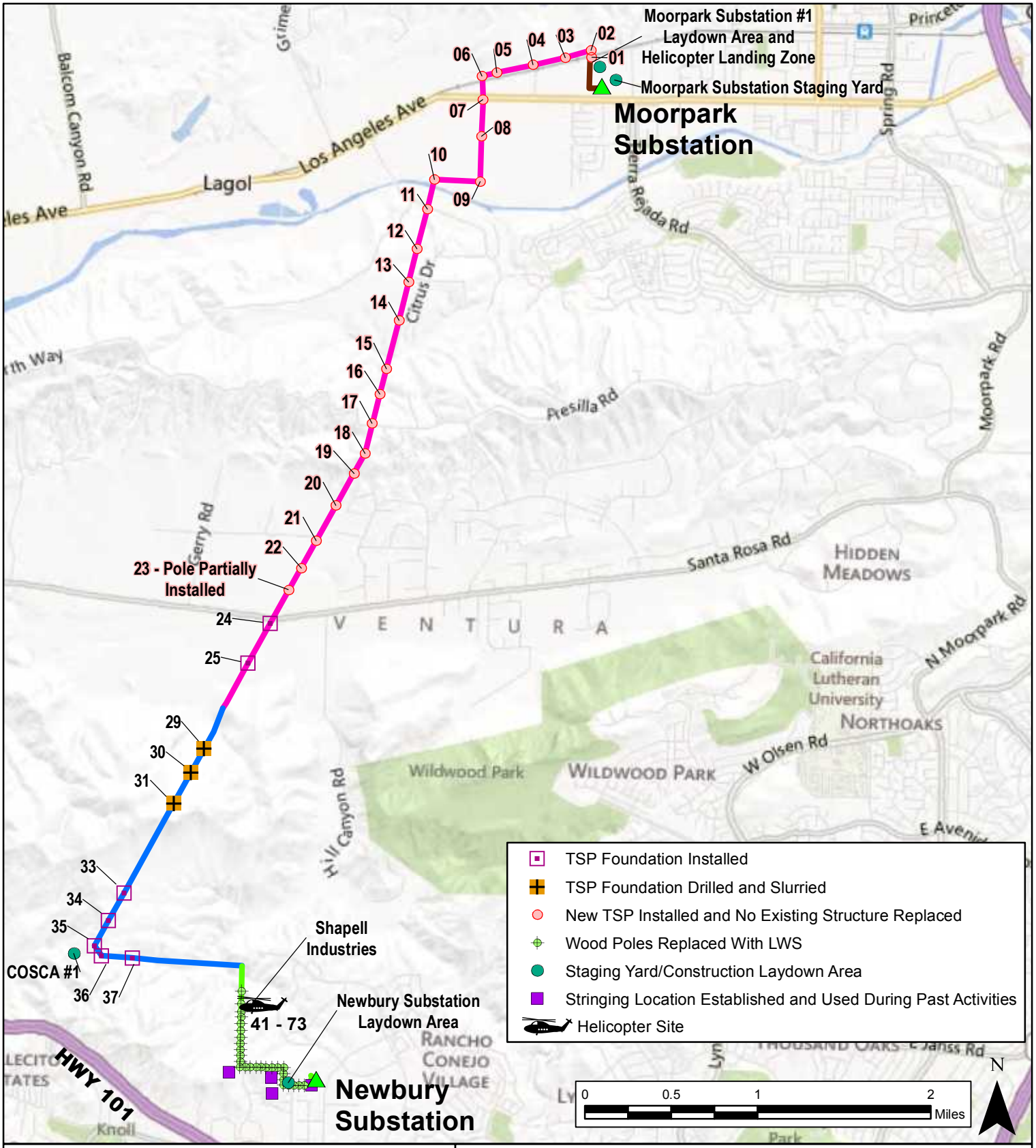

Substation
Project Section 1
Project Section 2
Project Section 3
Project Section 4

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PAST ACTIVITIES

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ARCADIS
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Figure
3.4-1a

ARCADIS: SCEMN_019, 10/14/13, R10

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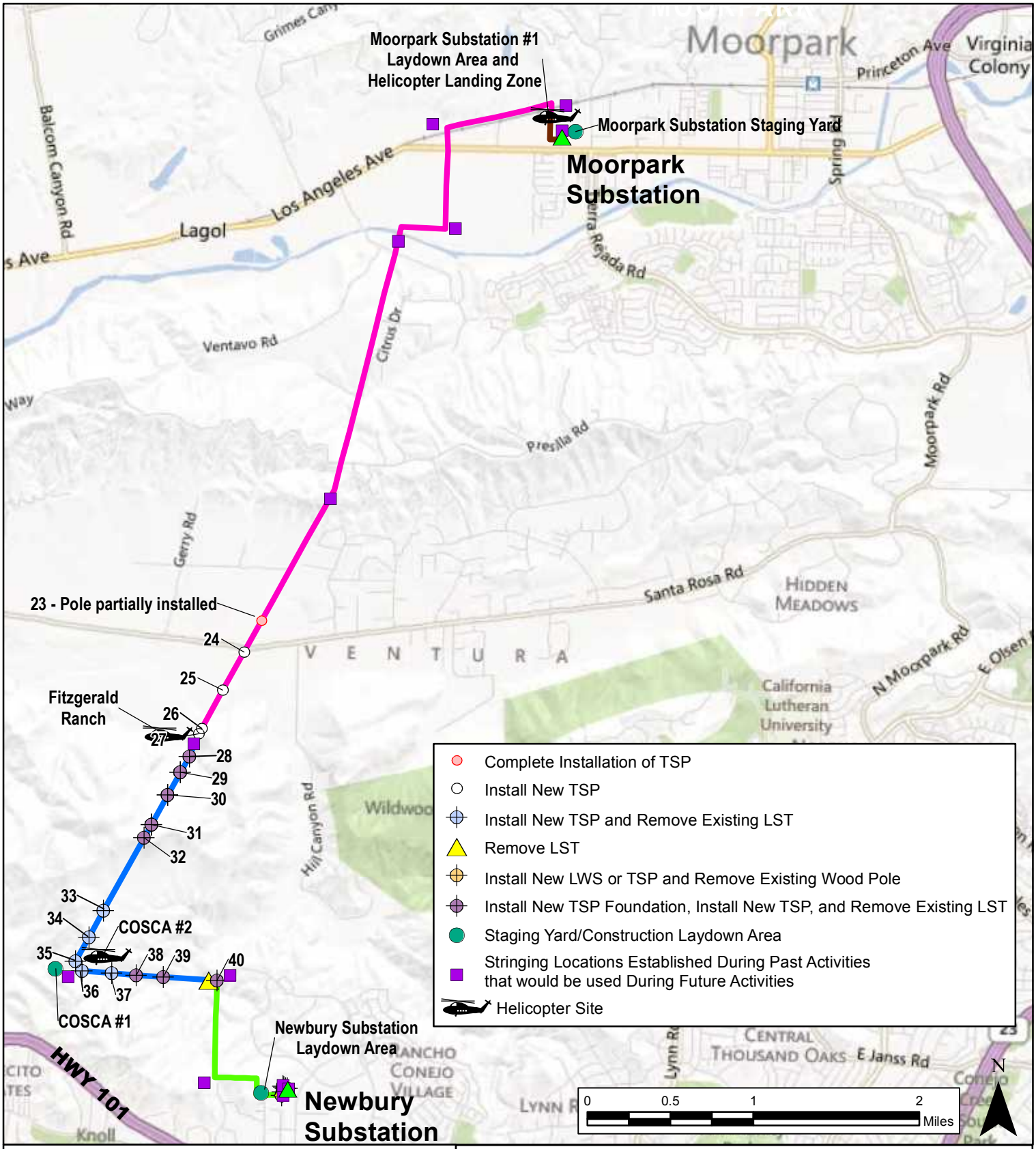

Substation
Project Section 1
Project Section 2 (Conductor to be installed)
Project Section 3 (Conductor to be installed)
Project Section 4 (Conductor to be installed)

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FUTURE ACTIVITIES

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Figure
3.4-1b

ARCADIS: SCEMN_020, 10/11/13, R10

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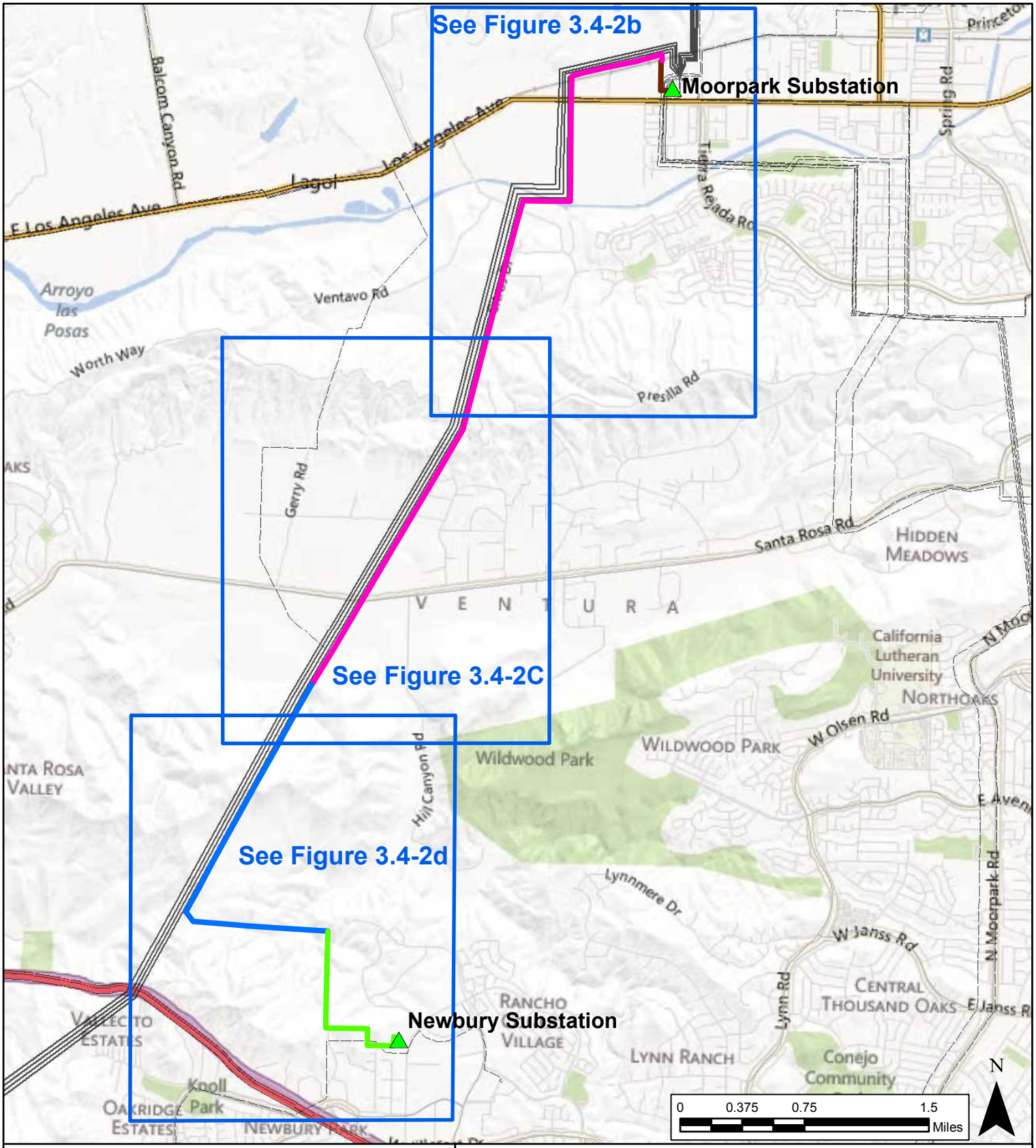

Substation
220 kV Transmission Lines
Subtransmission Lines
Freeways
Highways
Major Roads
Sheet Index

Project Sections
Project Section 1
Project Section 2
Project Section 3
Project Section 4

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

TRANSMISSION AND SUBTRANSMISSION LINES IN THE VICINITY OF THE PROJECT: INDEX

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Figure
3.4-2a

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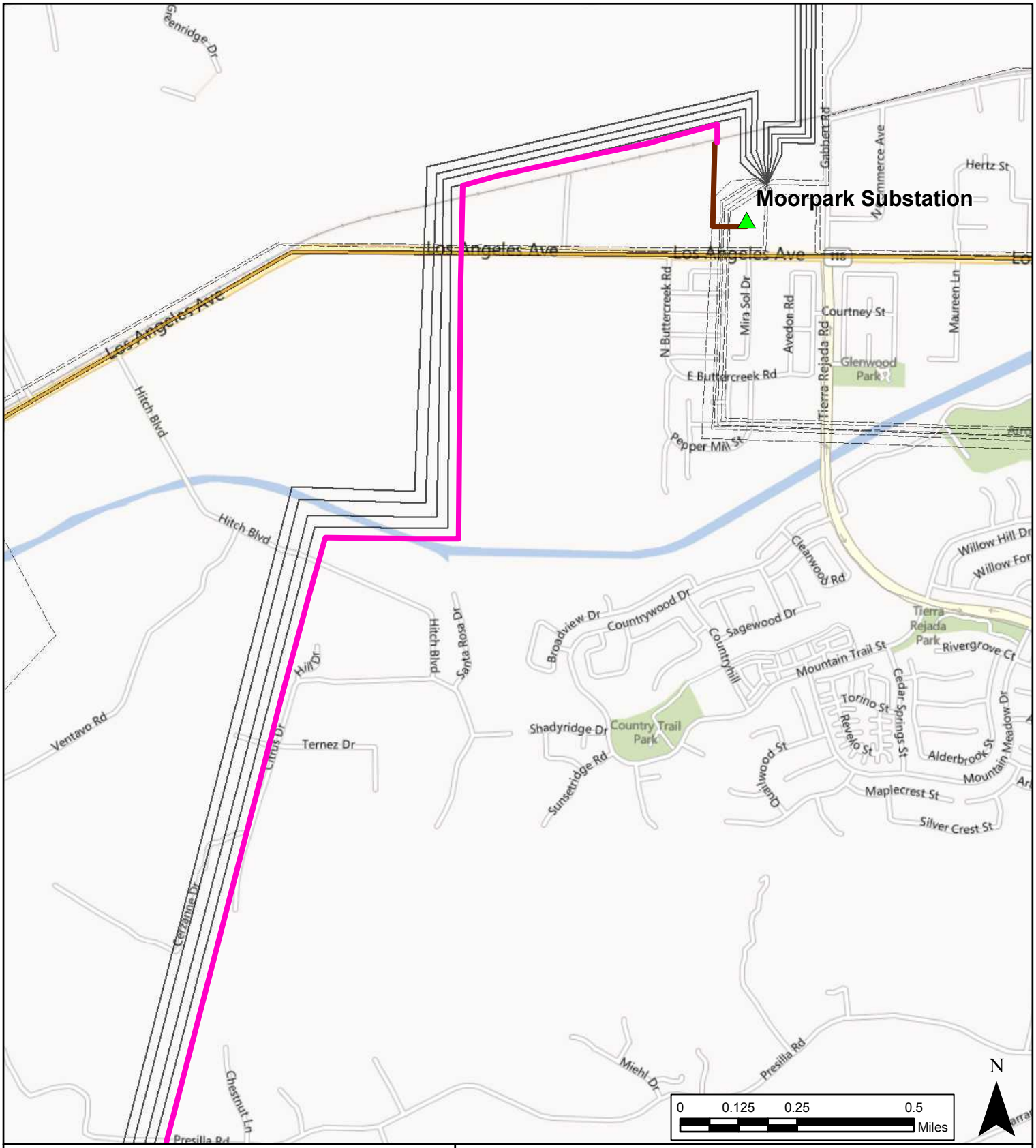

Substation
220 kV Transmission Lines
Subtransmission Lines
Freeways
Highways
Major Roads

Project Sections
Project Section 1
Project Section 2

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
PROJECT VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

TRANSMISSION AND SUBTRANSMISSION LINES IN THE VICINITY OF THE PROJECT: SECTIONS 1 AND 2

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Figure
3.4-2b

ARCADIS: SCEMN_016, 09/10/13, R03

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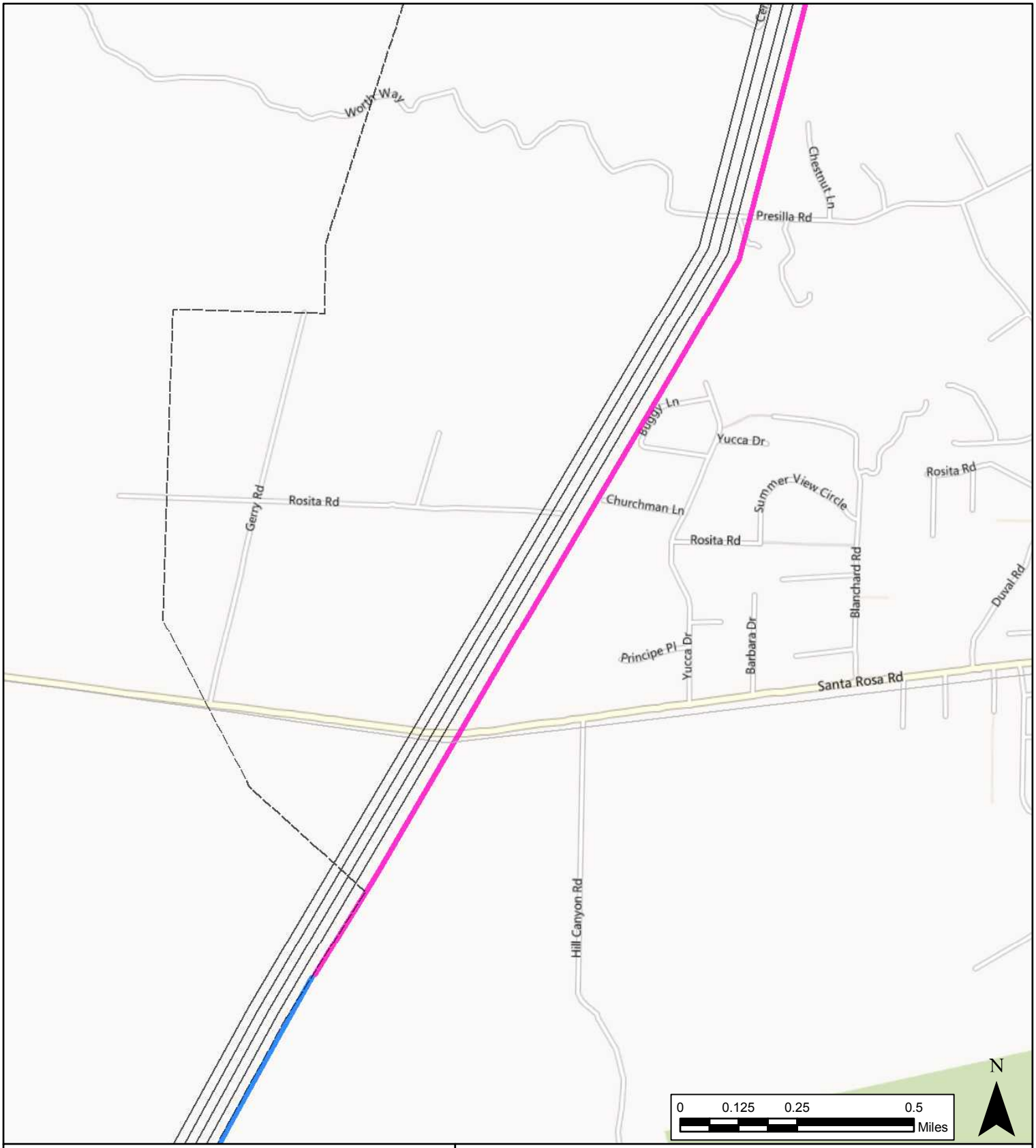

Substation
220 kV Transmission Lines
Subtransmission Lines
Freeways
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Project Sections
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Project Section 3

SOUTHERN CALIFORNIA EDISON
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TRANSMISSION AND SUBTRANSMISSION LINES IN THE VICINITY OF THE PROJECT: SECTIONS 2 AND 3

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Figure
3.4-2c

ARCADIS: SCEMN_017, 09/10/13, R03

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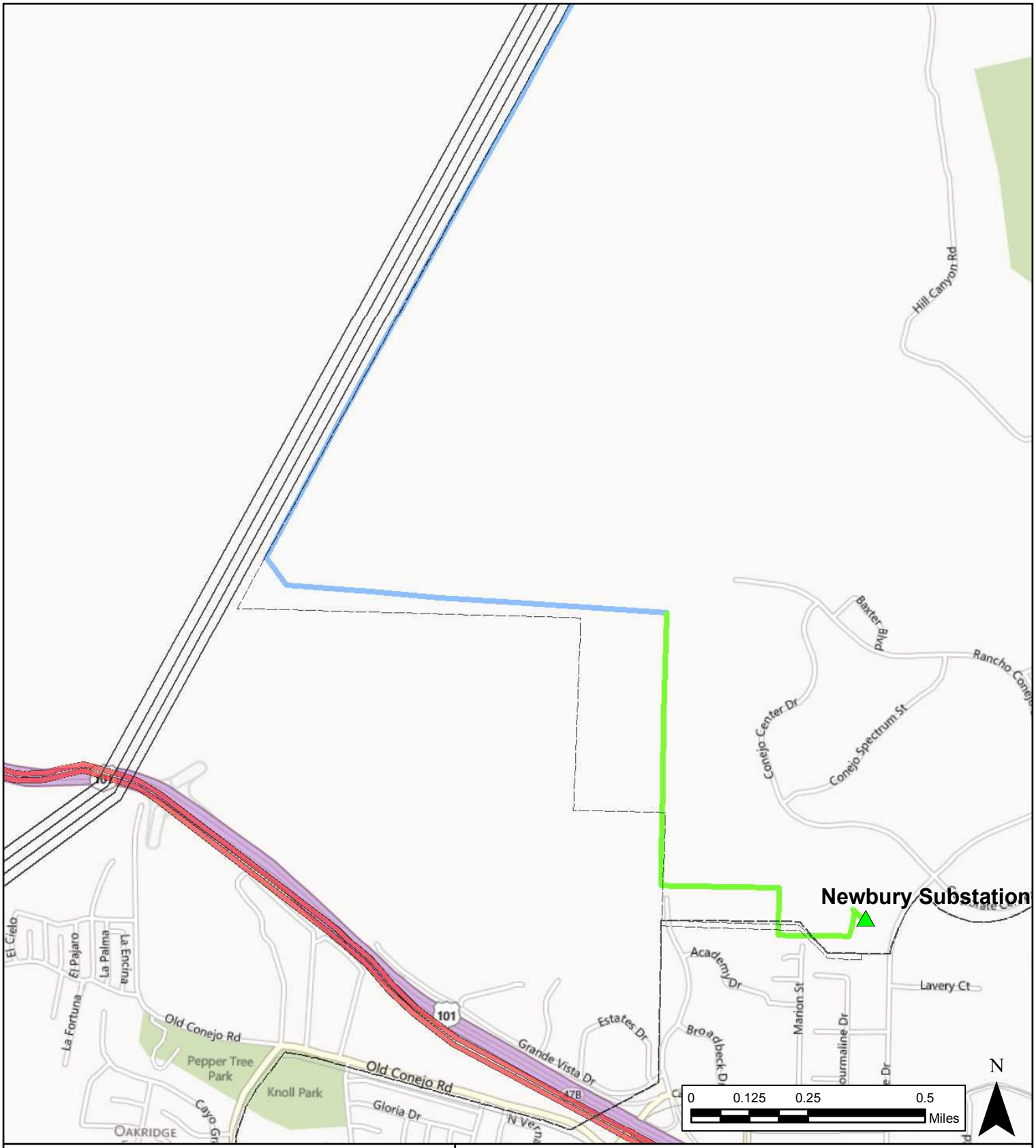

- Substation
- 220 kV Transmission Lines
- Subtransmission Lines
- Freeways
- Highways
- Major Roads

Project Sections

- Project Section 3
- Project Section 4

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

TRANSMISSION AND SUBTRANSMISSION LINES IN THE VICINITY OF THE PROJECT: SECTIONS 3 AND 4

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Figure
3.4-2d

ARCADIS: SCEMN_018, 09/10/13, R03

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3.5 Project Components

3.5.1 66 kV Subtransmission Lines

The Newbury Substation is presently served from Moorpark Substation by the single-circuit Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the Newbury-Thousand Oaks 66 kV Subtransmission Line.

The Project consists of constructing a new line, the nine-mile long 66 kV Moorpark-Newbury 66 kV Subtransmission Line. The Project consists of installing new TSPs, replacement of existing wood poles with new LWS poles, and replacement of LSTs with new TSPs, as follows:

- In Project Section 1, one new TSP would be installed
- In Project Section 2, 26 new TSPs would be installed
- In Project Section 3, 14 LSTs would be removed and 13 new TSPs would be installed
- In Project Section 4, 27 wood poles would be removed and 27 new LWS poles would be installed outside the Newbury Substation. Inside the Newbury Substation, 6 wood poles would be removed and 4 new TSPs and 2 LWS poles would be installed

The wood subtransmission poles previously in place in Project Section 4 also contained a 16 kV distribution circuit between pole locations 40 and 59. As part of the past construction activities, these distribution facilities were transferred to newly-installed LWS poles. In addition, a 16 kV distribution switch was installed at pole location 58 during the transfer.

3.5.2 66 kV Subtransmission Poles

The 66 kV subtransmission line sections of the Project would be built using TSPs and LWS poles (see Figure 3.5-1 and Table 3.5-1). The 66 kV subtransmission structures would be designed consistent with the Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006 (Avian Power Line Interaction Committee 2006).

3.5.2.1 Lightweight Steel Poles

A total of 27 LWS poles were installed during past construction activities; as discussed earlier, approximately two LWS poles remain to be installed as part of the future construction activities. LWS poles would be direct buried approximately 9 to 12 feet deep. The LWS poles would extend approximately 60 to 80 feet above ground. The diameter of LWS poles would typically be 2 to 3 feet at ground level, tapering to the top of the pole. LWS poles are a functional equivalent to wood subtransmission poles and are generally of similar height and diameter. Each LWS pole would be installed within approximately 6 feet of the existing wood pole it replaces, and in-line with the current alignment of the subtransmission line. The LWS pole installation would require excavation of holes approximately 30-36 inches in diameter to a depth of between 9 and 12 feet; approximately 1.75 cubic yards of soil would

be excavated per LWS pole. LWS poles are direct buried and do not require concrete foundations.

3.5.2.1.1 Grounding

Although LWS poles are earth-grounded structures, a FRC, consisting of bare 4/0 ACSR, would be installed along a portion of Project Section 4. This conductor would electrically ground the LWS poles. This conductor is typically located 1 to 2 feet above the telecommunications facilities and 4 to 6 feet below the distribution facilities.

3.5.2.1.2 Guying and Guy Poles

Guys are typically used when poles are located on angles or corners to provide support to the pole. Guying consists of a guy wire (down guy) that is fastened to the pole and attached to a buried anchor, or when there is not adequate space for the required down guy, a shorter guy pole (stub pole) is typically placed with a down guy and buried anchor in a location that has sufficient room for these facilities.

Between October 2010 and November 2011, guy wires were installed along Project Section 4 to stabilize LWS poles located at corners along the line route. At the resumption of construction, the location of any additional guy wires and anchors for LWS poles would be determined on a case-by-case basis. No guying across a roadway would be required.

3.5.2.2 Tubular Steel Poles

A total of 44 TSPs would be installed as part of the Project; 22 TSPs remain to be installed as part of the future construction activities.[11] The TSPs would be approximately 3 to 6 feet in diameter at the base and extend approximately 70 feet to 135 feet above ground, including the above-ground height of the foundation. The TSPs would be galvanized steel structures with a dulled finish. The TSPs would be affixed to concrete foundations that would be approximately 6 to 8 feet in diameter and would extend underground approximately 17 to 46 feet with a projection of approximately 2 to 5 feet of concrete above ground. Correspondingly, TSP foundations would use approximately 20 to 95 cubic yards of concrete depending upon the diameter and depth of the foundation. Of the 22 TSPs that would be installed, eight foundations have already been constructed (pole locations 23, 24, 25, and 33-37), an additional three holes for foundations have been excavated but were filled with slurry when construction on the remainder of the Project was halted (pole locations 29-31), and 11 TSP sites have no foundation work started to date.

Each TSP installed to replace an LST would be installed within approximately 10-25 feet of the existing LST it replaces, and in the current alignment of the existing 66 kV subtransmission line.

[11] Note that 22 TSPs were completely installed as part of past activities; due to the work being halted by the CPUC, only the lower section of one TSP (pole location 23) was installed. The upper section of this pole would be installed as part of future activities.

Table 3.5-1: Typical Subtransmission Structure Dimensions

Pole Type	Proposed Number of Structures to be Installed (Future Activities)	Approximate Height Above Ground	Approximate Pole Diameter	Approximate Auger Hole Depth	Approximate Auger Diameter
LWS Poles	2	60 to 80 Feet	2 to 3 Feet	9 to 12 Feet	2 to 3 Feet
TSPs	22*	70 to 135 Feet	3 to 6 Feet	17 to 46 Feet	6 to 8 Feet

Notes:
Specific pole height and spacing would be determined upon final engineering and would be constructed in compliance with CPUC GO 95.
* 21 entire TSPs would be installed; one TSP in Project Section 2 is partially installed, and would have only its top section installed.

3.5.3 Conductor

3.5.3.1 Above-Ground Installation

The configuration of conductor on TSPs and LWS poles varies by Project Section. In Project Sections 1 and 2, TSPs would be single-circuited with 954 ACSR. In Project Section 3, TSPs would be double-circuited with new 954 ACSR for both the new Moorpark-Newbury 66 kV Subtransmission Line and the reconductored Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line. In Project Section 4, TSPs and LWS poles would be double-circuited with existing, transferred 653 ACSR (for the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line) and new 954 SAC (for the new Moorpark-Newbury 66 kV Subtransmission Line). Certain structures in Project Section 4 would also support a 16 kV distribution circuit and fault return conductor.

In Project Sections 1 and 2, three conductors would be installed on each TSP. In Project Section 3, six conductors would be installed on each TSP. In Project Section 4 outside of Newbury Substation, three subtransmission conductors would be installed on all LWS poles, and FRC would be installed on LWS poles as necessary. In Project Section 4 inside of Newbury Substation, three subtransmission conductors and FRC would be installed on the LWS poles (see Figure 3.5-1 for typical configurations of conductor and insulators).

Subtransmission conductor installed on LWS poles is planned to be at least 50 feet above ground as measured at the pole; conductor installed on TSPs is planned to be at least 53 feet above ground as measured at the pole. The vertical distance between the conductors installed on LWS poles would be approximately 5 to 8 feet, and approximately 8 feet on TSPs. The horizontal distance between the conductors installed on LWS poles would be approximately 11 feet, and approximately 18 feet on TSPs. The distance between the ground and the lowest conductor would exceed applicable minimum height requirements where the conductor spans roadways, railroads, and flood control structures.

Conductor span lengths would vary depending upon topography, engineering, and site considerations. Spans between LWS poles would range from 145 feet to 433 feet; spans between TSPs would range from approximately 205 feet to 2,685 feet.

All conductor installed as part of the Project would be non-specular. The 954 ACSR would be 1.165 inches in diameter; the 954 SAC would be 1.124 inches in diameter. The FRC consists of bare 4/0 ACSR with a diameter of 0.563 inches; the FRC is not non-specular. Overhead structures would also support polymer insulators.

The alignment of some of the Project infrastructure and terrain in the region likely will require Federal Aviation Administration (FAA) notification due to the height above ground of the conductor at certain locations. SCE is currently evaluating the proposed Project infrastructure with respect to FAA regulations regarding notification, and may file FAA Form 7460-1 as outlined in FAA Part 77. If applicable, SCE would file the form upon completion of final engineering and prior to construction per FAA Part 77. FAA recommendations would be implemented into the design of the Project to the extent practicable. Pursuant to FAA guidance, if a span requires three or fewer marker balls, then the marker balls on the span would all be aviation orange. If a span requires more than three marker balls, then the marker balls would alternate between aviation orange, white, and yellow. Marker balls would be 36 inches in diameter.

3.5.3.2 Below-Ground Installation

Underground 66 kV subtransmission facilities would be constructed at Moorpark Substation to route subtransmission cable from the TSP riser pole (pole location 1) to the 66 kV switchrack. An approximately 1,200-foot long duct bank would link the TSP to the 66 kV switchrack. Between October 2010 and November 2011, approximately 700 feet of duct bank was constructed and two underground vaults were installed (Figure 3.5-2).

Approximately 500 feet of duct bank remains to be constructed as part of the Project. Three separate 3,000 kcmil copper underground cables approximately 1,200 feet in length each would be installed through the TSP and conduit within the duct bank, terminating at the 66 kV switchrack.

The duct bank would be comprised of conduit, spacers, ground wire, and concrete encasement. The duct bank consists of six 5-inch diameter polyvinyl chloride (PVC) conduits fully encased with a minimum of 3 inches of concrete all around. The duct bank would be installed in an approximately 60-inch deep trench to ensure the minimum 36 inches of cover above the duct bank. The 66 kV duct bank would be installed in a vertically stacked configuration and each duct bank would be approximately 21 inches in height by 20 inches in width.

The 66 kV subtransmission duct bank would accommodate six cables; the Project would utilize three cable conduits and leave three spare cable conduits for any potential future circuit pursuant to SCE's current standards for 66 kV underground construction.

3.5.4 Substations

The Project includes work to be conducted at two existing substations: the 220/66/16 kV Moorpark Substation and the 66/16 kV Newbury Substation; there are no new substations proposed as part of this Project. The ENA served by Newbury Substation and Pharmacy Substation within the Moorpark 66 kV Subtransmission System includes portions of the City of Thousand Oaks and unincorporated areas of Ventura County (Figure 1.1-2).

Modifications to existing substations described below in the following sections are being performed to accommodate the construction of the subtransmission line work between Moorpark Substation and Newbury Substation.

3.5.4.1 Modifications to Existing Substations

All substation related work at the substations would be conducted within the existing substation fencelines; the substation footprints or exterior dimensions of the substations would not be expanded as part of the Project.

SCE considers the California Building Code and the Institute of Electrical and Electronics Engineers (IEEE) 693, Recommended Practices for Seismic Design of substations when designing substation structures and equipment.

Figures 3.5-3a and -3b show the boundaries of each of the substations.[12] Improvements to the existing substations are described below.

3.5.4.1.1 Moorpark Substation

Moorpark Substation is located at the intersection of Gabbert Road and Los Angeles Avenue in the City of Moorpark. Between October 2010 and November 2011, the following work was completed at Moorpark Substation:

- Equipped an existing 66 kV position as a line position in a double bus-double breaker configuration by:
  - Constructing a new dead-end steel switchrack structure
  - Installing cable terminations and lightning arresters
  - Installing two circuit breakers
  - Installing four sets of group-operated disconnect switches
  - Installing two potential transformers (PTs)
  - Installing insulators

[12] Plot plans of Moorpark Substation and Newbury Substation are CEII; these have been provided under separate cover.

- Modified one position for the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line by:
  - Installing one PT
  - Installing new relays
- Installed the foundations and structural steel associated with the circuit breaker, PT, disconnect switches and a new dead-end structure
- Installed new relay racks in the Mechanical Electrical Equipment Room (MEER)

Earth moving activities at Moorpark Substation included excavating for the 66 kV switchrack foundations, shallow trenching to install conduit and grounding equipment, deeper trenching for the installation of the subtransmission duct bank, and excavation of a hole for the foundation of the TSP at pole location 1 (see Section 3.5.3.2). The structural steel, and electrical equipment installed for the new line position occupy a space measuring 161 feet long, 39 feet high, and 22 feet wide. Approximately 100 cubic yards of soil was removed to install the 66 kV switchrack foundations at Moorpark Substation. Approximately 260 cubic yards of soil was removed to installed 700 linear feet of the subtransmission duct bank during past construction activities; and additional 185 cubic yards would be removed during future construction activities. None of this excavated material would be used to backfill the trench; the excavated material would be disposed of off site in accordance with all applicable laws. Approximately 30 cubic yards of soil was removed for installation of the TSP at pole location 1.

The only substation related construction work remaining at Moorpark Substation is to terminate the new Moorpark-Newbury 66 kV Subtransmission Line to the new line position. Details regarding subtransmission related work within Moorpark Substation are provided above in Section 3.5.1.1

3.5.4.1.2 Newbury Substation

Newbury Substation is located on Lawrence Drive between Lavery Court and Corporate Center Drive in the City of Thousand Oaks. Between October 2010 and November 2011, the following work was completed at Newbury Substation:

- Upgraded the 66 kV operating bus and transfer buses
- Relocated the original 66 kV bus tie from one position to another by:
  - Installing one circuit breaker
  - Installing two sets of group-operated disconnect switches
  - Rewiring and relabeling existing relays for the new position
- Converted the original bus tie position to a line position to terminate the new Moorpark-Newbury 66 kV Subtransmission Line by:
  - Removing the circuit breaker, disconnect switches, and related equipment
  - Installing one circuit breaker

  - Installing three group-operated disconnect switches
  - Installing one PT
  - Installing new relays
- Installed the foundations and structural steel associated with the circuit breaker, PT and disconnect switches
- Installed new relay racks in the MEER

Earth moving activities at Newbury Substation included excavating for the foundations of the new bus tie position and line position. Approximately 40 yards of soil were removed to install the foundations. The structural steel and electrical equipment installed for the new bus tie position and line position occupy a space measuring 85.5 feet long, 39 feet high, and 22 feet wide.

The only substation related construction work remaining at Newbury Substation is to reconductor the transfer bus and terminate the new Moorpark-Newbury 66 kV Subtransmission Line. Details regarding subtransmission related work at Newbury Substation are provided in Section 3.4.1.4.

3.5.4.1.3 Substation Access

Access to the existing Moorpark Substation would not be modified as part of the Project. Access to the existing Newbury Substation would be modified; the existing gate located on the eastern side of the southeast corner of the substation would be realigned slightly northward to facilitate vehicle movements.

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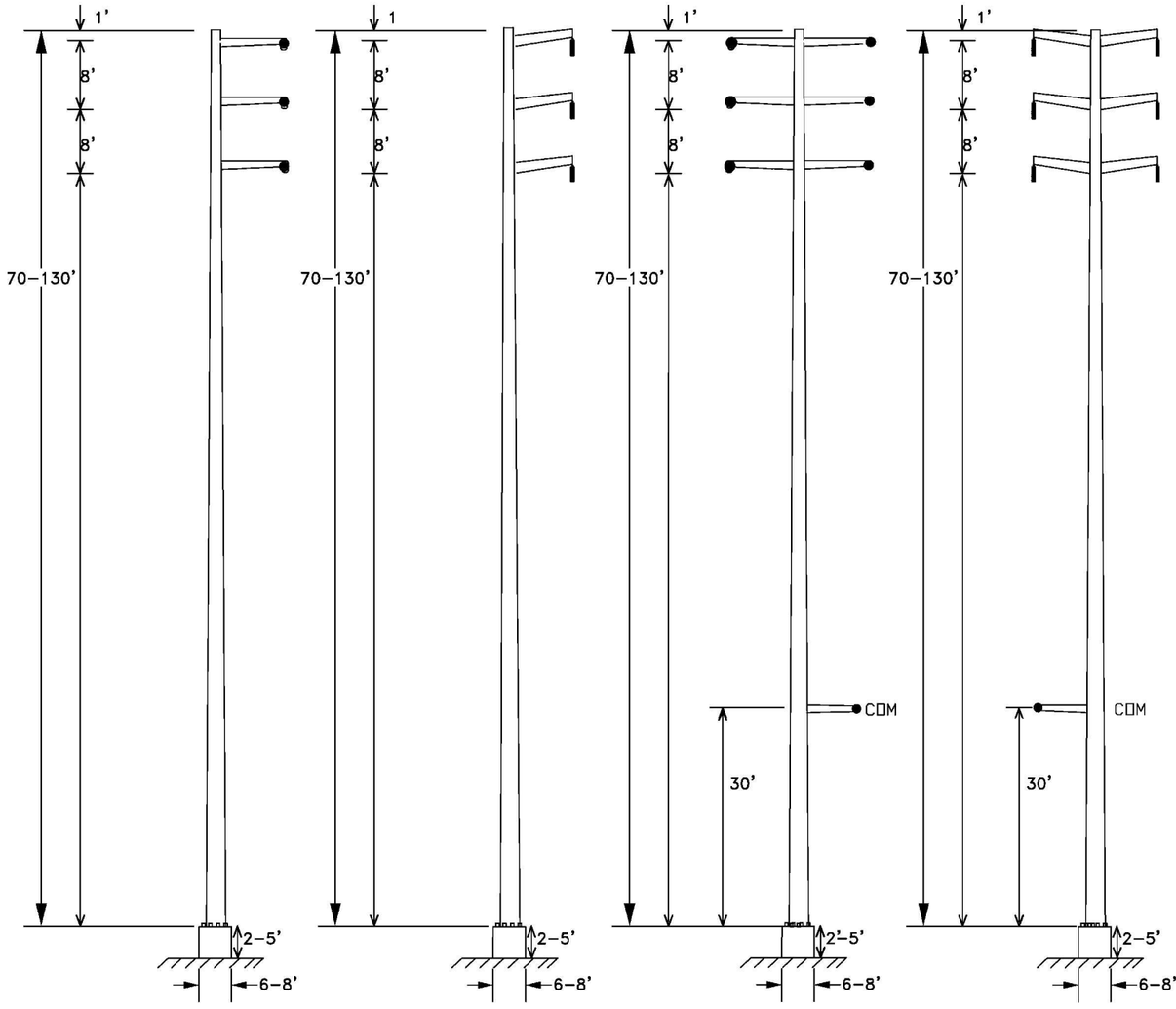
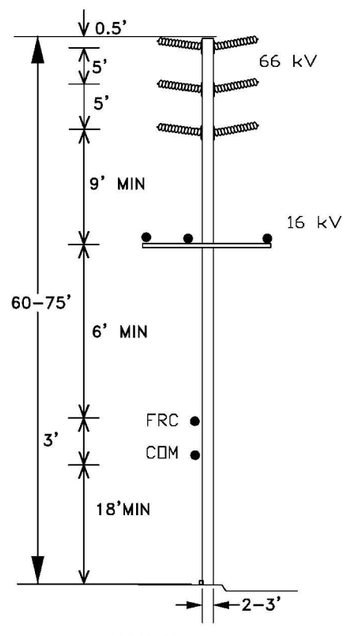


SECTION 2
DEAD END TSP

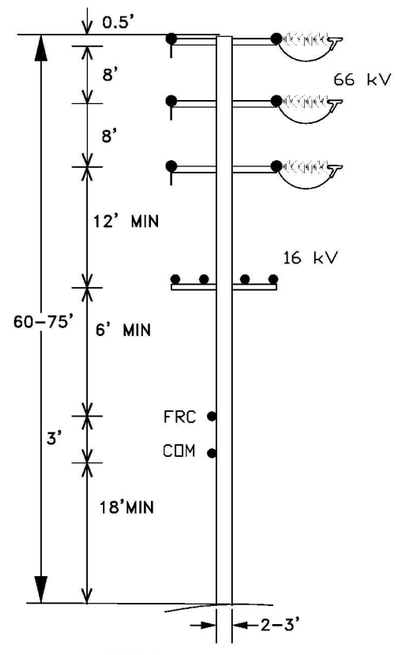
SECTION 2
SUSPENSION TSP

SECTION 3
DEAD–END TSP

SECTION 3
SUSPENSION TSP



SECTION 4
DOUBLE CIRCUIT POST–TYPE
LWS POLE



SECTION 4
DEAD–END CORNER
LWS POLE

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TYPICAL POLE DESIGN

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Figure
3.5-1

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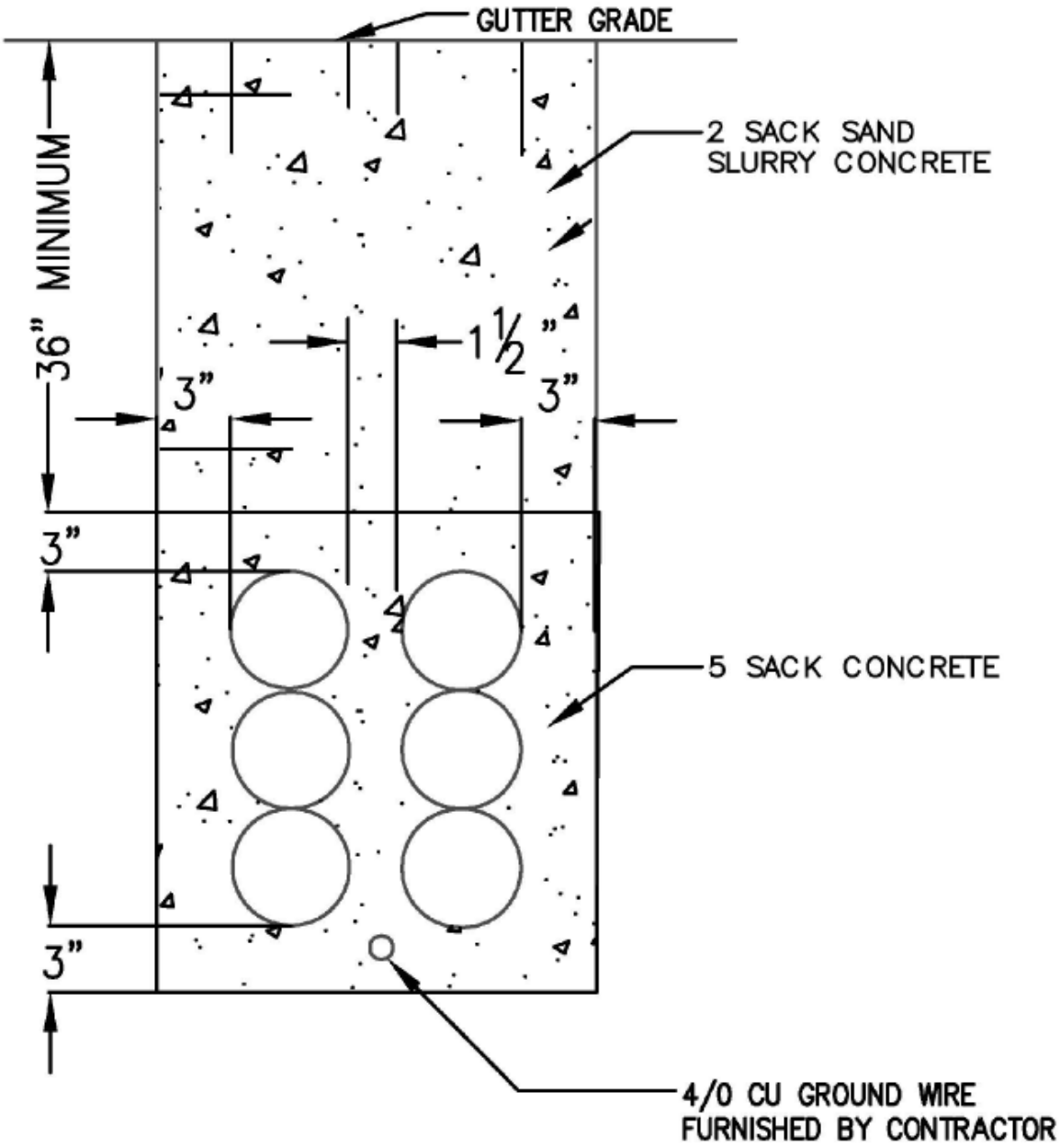

TYPICAL DUCT BANK SECTION
(NOT TO SCALE)

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SUBTRANSMISSION DUCT BANK DETAIL

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Figure
3.5-2

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EXISTING MOORPARK SUBSTATION AREA

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Figure
3.5-3a

MAP SOURCE: http://server.arcgisonline.com/arcgis/services

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EXISTING NEWBURY SUBSTATION AREA

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Figure
3.5-3b

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3.5.4.1.4 Substation Parking Area

Parking at the existing substations would not be modified as part of the Project.

3.5.4.1.5 Substation Grading

No additional grading at existing substations would be required to accomplish the substation work discussed in this section.

3.5.4.1.6 Substation Drainage

Drainage at the existing substations would not be modified as part of the Project.

3.5.4.1.7 Ground Surface Improvements

No additional ground surface improvements would be required to accomplish the substation work discussed in this section.

3.5.4.1.8 Substation Lighting

No new lighting would be installed as part of the Project.

3.5.4.1.9 Substation Perimeter

With the exception of the gate realignment at Newbury Substation discussed above, there would be no other permanent modifications to walls or fencing at the existing substations as part of the Project.

3.6 Right-of-Way Requirements

The Project would be built entirely within existing ROWs, easements, public ROWs, and on existing SCE fee-owned property. In addition, appropriate permits, licenses, and/or property rights would be obtained for flood control, railway and highway crossings.

If temporary construction access is needed, SCE would work with property owners to secure appropriate rights or permission.

3.7 Construction

The following subsections describe the past and future construction activities associated with the Moorpark-Newbury 66 kV Subtransmission Line Project.

3.7.1 For All Projects

3.7.1.1 Staging Areas

SCE plans to utilize two portions of SCE's Moorpark Substation property as staging areas for crew assembly and materials staging. The staging areas may be used as a reporting location for workers and as a parking area for vehicles and equipment. The Moorpark Substation has offices for supervisory and clerical personnel, and is fenced and lit for staging and security. Electricity for the lighting at Moorpark Substation would be obtained from the SCE electrical grid.

The two staging areas at Moorpark Substation are both 'L' shaped and have maximum dimensions of approximately 155 yards by 125 yards (Moorpark Substation #1) and approximately 100 yards by 80 yards (Moorpark Substation #2); these areas cover approximately 3.3 acres and 1.7 acres respectively. The Moorpark Substation staging areas would require no site preparation, as the staging areas are located on rock- or gravel-covered areas and other previously-disturbed areas within the substation.

SCE may identify an additional or substitute staging area(s) prior to the start of future construction activities; additional staging areas would be identified and established as needed to optimize construction efficiency. These staging areas would not be fenced or lit. Typically, these additional staging areas would be 2 to 10 acres in size and located on previously disturbed land in the vicinity of the Project, depending on land availability and intended use. Normal maintenance of construction equipment could be conducted at these staging areas. Materials stored at the staging areas may include the following:

- construction trailers
- construction equipment
- steel poles
- wire reels
- hardware
- insulators
- cross arms
- signage
- consumables (such as fuel and filler compound)
- BMP materials, (i.e., straw wattles, gravel, and silt fences)
- portable sanitation facilities
- waste materials for salvaging, recycling, or disposal

A majority of materials associated with the construction efforts would be delivered by truck to the Moorpark Substation staging area, while some materials may be delivered directly to temporary construction laydown areas.

Contractor construction personnel would be managed by SCE construction management personnel and based out of the Contractor's existing yard, the Moorpark Substation staging area, or one or more additional staging areas set up for the Project.

3.7.1.1.1 Vehicle Maintenance and Refueling

Normal maintenance and refueling of construction equipment and fuel storage by SCE personnel may occur at Thousand Oaks Service Center, Valencia Service Center or Ventura Service Center. All refueling and storage of fuels would be in accordance with site-specific stormwater permits.

3.7.1.1.2 Construction Laydown Areas

Construction laydown areas serve as temporary areas where project related equipment and/or materials are placed within SCE ROW or franchise. Construction laydown areas would be accessed by construction vehicles using the established access road network. Table 3.7-1 identifies the potential locations of the construction laydown areas and the areas that they would occupy; the dimensions of work areas vary depending upon need and local site conditions.

Several construction laydown areas were established for past construction activities; it is likely that these same areas would be utilized for future activities, but this decision would depend on field conditions at the time of future construction activities. Previously-established construction laydown areas may require only light grading/brushing prior to future use; construction laydown areas are sited, where possible, in areas that are previously disturbed and that require limited grading.

Materials commonly located at the construction laydown areas along the subtransmission line would include, but not be limited to, construction equipment, portable sanitation facilities, foundation cages, steel bundles, steel/wood poles, conductor reels, hardware, insulators, cross arms, signage, consumables, waste materials for salvaging, recycling, or disposal, and BMP materials (straw wattles, gravel, and silt fences).

At the completion of future construction activities, construction laydown areas would be restored to preconstruction conditions or to the landowner's requirements.

Table 3.7-1: Staging Yards, Construction Laydown Area, and Helicopter Landing Zone Locations

Yard Name	Location	Pre-Project Condition	Approximate Area	Project Component
Moorpark Substation #1	Northwest corner of Gabbert Road and Los Angeles Avenue. (Northeast portion of substation property)	Disturbed	1.7 acres	Staging Yard
Moorpark Substation #2	Northwest corner of Gabbert Road and Los Angeles Avenue. (Southwest portion of substation property)	Disturbed	3.3 acres	Staging Yard
Moorpark Substation Landing Zone	Northwest corner of Gabbert Road and Los Angeles Avenue. (Northwest portion of substation property)	Disturbed	0.28 acres	Helicopter Landing Zone (LZ)
COSCA #1	COSCA-owned Lands in Project Section 3 / Pole Locations 35 and 36	Disturbed	1.5 acres	Construction Laydown Area
COSCA #2	COSCA-owned Lands near Project Section 3 / North of Pole Location 37	Disturbed	0.1 acre	Helicopter LZ
Shapell Industries	Privately-owned Land East of Project Section 4 / Pole Location 41	Disturbed	0.1 acre	Helicopter LZ
Fitzgerald Ranch	West of Pole Location 28	Disturbed	0.1 acre	Helicopter LZ
Newbury Substation	North of Pole Location 64	Disturbed	0.2 acre	Construction Laydown Area

3.7.1.2 Work Areas

3.7.1.2.1 Construction Work Sites

Construction work sites are areas established at pole locations. Construction work sites would typically be developed with maximum dimensions of approximately 200 feet by 150 feet. However, for past activities on the Project between October 2010 and November 2011, most work sites were smaller due to site topography and other environmental resource constraints.

A construction work site generally includes, but is not limited to, sites for the staging, assembly and erection of the TSPs or LWS poles, and sites for equipment pads. Construction work sites include those sites that were mechanically disturbed (e.g., bladed or graded) during past construction activities. In most cases, access and spur roads may overlap with the construction work site. During construction, personnel may walk in areas outside of construction work sites after such areas have been surveyed as described in Section 3.9; similarly, equipment may extend in the air beyond anticipated boundaries without additional ground disturbance (such as in the case of a crane boom or arm).

The majority of the area disturbed for the construction work sites would be permanently disturbed as these sites would continue to be used during operation and maintenance of the subtransmission line; any sites that would not be permanently disturbed would be restored to preconstruction conditions or to the landowner's requirements following the completion of construction for the Project.

3.7.1.3 Access and Spur Roads

Subtransmission line roads are classified into two groups: access roads and spur roads. Access roads are through roads that run between structure sites along a ROW and serve as the main transportation route along the ROW. Spur roads branch from access roads and terminate at one or more structure sites. Access roads are accessed from paved public and private roads (Table 3.7-2).

Table 3.7-2: Access and Spur Roads

Type of Road	Description	Area
New Permanent Road	Not applicable	0
New Temporary Road	Not applicable	0
Existing Access Roads that would have Permanent Improvements	Dirt roads used for down-line access. Are graded as part of operations and maintenance. Majority of access roads may require only light grading and vegetation removal prior to construction. Limited sections may require widening at curves or heavier grading.	9.15 miles
Existing Roads that would have Temporary Improvements	Not applicable	0
Existing Paved Roads	State, county, and city paved roadways would be used to access Moorpark Substation, Newbury Substation, and the subtransmission access road network. No upgrades or maintenance would be performed on these roadways as part of the Project.	NA
New Spur Roads	Dirt roads used to access structure locations. Only a single new spur road, 100 feet in length, was constructed.	0.04 acres
Existing Spur Roads	Dirt roads used to access structure locations. The majority of spur roads require only light grading and vegetation removal prior to construction. Some spur roads may require widening or heavier grading.	Included in Existing Access Roads
Overland Access	No preparation required. No restoration required. No overland access necessary as part of Project.	0

Access to the Project's 66 kV subtransmission lines for construction, operation and maintenance activities would be accomplished by using a network of approximately 9.15 miles of existing dirt access roads and existing spur roads. Only one new spur road, approximately 100 feet in length, was constructed during past construction activities (Figures 3.7-1a and 3.7-1b). Access and spur roads are primarily located within existing ROWs or covered under easements.

Between October 2010 and November 2011, existing access and spur roads were rehabilitated; rehabilitation work included regrading and repair of existing access and spur roads. These roads were cleared of vegetation; blade-graded to remove potholes, ruts, and other surface irregularities; and re-compacted to provide a smooth and dense riding surface capable of supporting heavy construction equipment. The equipment used to rehabilitate the access and spur roads is listed in Table 3.7-8a and 3.7-8b, and included: a Backhoe/Front Loader, Track Type Dozer, Compact Track Loader, Motor Grader, and a Drum Type Compactor among others.

In some locations along the access road network, more extensive rehabilitation was necessary, including:

- Widening of the existing roadbed at curves and other locations
- Installing new, or repairing existing, drainage structures such as water bars, overside drains and pipe culverts to prevent road damage due to uncontrolled water flow
- Repairing and stabilizing slopes to prevent future failures: a Hilfiker retaining wall was installed adjacent to pole location 38, a soldier-pile wall was installed between pole locations 12 and 13, and jute soil erosion control mats were installed adjacent to pole locations 38, 39, and 40. (Figures 3.7-1a and 3.7-1b)

The Hilfiker retaining wall (adjacent to pole location 38) was installed using construction methods recommended by the manufacturer. In summary, the area was excavated to a depth where competent, stable soils were encountered. The area was graded/leveled, and a first layer of welded-wire mesh and backing mats were placed on the leveled soil. Excavated soil was then backfilled in loose lifts to achieve the necessary compaction to the top of the welded-wire mesh. A second layer of welded-wire mesh and backing mats were then placed on top of the compacted soil, and the process repeated until the desired grade was achieved. The Hilfiker retaining wall is approximately 140 feet long, and ranges in height from 4 to 16 feet.

The soldier-pile wall (between pole locations 12 and 13) is approximately 60 feet long and approximately 3 feet tall. It was constructed to widen an existing access road and to replace a deteriorated retaining wall constructed of railroad ties. A soldier-pile wall is constructed of structural steel columns (e.g., I-beams) either driven into the ground or placed in pre-drilled holes. Lagging (timber planks) are placed between the structural steel columns in the spaces in the I-beams to retain the earth behind the wall.

Jute soil erosion control mats were placed adjacent to pole locations 38, 39, and 40. These mats were installed by hand. A small trench was dug by hand at the top of the slope, and the mats keyed-in to the slope by burying the end of the mat in this trench. The mats were then unrolled down the slope, and secured by steel staples.

Prior to the restart of Project construction, some segments of the existing access and spur roads and work areas may be rehabilitated to facilitate the safe movement of construction vehicles and personnel. At present, future construction activities are projected to require only minor rehabilitation work to most existing access and spur roads; this work would be necessary due to the time elapsed between past and future construction activities.

3.7.1.4 Helicopter Access

A single LWS pole at pole location 41 was installed using a light-duty (Hughes 500E type) helicopter during past construction activities; no LWS poles or TSPs are planned to be installed using helicopters during future construction activities. A Hughes 500E or similar light-duty helicopter would be used during future construction activities to facilitate construction, including during the stringing of conductor, dependent upon recommendations by the installation contractor. This helicopter type may also be used to install marker balls on

conductor, where appropriate. Helicopter payloads would include marker balls and a sock line to be used during wire stringing.

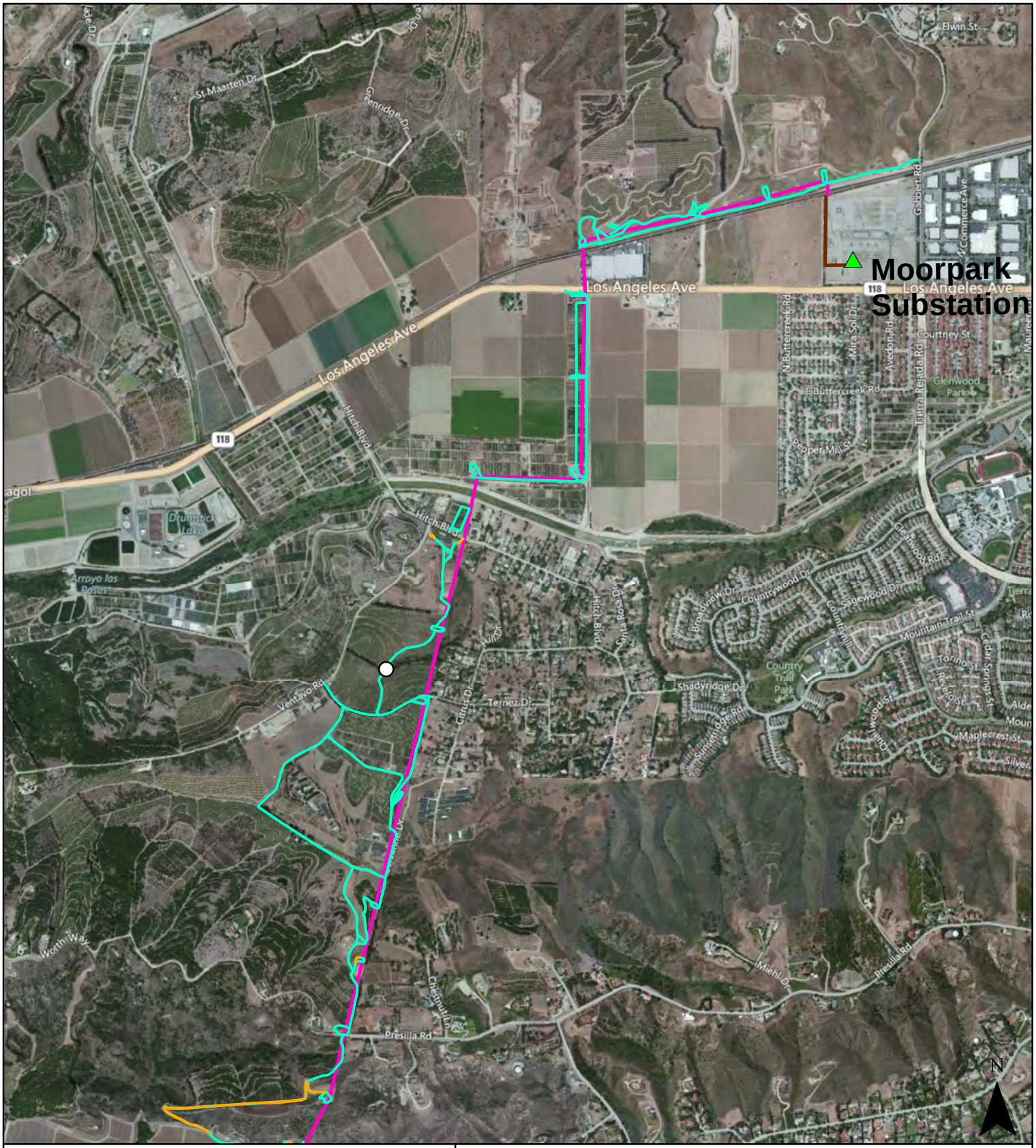
Helicopters would be staged from Camarillo Airport, SCE's Air Operations in Chino, or from a contractor's facility. The operations area of the helicopters would be limited to the Project area including: Moorpark Substation; identified helicopter landing zones as identified in Table 3.7-1; ground locations in close proximity to conductor pulling, tensioning, and splice sites; and in previously disturbed areas near construction sites. In addition, helicopters must be able to land within or near SCE ROWs, which could include landing on access or spur roads. It is also assumed that for safety and security concerns at night or on non-working days, helicopters and their associated support vehicles and equipment may be based at Camarillo Airport, a contractor's facility, or SCE's Air Operations in Chino. During future construction activities, helicopters may, if necessary, be refueled at helicopter landing zones.

SCE anticipates that if helicopters are used, SCE would use a helicopter contractor. Typically, the awarded contractor would develop a project-specific helicopter use plan. The project-specific use plan would be reviewed by SCE to ensure industry best management practices are met. Flight paths would be determined immediately prior to construction by the helicopter contractor. Flight paths would be filed with the appropriate authorities as necessary. Helicopters would be operated within the Project area between the hours of 7:00 a.m. and 7:00 p.m.

3.7.1.5 Vegetation Clearance

Construction of the Project incorporates SCE's existing access roads and existing and new spur roads, as well as stringing sites, construction laydown areas, and construction work areas along the alignment that are topographically gentle and already disturbed, thereby requiring only minor vegetation clearing.

As presented in Section 3.9.2 and Section 4.4, prior to past vegetation removal, clearance surveys and focused surveys were conducted prior to construction, including in orchards and in areas with sensitive species; if nesting birds or sensitive species were discovered, the area was flagged and avoided. The vegetation types within the blade-graded areas were primarily ruderal as determined during clearance surveys.



SOUTHERN CALIFORNIA EDISON
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VENTURA COUNTY, CALIFORNIA
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ACCESS ROADS AND CONTROL FEATURES (NORTH)

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Figure **3.7-1a**

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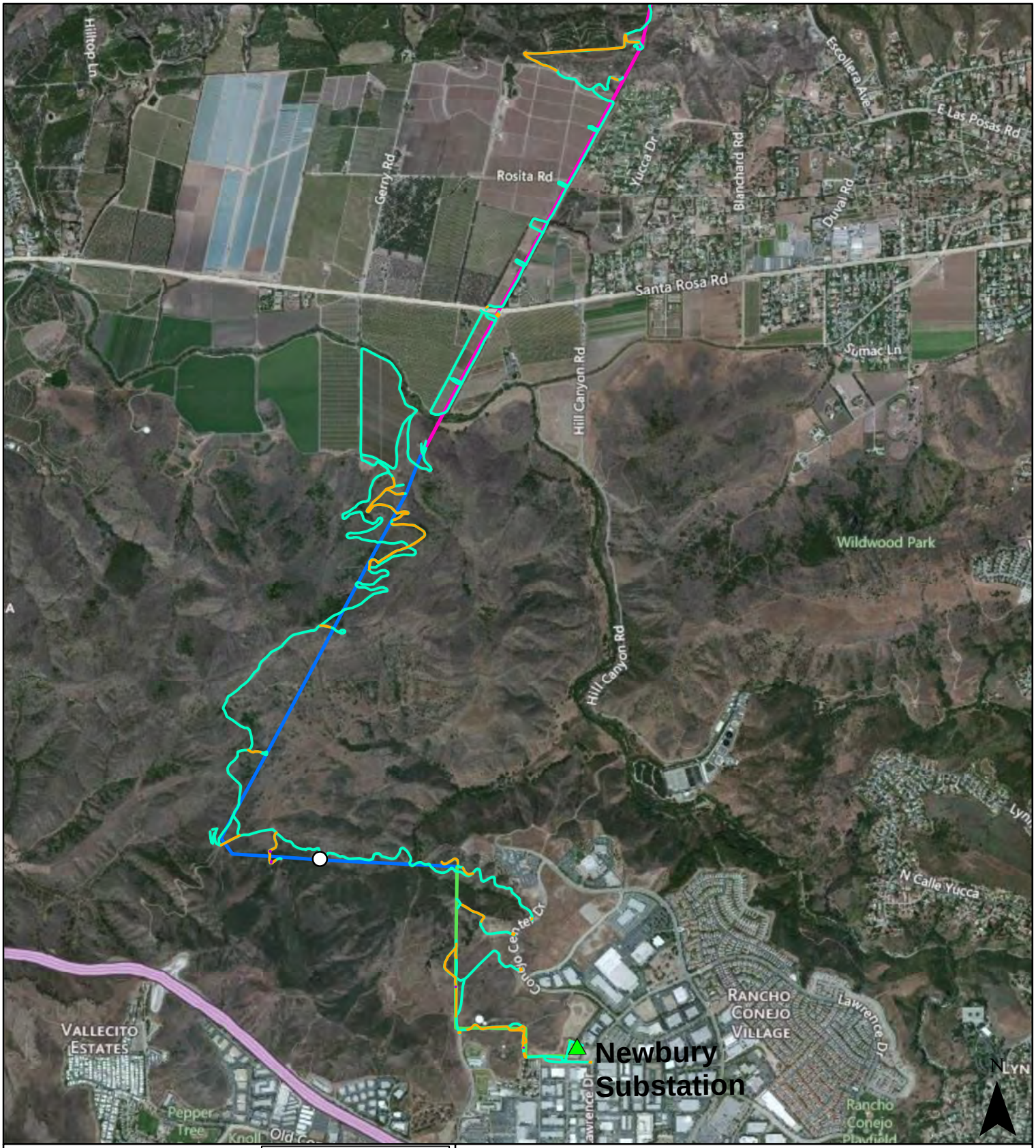

- Substation
- Access and Spur Roads
- Areas of Road Rehabilitation
- Erosion Control Features/Drains
- Retaining Wall

Project Sections

- Project Section 2
- Project Section 3
- Project Section 4

0 0.125 0.25 0.5 Miles

Source: CDMG 1999a; Dibblee 1992

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

ACCESS ROADS AND CONTROL FEATURES (SOUTH)

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Figure **3.7-1b**

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During past construction activities, no vegetation was removed in Project Section 1 due to the section being wholly within the Moorpark Substation. In Project Sections 2, 3, and 4, low-lying vegetation was trimmed and/or removed from the edges of access roads and spur roads as necessary during road rehabilitation; low-lying vegetation was also trimmed and/or removed at stringing sites, construction laydown areas, and construction work areas. Vegetation removal in some areas consisted of "brushing" (i.e., shrubs and other low-lying vegetation within approximately 2-5 feet of the edge of access or spur roads were removed to prevent vegetation from intruding into the roadway). Brushing was generally accomplished using a mower-type attachment mounted to a tractor; in some instances, areas may have been brushed by individuals using heavy-duty "weed whacker" type equipment. A motor grader was also utilized to blade- grade roads to remove potholes, ruts, and other surface irregularities. To establish the COSCA #1 laydown area, a mower-type attachment mounted to a tractor was also utilized.

Blade-grading, mowing, or brushing may also occur during future construction activities in Project Sections 2, 3, and 4 depending upon the condition of the access roads, spur roads, and construction work sites; vegetation that has grown in these areas in the period between past construction activities and future construction activities would be trimmed and/or removed.

To facilitate safe construction, some trees were trimmed or removed for vehicle access and equipment placement, and to create an approximately 100-foot long new spur road. Additionally, to maintain proper clearances under GO 95 (Rule 35), trees were either removed or trimmed, depending on the type and height, and in consultation with the project arborist and/or biologist with regard to permits and monitoring. Concurrent with the tree removal conducted during past construction activities, trees that encroached into the adjacent 220 kV right-of-way were also removed.

Trees that are directly under the new line and of a variety that could grow into the lines are typically removed. For trees that are adjacent to and could interfere with the new line, the decision to trim or remove specific trees would be based on the recommendation of the project arborist and/or biologist and would depend on the type, size, location and condition of the trees.

For the project construction and to maintain proper clearances under GO 95, approximately 94 eucalyptus trees were trimmed or removed. Two of the eucalyptus trees that were removed in Project Section 2 required a permit from Ventura County (see Permit No. AD11-0091). Eighteen of the eucalyptus trees that required trimming also required a ministerial tree permit from Ventura County (see Permit No. AD11-0091). Based on the Ventura County ordinance, it was determined that the remaining trees trimmed or removed did not require a permit. Typical arborist equipment (e.g., bucket trucks, chainsaws, chippers, etc.) was used to trim and remove trees.

In addition, approximately 42 cottonwood trees were removed in Project Section 2, of which 35 required a ministerial tree permit from Ventura County (see Permit No. AD11-0099).

Other trees that were removed to support construction in Project Section 2, for which ministerial tree permits were not required, included the following (all numbers are

approximate): 36 citrus, 2 palm, and 62 avocado. Typical arborist equipment (bucket trucks, chainsaws, chippers, etc.) was used to trim and remove trees. In Project Section 3, a few small willows from a single culvert were removed with a backhoe, in conjunction with the installation of a downdrain.

During future construction activities, no vegetation clearance is expected to occur within Project Section 1. In portions of Project Section 2, some tree trimming and/or removal may be necessary due to the time lapse between the tree trimming and removal during past construction activities, and the re-start of the future activities. Tree removal or trimming will depend on the type and size of the tree, and its location relative to construction work areas, and/or interference with GO 95. Currently, there is one eucalyptus tree located just north of SR-118 (Los Angeles Avenue) that will need to be removed; along Montair Drive, approximately 10 to 12 carrotwood trees would need to be trimmed, and two to three pine trees would need to be removed. There are no trees that will be removed or trimmed in Project Section 3.

In Project Section 4, within the outer fenceline of the Newbury Substation, approximately 30 to 40 existing trees will require trimming or removal to facilitate construction. Most of the trees are ornamental species. They would be trimmed or removed using typical arborist equipment (e.g., bucket trucks, chainsaws, chippers, etc.).

Permits for tree removal and trimming for future construction would be acquired from the City of Moorpark, City of Thousand Oaks, and Ventura County as appropriate.

3.7.1.6 Erosion and Sediment Control and Pollution Prevention During Construction

3.7.1.6.1 Land Disturbance, Project Summary

Land disturbance would include all areas mechanically disturbed by construction of the Project. It is estimated that the total permanent land disturbance for the Project would be approximately 6.3 acres. It is estimated that the Project would temporarily disturb approximately 18.3 acres. The land disturbance estimates presented in Tables 3.7-3, 3.7-4a, and 3.7-4b are conservative, in that some elements overlap each other (for instance, TSP construction areas may overlap onto access roads, and wood pole removal areas are generally completed contained within either TSP or LWS construction areas). The estimated amount of land disturbance for each project component is summarized in Table 3.7-3.

3.7.1.6.2 Land Disturbance and Impervious Surfaces, Summary

The anticipated approximate land disturbance associated with each of the major components of the Project is summarized in Table 3.7-3; the approximate area of new impervious surfaces is shown in Table 3.7-5.

Table 3.7-3: Moorpark-Newbury 66 kV Subtransmission Line Project Approximate Land Disturbance Summary

Project Element[1]	Acres Disturbed During Construction	Acres Temporarily Disturbed	Acres Restored/ To Be Restored	Acres Permanently Disturbed[2]
Past Activities				
Substation	0	0	0	0
Subtransmission	14.5	7.9	0.3	6.3
Future Activities				
Substation	0	0	0	0
Subtransmission	1.61	1.61	0.08	- 0.08

Notes:

1. No substation- or subtransmission related disturbance areas are shown for work conducted within the fencelines at Moorpark Substation or Newbury Substation because this work was and would be conducted on previously-disturbed SCE-owned lands dedicated to utility functions.
2. Please see footnotes 2, 3, 4, 5 and 7 to Table 3.7-4a for more information.

The estimated land disturbances associated with subtransmission work that has previously occurred (past activities) is presented in Table 3.7-4a; as shown in Table 3.7-4a, the large majority of these land disturbances would be permanent, as the access and spur roads and construction work sites would be maintained (e.g., graded) on a regular basis for the use of operations and maintenance personnel.

Stringing setup areas and construction work sites at all TSP installation and LST removal sites were established during the past activities; these areas are currently being maintained, and would need only minor brushing prior to future construction activities. Similarly, the access and spur roads used during past activities would continue to be maintained, and would not require any additional work prior to or during the proposed future activities. As a result, there would be no ground disturbance associated with these areas as a result of the future activities. The disturbances associated with the Project's future activities are shown in Table 3.7-4b.[13]

[13] All data provided on Table 3.7-4b is based on planning level assumptions and may change based on any of the following: the completion of preliminary and final engineering; any updates and/or changes in Project scope; any updates and/or changes to the Project description; any changes to existing field conditions and/or the identification of yet unknown field conditions; outage constraints; the availability of labor, material, and equipment; as well as any constraints caused by environmental and/or permitting requirements.

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Table 3.7-4a: Subtransmission Approximate Land Disturbance Table, Past Activities

Project Feature	Sites or Miles	Area Disturbed During Past Construction Activities (Acres)	Area Restored During Past Construction Activities (Acres)	Area Permanently Disturbed by Past Construction Activities (Acres)
Rehabilitate Existing Access and Spur Roads [1]	20.9 Miles	4.82	0	4.82
Construction Work Site – Install TSPs [2]	39 Sites	5.92	0.30	1.32
Construction Work Site – Install LWS Poles [3]	27 Sites	0.44	0	0.15
Construction Work Site – Remove Wood Poles [4]	27 Sites	NA	NA	NA
Stringing Sites [5]	10 Sites	5.42	0	NA
Construction Work Site – Guard Locations [6]	0 Sites	0	0	0
Construction Work Site – Remove Existing LSTs [7]	14 Sites	0.08	0	0
Total Disturbed[8,9]		14.46	0.30	6.27

Notes:

1. Note that only 2.7 miles of the network of access and spur roads required rehabilitation to facilitate the past construction activities; the 4.8 acres of disturbance was located along these 2.7 miles of access and spur roads, and includes the area disturbed to construct a single new approximately 100-foot long spur road.
2. Includes foundation, structure assembly and erection. Most TSPs installed in areas already disturbed/kept clear of vegetation in the Moorpark-Ormond Beach 220 kV Transmission Line ROW; some TSP construction work sites and conductor stringing setup areas overlap existing access and spur road locations. Thus, no new temporary or permanent disturbance resulted from construction in these areas. Total disturbance associated with construction areas = 5.12 acres. Portion of ROW generally within 25' radius of each TSP to remain cleared of vegetation; the permanently disturbed areas for each TSP = 0.06 acre. Only 22 TSPs were partially or fully installed during past construction activities, so permanent disturbance = 22 x 0.06. Note that 'Construction Area' is defined as the area that is mechanically disturbed (e.g., those areas that are bladed or graded). The 5 TSP installation sites on the Moorpark Substation and Newbury Substation did not require the establishment of a construction work site.
3. Most LWS poles were installed adjacent to the access roads, and thus the access road was used as the construction area for the installation of the LWS poles. Total permanent disturbance associated with construction areas = 0.15 acres of land off the access roads.
4. The areas used to remove wood poles are the same as the areas used for installation of LWS poles. Therefore, to avoid double-counting, no disturbance or restoration has been included in this table for the removal of wood poles.
5. Some conductor stringing setup areas overlap existing access and spur road locations. All stringing setup areas needed for the Project were established during past construction activities.
6. No guard structures were installed during past construction activities.
7. The area disturbed during past construction activities for removal of the LST between new TSP locations 39 and 40 (0.08 acres) would be restored following final construction activities; therefore, the restoration acreage has been accounted for on Table 3.7-4b as part of future activities. This restoration is not associated with the HMRP discussed in Section 4.4.
8. Duct bank trenching, duct bank installation, and vault installation at Moorpark Substation is not included here; this work was conducted on previously-disturbed SCE-owned lands dedicated to utility functions.
9. TSP construction areas and stringing setup areas established during past construction activities have been stabilized per the Project SWPPP, but would be considered restored only following the end of the future construction activities.

Table 3.7-4b: Subtransmission Approximate Land Disturbance Table, Future Activities

Project Feature	Sites or Miles	Area to be Disturbed During Future Construction (Acres)	Area to be Restored (Acres)	Area Permanently Disturbed (Acres)
Rehabilitate Existing Access and Spur Roads [1]	0 Miles	0	0	0
Construction Work Site – Install TSPs [2]	22 Sites	0	0	0
Construction Work Site – Install LWS Poles [3]	2 Sites	0	0	0
Construction Work Site – Remove Wood Poles [4]	6 Sites	0	0	0
Stringing Sites [5]	0 Sites	0	5.42	0
Construction Work Site –Guard Locations [6]	14 Sites	1.61	1.61	0
Construction Work Site – Remove Existing LSTs [7]	14 Sites	0	0.08	- 0.08
Total Disturbed [8]		1.61	7.11	- 0.08

Notes:

1. No additional rehabilitation of access or spur roads is anticipated prior to the start of future construction activities other than light brushing that may be required within the previously-disturbed construction areas.
2. 22 new TSPs would be installed utilizing construction areas developed during past construction activities. Some TSP construction work sites overlap existing access and spur road locations rehabilitated during past activities. All disturbances associated with TSP installation are captured on Table 3.7-4a.
3. All LWS poles to be installed during future activities would be located within the fenceline of Newbury Substation and would not require the establishment of a construction work site.
4. Includes the removal of existing conductor, disassembly and removal of existing wood pole. All wood poles to be removed during future activities are located within the fenceline of Newbury Substation and would not require the establishment of a construction work site.
5. The ten stringing setup areas established during past construction activities may be used during future construction activities; these disturbance areas are accounted for on Table 3.7-4a. Additional stringing setup areas, if needed, would be established on existing access roads and in areas within the Moorpark-Ormond Beach 220 kV Transmission Line ROW.
6. As a conservative accounting measure, temporary disturbance areas for guard structures have been assumed. The disturbed acreage calculations for installing guard structures are estimates based upon SCE's preferred area of use for the described project feature, the width of the existing ROW, or the width of the proposed ROW and, they do not include any new access/spur road information; they are subject to revision based upon final engineering and review of the project by SCE's Construction Manager and/or Contractor awarded project. In some cases, the wood poles could be substituted with the use of specifically-equipped boom trucks which would not require land disturbance.
7. The construction areas used for removing existing LSTs were established as part of past construction activities, and have been maintained since then; therefore, there would be no additional land disturbance for these activities during future construction activities. The area disturbed during past construction activities for removal of the LST between TSP locations 39 and 40 (0.08 acres) would be restored following final construction activities. This restoration is not associated with the HMRP discussed in Section 4.4.
8. Duct bank trenching, duct bank installation, and vault installation at Moorpark Substation is not included here; this work was conducted on previously-disturbed SCE-owned lands dedicated to utility functions.

Table 3.7-5: Change in Impervious Surfaces

Element	Surface Type	Approximate Area, Square Feet
TSP Foundations	Concrete	2,210
LWS Poles	Steel	0
Moorpark Substation, Switchrack Foundations	Concrete	100
Newbury Substation, Switchrack Foundations	Concrete	96

Note: LWS poles have and would replace existing wood poles on a one-for-one basis; the LWS and wood poles have similar dimensions. Thus, the impervious surface area of newly-installed LWS poles is equivalent to the impervious surface area accounted for by the replaced wood poles, and hence the '0' change in impervious surface area accounted for by LWS poles.

Note also that footings of existing LSTs would be removed during future construction activities, thus returning these current impervious surfaces to a pervious condition.

3.7.1.6.3 Permits[14]

SCE applied for and obtained a number of permits prior to and during the past construction activities. These included:

- State Water Control Resources Board: National Pollution Discharge Elimination System Construction General Permit
- Caltrans: Encroachment Permit
- California Department of Fish and Game: 1602 Streambed Alteration Agreement
- County of Ventura: Encroachment Permit
- County of Ventura: Ministerial Tree Permits (2)
- Ventura County Watershed Protection District: Encroachment Permits (2)
- City of Thousand Oaks: Encroachment Permit
- City of Thousand Oaks: After-Hours Work Permit

[14] SCE notes that in the CPUC's "Working Draft Proponent's Environmental Assessment (PEA) Checklist for Transmission Line and Substation Projects," dated November 2008, Section 3.7.1.6, the CPUC requests that applicants "[l]ist all known permits required." Therefore, SCE has included all permits applied for during Past Activities, or those that may be applied for prior to or during Future Activities, in this section. No Federal permits have been, or need to be, obtained for the Project.

SCE would apply for and obtain the following permits in support of future construction activities as appropriate:

- State Water Control Resources Board: NPDES Construction General Permit
- Caltrans: Encroachment Permit(s)
- County of Ventura: Encroachment Permit(s)
- County of Ventura: Ministerial Tree Permit(s)
- Ventura County Watershed Protection District: Encroachment Permit(s)
- City of Moorpark: Encroachment Permit(s)
- City of Thousand Oaks: Encroachment Permit(s)
- City of Thousand Oaks: After-Hours Work Permit(s)
- Union Pacific Railroad: Railroad Crossing Permit(s)

3.7.1.6.4 Stormwater Pollution Prevention Plan

Construction of the Project would disturb a surface area greater than one acre. Therefore, SCE would comply with the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ from the State Water Resources Control Board (Construction General Permit). Commonly used BMPs would include stormwater runoff quality control measures (boundary protection), dewatering procedures, and concrete waste management. Compliance coverage under the Construction General Permit would be based on final engineering design.

Past construction activities were completed under the Construction General Permit (SWRCB Order 2009-0009-DWQ as amended by 2010-0014-DWQ) and an approved stormwater pollution prevention plan (SWPPP; WDID# 4 56C359579). This SWPPP has been closed-out.

Typical BMPs that were implemented during past construction activities, and that may be implemented during future construction activities, are presented in Table 3.7-6 below.

Table 3.7-6: Typical Best Management Practices

Erosion Control/Soil Stabilization BMPs	
EC-1: Scheduling EC-2: Preservation of Existing Vegetation EC-4: Hydroseeding EC-5: Soil Binders	EC-7: Geotextiles and Mats SE-4: Check Dams EC-10: Velocity Dissipation Devices EC-11: Slope Drains
Sediment Control BMPs	
SE-5: Fiber Rolls SE-6: Gravel Bag Berm	SE-7: Street Sweeping and Vacuuming SE-10: Storm Drain Inlet Protection
Wind Erosion Control BMP	
WE-1: Wind Erosion Control	
Tracking Control BMP	
TC-1: Stabilized Construction Entrance/Exit	
Non-Stormwater Management BMPs	
NS-2: Dewatering Practices NS-6: Illicit Connection/Discharge NS-9: Vehicle and Equipment Fueling	NS-10: Vehicle and Equipment Maintenance NS-12: Concrete Curing
Waste Management and Materials Pollution Controls	
WM-1 : Material Delivery and Storage WM-2: Material Use WM-3: Stockpile Management WM-4: Spill Prevention and Control WM-5: Solid Waste Management	WM-6: Hazardous Waste Management WM-7: Contaminated Soil Management WM-8: Concrete Waste Management WM-9: Sanitary/Septic Waste Management

Source: Stormwater Pollution Prevention Plan for Construction Activities, California 2009-0002-DWQ Construction General Permit: Moorpark-Newbury 66 kV Linear Project

3.7.1.6.5 Dust Control

During construction, migration of fugitive dust from construction sites would be limited in accordance with Ventura County Air Pollution Control District (VCAPCD) Rule 55, as further discussed in Section 4.3.

3.7.1.6.6 Hazardous Materials

Construction of the Project would require the limited use of hazardous materials such as fuels, lubricants, and cleaning solvents. All hazardous materials would be stored, handled, and used in accordance with applicable regulations. Safety Data Sheets would be made available at the construction site for all crew workers.

3.7.1.6.7 Construction Waste

Construction of the Project would result in the generation of various waste materials, including wood, metal, soil, vegetation, and sanitation waste (portable toilets). Sanitation waste (i.e., human generated waste) would be disposed of in accordance with applicable requirements. Material from existing infrastructure that would be removed as part of the Project such as conductor, steel, concrete, and debris, would be temporarily stored in a staging yard as the material awaits salvage, recycling, or disposal.

The existing wood poles removed for the Project would be returned to the staging yard, and either reused by SCE, returned to the manufacturer, disposed of in a Class I hazardous waste

landfill, or disposed of in the lined portion of a municipal landfill which the Regional Water Quality Control Board (RWQCB) has approved for the disposal of treated wood waste.

Material excavated for the Project would either be used as fill, backfill for new TSP or LWS poles installed for the Project, made available for use by the landowner, or reused or disposed of off site in accordance with applicable requirements. If contaminated material is encountered during excavation, work would stop at that location and SCE's Spill Response Coordinator would be called to the site to make an assessment and notify the proper authorities.

3.7.1.7 Cleanup and Post-Construction Restoration

SCE would clean up areas temporarily disturbed by construction of the Project (which may include the material staging yard, construction setup areas, pull and tension sites, and splicing sites) to as close to pre-construction conditions as feasible, or to the conditions agreed upon between the landowner and SCE following the completion of construction of the Project.

Past Project construction activities partly involved improvements to existing roads to provide sufficient work areas for pole setting activities, which resulted in certain soil materials being deposited by SCE on sloped surfaces near pole locations 38, 39, and 40. During grading, some rocks at pole location 38 also dislodged and came to rest in approximately 0.02 acre in a small ephemeral drainage that is under the jurisdiction of the California Department of Fish and Wildlife (CDFW, at that time known as the California Department of Fish and Game, CDFG). This ephemeral drainage is a sub-tributary to Arroyo Conejo Creek. (See Section 4.4 for more discussion on this topic.)

As directed by CDFG in light of the rocks coming to rest in the drainage, SCE obtained a Streambed Alteration Agreement (SAA) which required the development of a Habitat Restoration and Monitoring Plan (HRMP) to guide the restoration of 0.48 acre of native coastal sage scrub at Project towers 38, 39, and 40 (see Appendix F to this PEA). The slopes were restored by taking the following steps:

- Installing appropriate erosion/sedimentation controls as outlined in the HRMP
- Removing loose soil from the slopes using an excavator or backhoe
- Hydroseeding with a native plant species seed mix
- Applying hydraulic mulch
- Installing soil erosion control mat (as directed)
- Irrigating to re-establish the native plant community
- Maintaining, repairing as necessary, and monitoring the restored areas

If additional restoration activities within sensitive habitats are necessary following future construction activities, a different habitat restoration and revegetation plan would be developed by SCE with the appropriate resource agencies and implemented after construction is complete.

3.7.2 66 kV Subtransmission Line Construction (Above Ground)[15]

3.7.2.1 Pull and Tension Sites

Pull and tension sites (stringing sites in SCE terminology) associated with the Project would be temporary and any land that may be disturbed at the stringing sites would be restored to preconstruction conditions or to the landowner's requirements following the completion of construction for the Project. The stringing sites require relatively level areas to allow for maneuvering of the equipment and, when possible, these sites would be located on existing roads and level areas to minimize the need for grading and cleanup. The approximate area needed for stringing sites is variable and depends upon terrain.

Wire pulls are the length of any given continuous wire installation process between two selected points along the line. Wire pulls are selected based on availability of dead-end structures, conductor size, geometry of the line as affected by points of inflection, terrain, and suitability of stringing sites. On relatively straight alignments, typical wire pulls occur approximately every 10,000 feet. When the line route alignment contains multiple deflections or is situated in rugged terrain, the length of the wire pull is diminished. Generally, stringing sites would be in direct line with the direction of the overhead conductors and established approximately a distance of three times the height away from the adjacent structure.

Each stringing operation consists of a puller set-up positioned at a stringing site on one end of a wire pull, and a tensioner set-up with a wire reel stand truck positioned at a stringing site at the other end of the wire pull. Approximately 15 stringing sites for overhead construction have been identified and established along the subtransmission line route (see Figure 3.4-1a for locations). The dimensions of stringing sites varies from site to site; the approximate land disturbance associated with these locations is found in Table 3.7-4a.

Conductor removed during reconductoring activities would be wound on spools and transported by truck to an SCE facility for recycling.

3.7.2.2 Pole Installation and Removal

Pole installation and removal would require the use of a variety of equipment as presented in Tables 3.7-4a and -4b; all construction vehicles and equipment would be moved to pole or tower installation or removal sites overland using the existing subtransmission access road network and spur roads. Pole installation and removal work would be conducted generally only during daytime hours (7:00 a.m. to 7:00 p.m.), Monday through Saturday.

[15] This construction description, plan, information, data, and associated tables are based on planning level assumptions and may change based on any of the following: the completion of preliminary and final engineering; any updates and/or changes in project scope; any updates and/or changes to the Project description; any changes to existing field conditions and/or the identification of yet unknown field conditions; outage constraints; the availability of labor, material, and equipment; as well as any constraints caused by environmental and/or permitting requirements.

3.7.2.2.1 Pole and Foundation Removal

The project would involve removing LSTs and wood poles, conductor and associated hardware. The number and type of structures previously removed and remaining to be removed is presented in Tables 3.7-6a and -7b.

LSTs and wood poles would be removed as described below.

- LST removal – For each structure to be removed, a work area would be required. Most structure removal activities would use the equipment pad or other previously disturbed areas established for structure installation. If previously disturbed areas adjacent to the structure are not available, an area would be cleared of vegetation and could be graded if the ground is not level. The crane could be positioned up to approximately 60 feet from the tower location to dismantle the tower. In limited circumstances helicopters may be used to dismantle the towers. Structures would be dismantled down to the foundations and the materials would be transported to a staging yard where they would be prepared for recycling.
- Footing removal – Footings would typically be removed 1-2 feet below grade and the holes would be filled with excess soil from the Project area and smoothed to match the surrounding grade. Footing materials would be transported to a construction yard where they would be prepared for disposal. Some footings may be left in place to prevent erosion from occurring.
- Wood pole removal – Wood poles would be removed utilizing a line truck with an attached boom. The removal would consist of the above and below-ground portions of the pole. Ground crew would hand excavate around the wood pole; a boom would be attached to the pole, and the pole would then be lifted out and placed on the ground or on a trailer. The wood pole would be transported by truck to an SCE facility for reuse or recycling. The holes left from removing the poles would be backfilled and compacted with soils that may be available as a result of the excavation for new poles, with excess soil from the Project area, or using imported fill as needed.

At the completion of LST, footing, and wood pole removal activities during future construction activities, these areas would be restored to preconstruction conditions or to the landowner's requirements.

Table 3.7-6a: Structures and Conductor Removed During Past Construction Activities

Location	Structures	Structure Foundations	Wire Type/ Circuit Length
Project Section 1	0	0	None
Project Section 2	0	0	None
Project Section 3	0	0	None
Project Section 4	27 Wood Subtransmission Poles	0	None

Table 3.7-6b: Structures and Conductor to be Removed During Future Construction Activities

Location	Structures	Structure Footings	Wire Type/ Circuit Length
Project Section 1	0	0	None
Project Section 2	0	0	None
Project Section 3	14 LSTs	56 (4 per LST)	653 ACSR/5 Miles
Project Section 4	6 Wood Subtransmission Poles	0	None

3.7.2.2.2 Top Removal

No poles would be topped as part of the Project.

3.7.2.2.3 Pole/Tower Installation

The types of equipment that would be used to complete the activities described in this subsection are shown on Table 3.7-8a and -8b. A summary of typical pole metrics is found in Table 3.7-7.

Structure Site Preparation

During past construction activities, construction work sites were established at all pole locations. Upon resumption of construction activities, these existing construction work sites would be re-graded (if necessary) and/or cleared of vegetation as required to provide a reasonably level and vegetation-free surface for structure installation. It is not anticipated that any additional construction work sites would be established to complete the Project; however, the decision to establish new construction work sites or equipment pads would ultimately be determined based on field conditions prior to the start of future construction activities.

If grading is necessary, sites would be graded such that water would run toward the direction of the natural drainage. In addition, drainage would be designed to prevent ponding and erosive water flows that could cause damage to the structure foundations. The graded area would be compacted to at least 90 percent relative density, and would be capable of supporting heavy vehicular traffic.

The construction work sites established during past construction activities would be permanently maintained (i.e., periodically graded and kept free of vegetation) to support future operations and maintenance.

TSP Foundation Construction

Structure foundations for each TSP would require a single drilled poured-in-place concrete foundation. The foundation diameters and depths for each of the structure foundations would depend on the soil conditions and topography at each site and would be determined during final engineering.

The foundation construction process begins with the drilling of the foundation hole. The hole would be drilled using truck- or track-mounted excavators with various diameter augers to match the diameter requirements of the structure type. TSPs for the Project would typically require an excavated hole approximately 6 feet to 8 feet in diameter and approximately 17 feet to 46 feet deep, resulting in an excavation volume ranging from 18 to 86 cubic yards. On average, each TSP foundation would project approximately 2 to 5 feet above ground level. Open excavations would be covered with steel plates. The excavated material would be used as described in Section 3.7.1.6.7.

Following excavation of the foundation hole, steel reinforced rebar cages would be set, survey positioning would be verified, and concrete would then be placed. Steel reinforced rebar cages may be assembled at staging yards and delivered to each structure location by flatbed truck or assembled at the job site. Depending upon the size of the TSP being constructed, soil conditions, and topography at each site, TSPs would typically require approximately 20 to 95 cubic yards of concrete delivered to each structure location.

Slight to severe ground caving is anticipated along the preferred route during the drilling of the TSP foundations due to the presence of loose soils or groundwater levels. The use of water, fluid stabilizers, drilling mud and/or casings would be made available to control ground caving and to stabilize the sidewalls from sloughing. If fluid stabilizers are utilized, mud slurry would be added in conjunction with the drilling. The concrete for the foundation is then pumped to the bottom of the hole, displacing the mud slurry. Mud slurry brought to the surface is typically collected in a pit adjacent to the foundation and/or vacuumed directly into a truck to be reused or disposed of off site in accordance with all applicable laws.

Concrete samples would be drawn at the time of pour and tested to ensure engineered strengths were achieved. A normally specified SCE concrete mix typically takes approximately 20 days to cure to an engineered strength. This strength is verified by controlled testing of sampled concrete. Once this strength has been achieved, crews would be permitted to commence erection of the structure.

Conventional construction techniques would generally be used as described above for new foundation installation. Alternative foundation installation methods would be used where conventional methods are not practical. In certain cases, equipment and material may be deposited at structure sites using helicopters or by workers on foot, and crews may prepare the foundations using hand labor assisted by hydraulic or pneumatic equipment, or other methods.

During construction, existing concrete supply facilities would be used; concrete would be mixed at the facility.

Prior to drilling for foundations, SCE or its contractor would contact Underground Service Alert to identify any underground utilities in the construction zone.

Tubular Steel Pole Installation

TSPs consist of multiple sections. The pole sections would be transported to each installation site by truck and placed in the construction work site at each pole location. Depending on conditions at the time of construction, the top sections may be configured with the necessary cross arms, insulators, and wire stringing hardware while the sections are on the ground, or may be configured after pole installation. A crane would be used to set each steel pole base section on top of one of the previously prepared foundations. If existing terrain around the TSP location is not suitable to support crane activities, an equipment pad would be constructed within the construction work site. When the base section is secured, the subsequent section of the TSP would be slipped together into place onto the base section. The pole sections may also be spot welded together for additional stability. Depending on the terrain and available equipment, the pole sections could also be pre-assembled into a complete structure prior to setting the poles. No special construction methods, including helicopter installation, would be used during future construction activities.

Lightweight Steel Pole Installation

Each LWS pole would require a hole to be excavated using either an auger or a backhoe; the holes would be excavated proximate to the existing wood pole alignment (each LWS pole would be installed within approximately 6 feet of the existing wood pole it replaces). Excavated material would be used as described in Section 3.7.1.6.7. LWS poles consist of separate base and top sections and may be placed in temporary laydown areas at each pole location. Depending on conditions at the time of construction, the top sections may be configured with the necessary cross arms, insulators, and wire-stringing hardware while the sections are on the ground, or may be configured after pole installation. The LWS poles would then be installed in the holes, typically by a line truck with an attached boom. When the base section is secured, the top section would be installed on top of it. Depending on the terrain and available equipment, the pole sections could also be assembled into a complete structure on the ground prior to setting the poles in place within the holes. All future LWS poles would be installed using this conventional construction methodology. No special construction methods, including helicopter installation, would be used during future construction activities; a single LWS pole at pole location 41 was installed using a helicopter during past construction activities.

Table 3.7-7: Summary of Typical Pole Installation Metrics

	Project (Approximate Metrics)
Pole Diameter at Base: LWS TSP	0 2-3 feet 6-8 feet
Auger Hole Depth: LWS TSP	 ~10 feet 17-46 feet
Permanent Footprint per Pole: LWS TSP	 0.04 acre 0.06 acre
Number of Poles: LWS TSP	 29 44
Average Construction Work Site: LWS Tangent Structure Work Areas LWS Dead End/Angle Structure Work Areas TSP Tangent Structure Work Areas TSP Dead End/Angle Structure Work Areas	 0.009 acre average 0.009 acre average 0.14 acre average 0.24 acre average
Total Permanent Footprint for Poles	~4.79 acres

3.7.2.3 Conductor/Cable Installation

Conductor installation (wire stringing activities) would be conducted in accordance with SCE common practices and similar to process methods detailed in the IEEE Standard 524-2003 (Guide to the Installation of Overhead Transmission Line Conductors). Wire stringing activities would occur along the length of Project Sections 1, 2, 3, and 4; wire stringing activities were previously conducted in Project Section 4.

To ensure the safety of workers and the public, safety devices such as traveling grounds, guard structures or specifically-equipped boom trucks, radio-equipped public safety roving vehicles, and linemen would be in place prior to the initiation of wire stringing activities. Advanced planning by supervision is required to determine circuit outages, pulling times, and safety protocols for ensuring that the safe installation of wire is accomplished.

Wire stringing includes all activities associated with the installation of the primary conductors onto subtransmission line structures. These activities include the installation of conductor, ground wire, insulators, stringing sheaves (rollers or travelers), vibration dampeners, weights, suspension and dead-end hardware assemblies for the entire length of the route.

The following five steps describe typical wire stringing activities:

- Step 1: Planning: Develop a wire stringing plan to determine the sequence of wire pulls and the set-up locations for the wire pull/tensioning/splicing equipment.
- Step 2, Option 1: Sock Line, Threading: A bucket truck is typically used to install a lightweight sock line from structure to structure. The sock line would be threaded through the wire rollers in order to engage a camlock device that would secure the pulling sock in the roller. This threading process would continue between all structures through the rollers of a particular set of spans selected for a conductor pull.
- Step 2, Option 2: Sock Line, Threading: In areas where it is not practical to use a bucket truck to install a lightweight sock line, a helicopter would fly the lightweight sock line from structure to structure. The sock line would be threaded through the wire rollers in order to engage a camlock device that would secure the pulling sock in the roller. This threading process would continue between all structures through the rollers of a particular set of spans selected for a conductor pull.
- Step 3: Pulling: The sock line would be used to pull in the conductor pulling rope and/or cable. The pulling rope or cable would be attached to the conductor using a special swivel joint to prevent damage to the wire and to allow the wire to rotate freely to prevent complications from twisting as the conductor unwinds off the reel.
- Step 4: Splicing, Sagging, and Dead-Ending: Once the conductor is pulled in, if necessary, all mid-span splicing would be performed. Temporary splices, if required, are necessary because permanent splices that join the conductor together cannot travel through the rollers. Splicing set-up locations are used to remove temporary pulling splices and install permanent splices once the conductor is strung through the rollers located on each structure; stringing sites may be utilized for splicing and field snubbing of the conductors. Field snubs (i.e., anchoring and dead-end hardware) would be temporarily installed to sag each conductor to the correct tension at locations where stringing equipment cannot be positioned in back of a dead-end structure. Once the splicing has been completed, the conductor would be sagged to proper tension and dead-ended to structures.
- Step 5: Clipping-In: After the conductor is dead-ended, the conductors would be secured to all tangent structures; a process called clipping in. Once this is complete, spacers would be attached between the bundled conductors of each phase to keep uniform separation between each conductor.

For highways and roads, railroad, and water crossings, SCE would work closely with the applicable jurisdiction to secure the necessary permits to string conductor over the applicable infrastructure.

3.7.2.3.1 Temporary Guard Structure Locations

SCE has identified approximately 14 locations where the conductor would span transportation, flood control, and utility crossings. These locations may require safety guarding during wire stringing activities to stop the movement of a conductor should it momentarily drop below a conventional stringing height.

Guarding would be accomplished by either the placement of a guard structure, or by a specifically-equipped boom truck. Typically, guard structures are standard wood poles. Depending on the overall spacing of the conductors being installed, approximately two to four guard poles would be required on either side of a crossing. Installation of guard structures typically involves the temporary disturbance of an area measuring approximately 100 feet by 50 feet, depending upon field conditions. The wood pole guard structures would be removed after the conductor is secured into place.

3.7.2.3.2 Installation of Marker Balls

As presented in Section 3.5.3.1 above, FAA recommendations, including the installation of marker balls on appropriate infrastructure where appropriate, would be implemented into the design of the Project to the extent practicable (see Figure 3.7-2 for typical dimension of marker balls).[16] SCE would select the most suitable installation method for a particular span. In most cases, marker balls would be installed by helicopter because of this method's efficiency, minimal ground disturbance, and ability to operate in rugged terrain. In limited circumstances, marker balls may be installed using a spacer cart.

SCE would generally use a light-duty helicopter to install the marker balls. Installation by helicopter may require an outage that de-energizes nearby energized subtransmission lines and transmission lines. Helicopter installation requires staging at a landing zone where the helicopter would pick up the construction worker and a marker ball(s) and travel to the installation location. To minimize ground disturbance, helicopter landing zones would be located in existing, disturbed areas.

If a spacer cart is used, the spacer cart would be installed on the overhead wire by installation crews, either by helicopter or by using a crane placed on an existing equipment pad created during the construction of the structure.

Due to the terrain in the areas where marker balls may be required, installation by crane would likely be infeasible, and may entail significant additional ground disturbance. For these reasons, crane installation would not be considered for the Project.

[16] The SpanGuard™ power line marker illustrated on this figure is representative of the type of marker balls that SCE has installed in the past. Similar equipment that complies with FAA Advisory Circular AC 70/7460-1K could be installed as part of the Moorpark-Newbury 66 kV Subtransmission Line Project.

3.7.3 Subtransmission Line Construction (Below Ground)

The following sections describe the construction activities associated with installing the underground 66 kV subtransmission line within Moorpark Substation for the Project.[17]

SCE would survey proposed locations of underground facilities and SCE or its contractor would notify all applicable utilities via underground service alert to locate and mark existing utilities.

3.7.3.1 Trenching

The Project includes a total of approximately 1,200 feet of trenching within Moorpark Substation, 700 feet of which have already been constructed leaving a remaining 500 feet to still be constructed. An approximately 20-24 inch wide by 60-inch deep trench would be required to place the 66 kV subtransmission line underground. This depth is required to meet the minimum 36 inches of cover above the duct bank. For the Project, trenching may be performed by using the following general steps, including but not limited to: lay out trench line, dig to appropriate depth with a backhoe or similar equipment, and install duct bank. Once the duct bank has been installed, the trench would be backfilled with a two-sack sand slurry mix.

Approximately 185 cubic yards of soil would be excavated from the trench during future construction activities. None of this excavated material would be used to backfill the trench; the excavated material would be disposed of off site in accordance with all applicable laws. Excavated materials have been, and would be, disposed of at one of the following locations: Toland Road Landfill, Simi Valley Landfill, AG Reclamation, Bradley Landfill and Recycle, or Antelope Valley Landfill.

Soil at Moorpark Substation was sampled prior to past construction activities; petroleum hydrocarbons (total petroleum hydrocarbons, TPH) and polychlorinated biphenyls (PCBs) were not detected, and Table II Metals [Tit. 22 Cal. Code Regs. § 66261.4 (a)(2)(A)] were detected in the samples but were below the Title 22 California Code of Regulations action levels. In the event that contaminated soil is encountered during excavation of the trench, the soil would be segregated, sampled, and tested to determine appropriate treatment and disposal options. If the soil is classified as hazardous, it would be properly managed on location and transported in accordance with US Department of Transportation (USDOT) regulations using a Uniform Hazardous Waste Manifest to a Class I Landfill or other appropriate soil treatment or recycling facility. All hazardous materials would be transported, used, and disposed of in accordance with applicable rules, regulations, and SCE protocols designed to protect the environment, workers, and the public.

[17] The overhead conductor alignment would have been adjacent to the existing substation helipad and would have interfered with SCE's air operations at Moorpark Substation. Accordingly SCE has proposed this short section of underground construction for aircraft safety purposes.

Should groundwater be encountered, it would be pumped into a tank and disposed of off site in accordance with all applicable laws. No dewatering was necessary during past construction activities, and no dewatering is expected to be necessary during future construction activities.

The trench for underground construction would be widened and shored where appropriate to meet California Occupational and Safety Health Administration requirements. Trenching would be staged so that open trench lengths would not exceed that which is required to install the duct banks. Where needed, open trench sections would have steel plates placed over them in order to maintain vehicular and pedestrian traffic.

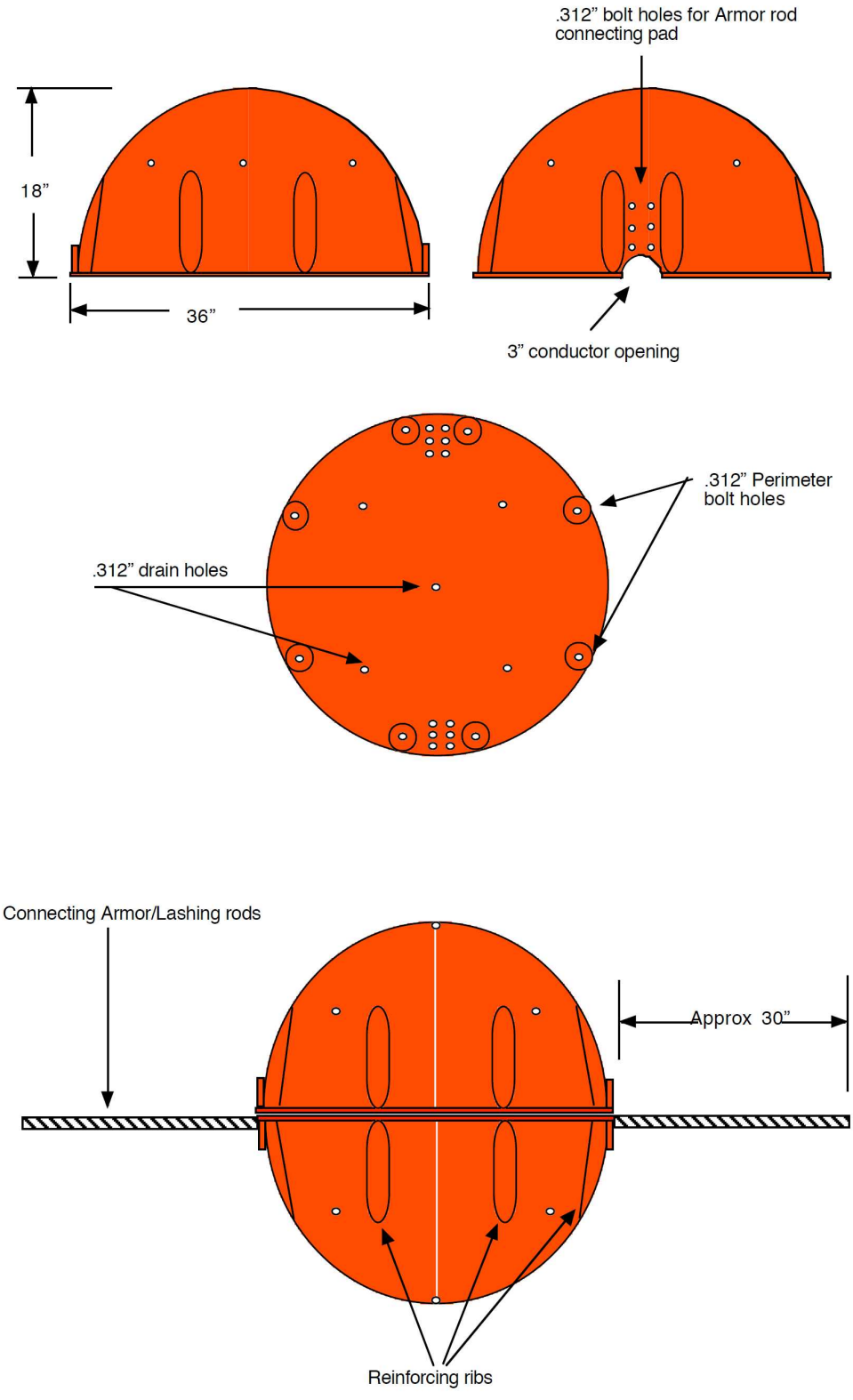
3.7.3.2 Duct Bank Installation

When trenching for the underground 66 kV subtransmission line is completed, SCE would begin to install the underground duct banks. Collectively, the duct bank is comprised of conduit, spacers, ground wire, and concrete encasement. The duct bank consists of six 5-inch diameter PVC conduits fully encased with a minimum of 3 inches of concrete all around. The trench would then be backfilled with slurry. Typical 66 kV subtransmission duct bank installations would accommodate six cables. The Project would utilize three cable conduits and leave three spare cable conduits for any potential future circuit pursuant to SCE's current standards for 66 kV underground construction (Figure 3.5-2).

The 66 kV duct bank would be installed in a vertically stacked configuration and each duct bank would be approximately 21 inches in height by 20 inches in width. In areas where it is necessary to fan out the conduits to reach termination structures, a flat configuration duct bank may be required. However, for the Project it is not anticipated that a flat underground duct bank configuration would be required.

In instances where a subtransmission duct bank would cross or run parallel to other substructures that operate at normal soil temperature (e.g., gas lines, telephone lines, water mains, storm drains, sewer lines), a minimal radial clearance of 6 inches for crossing and 12 inches for paralleling these substructures would be required, respectively. Where duct banks cross or run parallel to substructures that operate at temperatures significantly exceeding normal soil temperature (e.g., other underground transmission circuits, primary distribution cables, steam lines, heated oil lines), additional radial clearance may be required. Clearances and depths would meet requirements set forth within Rule 41.4 of CPUC GO 128.

36" SpanGuard™ dimensions



Source: P&R Industries.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

36" MARKER BALL DIMENSIONS

SOUTHERN CALIFORNIA EDISON®
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Figure
3.7-2

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3.7.3.3 Cable Pulling, Splicing, Termination

Following the remaining duct bank installation, SCE would pull the electrical cables through the duct banks, splice the cable segments at each vault, and terminate cables at the transition structures where the subtransmission line would transition from underground to overhead. To pull the cables through the duct banks, a cable reel would be placed at one end of the conduit segment, and a pulling rig would be placed at the opposite end. The cable from the cable reel would be attached to a rope in the duct bank, and the rope linked to the pulling rig, which would pull the rope and the attached cable through the duct banks. A lubricant would be applied as the cable enters the ducts to decrease friction and facilitate travel through the PVC conduits. The electrical cables for each of the 66 kV subtransmission phases would be pulled through the individual conduits in the duct bank.

After cable pulling is completed, the electrical cables would be spliced. A splice crew would conduct splicing operations at each vault location and continue until all splicing is completed.

3.7.4 Substation Construction

The following section describes the construction activities at Moorpark Substation and Newbury Substation described in Section 3.5.4.1.

3.7.4.1 Site Preparation and Grading

As discussed in Section 3.5.4.1, no additional grading would be required to construct the necessary substation upgrades planned for the future construction activities of the Project.

3.7.4.2 Below-Grade Construction

No additional below-grade construction for substation equipment would occur at the substations. As discussed earlier, below-grade facilities would be constructed at Moorpark Substation to accommodate the installation of subtransmission cable. These facilities may include conduits, vaults, and duct banks. These facilities are described in Section 3.5.3.2.

3.7.4.3 Above-Grade Construction

All substation related work at Moorpark Substation and Newbury Substation was presented in Section 3.5.4. With the exception of reconductoring the bus at Newbury Substation, no additional above-grade structures would be constructed as a result of the Project.

3.7.4.4 Landscape Plans

There are no landscape plans required for the Project; all Project components are within the existing substations.

3.7.4.5 Relocation of Commercial or Residential Property

No commercial or residential property would be relocated; all Project components are within the existing substations.

3.7.5 Construction Workforce and Equipment

The estimated elements, materials, and number of personnel and equipment required for completion of the Project are summarized for each Project component in the Construction Equipment and Workforce Estimates Table detailed in this section.

SCE anticipates that crews would work concurrently whenever possible; however, the estimated deployment and number of crew members would vary depending on factors such as material availability, resource availability, and construction scheduling.

3.7.5.1 Subtransmission Workforce and Construction Equipment Tables

The workforce and construction equipment used during the Project's past activities is presented in Table 3.7-8a. The workforce and construction equipment necessary to complete the Project is presented in Table 3.7-8b. Because the number of marker balls that may be required for the Project is unknown at this time, equipment and workforce estimates for this activity is not included in the table.

Table 3.7-8a: Subtransmission Construction Equipment and Workforce Estimates, Past Activities

Moorpark-Newbury Subtransmission Construction Equipment And Workforce Estimates By Activity — Past Activities							
Work Activity				**Activity Production**			
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hrs/Day)**	**Estimated Production Per Day**
Survey (1)				**4**	**9**		**8.7 Miles**
1-Ton Truck, 4x4	300	Gas	2		9	8	1 Mile
ROW Clearing (2)				**5**	**4**		**0.95 Mile**
1-Ton Truck, 4x4	300	Gas	1		4	8	0.25 Mile
Backhoe/Front Loader	125	Diesel	1		4	6	
Track Type Dozer	150	Diesel	1		4	6	
Compact Track Loader	100	Gas	1		4	6	
Motor Grader	250	Diesel	1		4	6	
Water Truck	300	Diesel	1		4	8	
Lowboy Truck/Trailer	450	Diesel	1		4	4	
Tree Trimming & Removal (3)				**5**	**28**		
Dump Truck, 4x4	380	Diesel	1		28	8	
1-Ton Truck	300	Diesel	1		28	8	
Chipper	50	Gas	1		28	4	
Stump Grinder	25	Gas	1		14	6	
Manlift/Bucket Truck	50	Diesel	1		28	8	
Roads & Landing Work (4)				**5**	**28**		**9.15 Miles 50 Pads**
1-Ton Truck, 4x4	300	Gas	1		28	8	Existing Roads: 2 Miles New Roads (Mod): 1 Mile New Roads (Mtns): 0.5 Mile Structure Pads (Flat to Mod): 4 Pads Structure Pads (Mtns): 2 Pads
Backhoe/Front Loader	125	Diesel	1		28	4	
Track Type Dozer	150	Diesel	1		28	4	
Compact Track Loader	100	Gas	1		9	6	
Motor Grader	250	Diesel	1		28	6	
Water Truck	300	Diesel	1		28	8	
Drum Type Compactor	100	Diesel	1		28	6	
Excavator	250	Diesel	1		28	4	
Lowboy Truck/Trailer	450	Diesel	1		8	4	
Install TSP Foundations (5)				**6**	**62**		**30 TSPs**
3/4-Ton Truck, 4x4	275	Gas	1		62	4	0.5 TSP
Boom/Crane Truck	350	Diesel	1		62	4	
Backhoe/Front Loader	125	Diesel	1		62	6	
Auger Truck	210	Diesel	1		62	6	
Water Truck	300	Diesel	1		62	8	
Dump Truck	350	Diesel	1		62	4	

Table 3.7-8a: Subtransmission Construction Equipment and Workforce Estimates, Past Activities

Moorpark-Newbury Subtransmission Construction Equipment And Workforce Estimates By Activity — Past Activities							
Work Activity				**Activity Production**			
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hrs/Day)**	**Estimated Production Per Day**
Concrete Mixer Truck	350	Diesel	3		62	2	
Drill & Slurry Fill TSP Foundations Holes (6)				**6**	**6**		**3 TSPs**
3/4-Ton Truck, 4x4	275	Gas	1		6	4	0.5 TSP
Backhoe/Front Loader	125	Diesel	1		6	6	
Auger Truck	210	Diesel	1		6	6	
Water Truck	300	Diesel	1		6	8	
Dump Truck	350	Diesel	1		6	4	
Concrete Mixer Truck	350	Diesel	3		7	2	
TSP Haul (7)				**4**	**6**		**23 TSPs**
3/4-Ton Truck, 4x4	275	Gas	1		6	8	4 TSPs
Boom/Crane Truck	350	Diesel	1		6	6	
Flat Bed Pole Truck	400	Diesel	1		6	8	
TSP Assembly (8)				**8**	**22**		**22 TSPs**
3/4-Ton Truck, 4x4	275	Gas	2		22	4	1 TSP
1-Ton Truck, 4x4	300	Gas	2		22	4	
Compressor Trailer	60	Diesel	1		22	6	
Boom/Crane Truck	350	Diesel	1		22	8	
TSP Erection (9)				**8**	**23**		**23 TSPs**
3/4-Ton Truck, 4x4	275	Gas	2		23	4	1 TSP
1-Ton Truck, 4x4	300	Gas	2		23	4	
Compressor Trailer	60	Diesel	1		23	4	
Manlift/Bucket Truck	250	Diesel	**1**		23	8	
Boom/Crane Truck	350	Diesel	1		23	8	
Vault Installation (10)				**6**	**6**		**2 Vaults**
1-Ton Truck, 4x4	300	Gas	2		6	4	0.33 Vault
Backhoe/Front Loader	125	Diesel	1		4	8	
Excavator	250	Diesel	1		4	6	
Dump Truck	350	Diesel	2		4	8	
Crane (L)	500	Diesel	1		6	6	
Concrete Mixer Truck	350	Diesel	3		4	2	
Lowboy Truck/Trailer	450	Diesel	1		6	4	
Flat Bed Truck/Trailer	400	Diesel	3		.33	4	
Duct Bank Installation (11)				**6**	**3**		**700 Trench Feet**

Table 3.7-8a: Subtransmission Construction Equipment and Workforce Estimates, Past Activities

Moorpark-Newbury Subtransmission Construction Equipment And Workforce Estimates By Activity — Past Activities							
Work Activity				**Activity Production**			
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hrs/Day)**	**Estimated Production Per Day**
1-Ton Truck, 4x4	300	Gas	2		3	4	250 Feet
Compressor Trailer	60	Diesel	1		3	4	
Backhoe/Front Loader	125	Diesel	1		3	6	
Dump Truck	350	Diesel	2		3	6	
Pipe Truck/Trailer	275	Diesel	1		3	6	
Water Truck	300	Diesel	1		3	8	
Concrete Mixer Truck	350	Diesel	3		3	2	
Lowboy Truck/Trailer	450	Diesel	1		1	4	
Wood Pole Removal (12)				**6**	**4**		**27 Poles**
1-Ton Truck, 4x4	300	Gas	2		4	8	9 Poles
Compressor Trailer	60	Diesel	1		4	4	
Manlift/Bucket Truck	250	Diesel	1		4	6	
Boom/Crane Truck	350	Diesel	1		4	6	
Flat Bed Pole Truck	400	Diesel	1		4	8	
LWS Pole Haul (13)				**4**	**14**		**27 LWS Poles**
3/4-Ton Truck, 4x4	275	Gas	1		14	8	2 Poles
Boom/Crane Truck	350	Diesel	1		14	6	
Flat Bed Pole Truck	400	Diesel	1		14	8	
LWS Pole Assembly (14)				**8**	**14**		**27 LWS Poles**
3/4-Ton Truck, 4x4	275	Gas	2		14	4	2 Poles
1-Ton Truck, 4x4	300	Gas	2		14	4	
Compressor Trailer	60	Diesel	1		14	6	
Boom/Crane Truck	350	Diesel	1		14	8	
Install LWS Pole (15)				**6**	**14**		**27 Poles**
1-Ton Truck, 4x4	300	Gas	1		14	8	2 Poles
Manlift/Bucket Truck	250	Diesel	1		14	6	
Boom/Crane Truck	350	Diesel	1		14	6	
Auger Truck	210	Diesel	1		14	4	
Backhoe/Frontloader	125	Diesel	1		14	8	
Extendable Flat Bed Pole Truck	400	Diesel	1		14	8	
Install Conductor (16)				**20**	**4**		**1.2 Linear Miles**
1-Ton Truck, 4x4	300	Gas	3		4	4	0.33 Mile

Table 3.7-8a: Subtransmission Construction Equipment and Workforce Estimates, Past Activities

Moorpark-Newbury Subtransmission Construction Equipment And Workforce Estimates By Activity — Past Activities							
Work Activity				**Activity Production**			
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hrs/Day)**	**Estimated Production Per Day**
Manlift/Bucket Truck	250	Diesel	4		4	8	
Boom/Crane Truck	350	Diesel	1		4	8	
Dump Truck	350	Diesel	1		4	2	
Wire Truck/Trailer	350	Diesel	2		4	6	
Sock Line Puller	300	Diesel	1		3	6	
Bull Wheel Puller	350	Diesel	1		3	6	
Static Truck/ Tensioner	350	Diesel	1		4	6	
Backhoe/Front Loader	125	Diesel	1		4	2	
Lowboy Truck/Trailer	450	Diesel	2		4	4	
Hughes 500 E Helicopter		Jet A	1		1	6	
Fuel, Helicopter Support Truck	300	Diesel	1		1	6	
Restoration (17)				**7**	**2**		**1.2 Miles**
1-Ton Truck, 4x4	300	Gas	2		2	4	
Backhoe/Front Loader	125	Diesel	1		2	4	
Motor Grader	250	Diesel	1		2	6	
Water Truck	300	Diesel	1		2	8	1 Mile
Drum Type Compactor	100	Diesel	1		2	4	
Lowboy Truck/Trailer	450	Diesel	1		2	4	

Crew Size Assumptions:
#1 Survey = one 4-man crew
#2 ROW Clearing = one 5-man crew
#3 Tree Trimming and Removal = four 5-man crews
#4 Roads and Landing Work = one 5-man crew
#5 Install TSP Foundations = one 6-man crew
#6 Drill & Slurry Fill TSP Foundation Holes = one 6-man crew
#7 TSP Haul = one 4-man crew
#8 TSP Assembly = one 8-man crew. Note that only the base of one TSP was installed, and thus the TSP Assembly work was not conducted. Hence the difference between TSP Haul, Assembly, and Erection figures.
#9 TSP Erection = one 8-man crew
#10 Vault Installation = one 6-man crew
#11 Duct Bank Installation = one 6-man crew
#12 Wood Pole Removal = one 6-man crew
#13 LWS Pole Haul = one 4-man crew
#14 LWS Pole Assembly = one 8-man crew
#15 Install LWS Pole = one 6-man crew
#16 Install Conductor = two 10-man crews
#17 Restoration = one 7-man crew

Table 3.7-8b: Subtransmission Construction Equipment and Workforce Estimates, Future Activities

Moorpark-Newbury Construction Equipment and Workforce Estimates by Activity — Future Activities							
Work Activity				**Activity Production**			
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hrs/Day)**	**Estimated Production Per Day**
Survey (1)				**4**	**10**		**10 Miles**
1-Ton Truck, 4x4	300	Gas	2		10	8	1 Mile
Marshalling Yard (2)				**4**	**DOP**		
1-Ton Truck, 4x4	300	Gas	1		Duration of Project (DOP)	4	
R/T Forklift	125	Diesel	1			6	
Boom/Crane Truck	350	Diesel	1			2	
Water Truck	300	Diesel	1			8	
Truck, Semi Tractor	400	Diesel	1			2	
Tree Trimming & Removal (3)				**5**	**12**		
Dump Truck, 4x4	380	Diesel	1		12	8	
1-Ton Truck	300	Diesel	1		12	8	
Chipper	50	Gas	1		12	4	
Stump Grinder	25	Gas	1		6	6	
Manlift/Bucket Truck	50	Diesel	1		12	8	
ROW Clearing (4)				**5**	**2**		**0.5 Mile**
1-Ton Truck, 4x4	300	Gas	1		2	8	0.25 Mile
Backhoe/Front Loader	125	Diesel	1		2	6	
Track Type Dozer	150	Diesel	1		2	6	
Motor Grader	250	Diesel	1		2	6	
Water Truck	300	Diesel	1		2	8	
Lowboy Truck/Trailer	450	Diesel	1		2	4	
Roads & Landing Work (5)				**5**	**6**		**4 Miles & 4 Pads**
1-Ton Truck, 4x4	300	Gas	1		6	8	Existing Roads: 2 Miles New Roads (Mod): 1 Mile New Roads (Mtns): 0.5 Mile Structure Pads (Flat to Mod): 4 Pads Structure Pads (Mtns): 2 Pads
Backhoe/Front Loader	125	Diesel	1		6	4	
Track Type Dozer	150	Diesel	1		6	4	
Motor Grader	250	Diesel	1		6	6	
Water Truck	300	Diesel	1		6	8	
Drum Type Compactor	100	Diesel	1		6	6	
Excavator	250	Diesel	1		6	4	
Lowboy Truck/Trailer	450	Diesel	1		6	4	
Guard Structure Installation (6)				**6**	**3**		**14 Locations**
3/4-Ton Truck, 4x4	275	Gas	1		3	8	5 Structures
1-Ton Truck, 4x4	300	Gas	1		3	8	
Compressor Trailer	60	Diesel	1		3	4	
Manlift/Bucket Truck	250	Diesel	1		3	4	
Boom/Crane Truck	350	Diesel	1		3	6	
Auger Truck	210	Diesel	1		3	4	

Table 3.7-8b: Subtransmission Construction Equipment and Workforce Estimates, Future Activities

Moorpark-Newbury Construction Equipment and Workforce Estimates by Activity — Future Activities							
Work Activity				**Activity Production**			
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hrs/Day)**	**Estimated Production Per Day**
Extendable Flat Bed Pole Truck	400	Diesel	1		3	8	
Remove Existing Conductor & Ground Wire (7)				**14**	**15**		**5 Circuit Miles**
1-Ton Truck, 4x4	300	Gas	2		15	4	Non-Bundled: 0.5 Mile
Manlift/Bucket Truck	250	Diesel	2		15	8	
Boom/Crane Truck	350	Diesel	2		15	8	
Bull Wheel Puller	350	Diesel	1		10	6	
Sock Line Puller	300	Diesel	1		10	6	
Static Truck/ Tensioner	350	Diesel	1		15	6	
Lowboy Truck/Trailer	450	Diesel	2		15	4	
Wood & LWS Pole Removal (8)				**6**	**1**		**6 Poles**
1-Ton Truck, 4x4	300	Gas	2		1	8	9 Poles
Compressor Trailer	60	Diesel	1		1	4	
Manlift/Bucket Truck	250	Diesel	1		1	6	
Boom/Crane Truck	350	Diesel	1		1	6	
Flat Bed Pole Truck	400	Diesel	1		1	8	
LST Removal (9)				**8**	**28**		**14 LSTs**
1-Ton Truck, 4x4	300	Gas	2		28	4	0.5 LST
Compressor Trailer	60	Diesel	1		28	8	
R/T Crane (M)	215	Diesel	1		28	6	
Boom/Crane Truck	350	Diesel	1		28	6	
Flat Bed Truck/Trailer	400	Diesel	1		28	4	
LST Foundation Removal (10)				**4**	**7**		**14 LSTs**
3/4-Ton Truck, 4x4	275	Gas	1		7	4	2 LSTs
Compressor Trailer	60	Diesel	1		7	8	
Backhoe/Front Loader	125	Diesel	1		7	6	
Dump Truck	350	Diesel	1		7	6	
Excavator	250	Diesel	1		7	4	
Install TSP Foundations (11)				**6**	**28**		**14 TSPs**
3/4-Ton Truck, 4x4	275	Gas	1		28	4	0.5 TSP
Boom/Crane Truck	350	Diesel	1		28	4	
Backhoe/Front Loader	125	Diesel	1		28	6	
Auger Truck	210	Diesel	1		28	6	
Water Truck	300	Diesel	1		28	8	
Dump Truck	350	Diesel	1		28	4	
Concrete Mixer Truck	350	Diesel	3		19	2	
TSP Haul (12)				**4**	**6**		**22 TSPs**

Table 3.7-8b: Subtransmission Construction Equipment and Workforce Estimates, Future Activities

Moorpark-Newbury Construction Equipment and Workforce Estimates by Activity — Future Activities							
Work Activity				**Activity Production**			
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hrs/Day)**	**Estimated Production Per Day**
3/4-Ton Truck, 4x4	275	Gas	1		6	8	4 TSPs
Boom/Crane Truck	350	Diesel	1		6	6	
Flat Bed Pole Truck	400	Diesel	1		6	8	
TSP Assembly (13)				**8**	**22**		**22 TSPs**
3/4-Ton Truck, 4x4	275	Gas	2		22	4	1 TSP
1-Ton Truck, 4x4	300	Gas	2		22	4	
Compressor Trailer	60	Diesel	1		22	6	
Boom/Crane Truck	350	Diesel	1		22	8	
TSP Erection (14)				**8**	**22**		**22 TSPs**
3/4-Ton Truck, 4x4	275	Gas	2		22	4	1 TSP
1-Ton Truck, 4x4	300	Gas	2		22	4	
Compressor Trailer	60	Diesel	1		22	4	
Manlift/Bucket Truck	250	Diesel	1		22	8	
Boom/Crane Truck	350	Diesel	1		22	8	
LWS Pole Haul (15)				**4**	**1**		**2 LWS Poles**
3/4-Ton Truck, 4x4	275	Gas	1		1	8	2 Poles
Boom/Crane Truck	350	Diesel	1		1	6	
Flat Bed Pole Truck	400	Diesel	1		1	8	
LWS Pole Assembly (16)				**8**	**1**		**2 LWS Poles**
3/4-Ton Truck, 4x4	275	Gas	2		1	4	2 Poles
1-Ton Truck, 4x4	300	Gas	2		1	4	
Compressor Trailer	60	Diesel	1		1	6	
Boom/Crane Truck	350	Diesel	1		1	8	
Install LWS Pole (17)				**6**	**1**		**2 Poles**
1-Ton Truck, 4x4	300	Gas	1		1	8	2 Poles
Manlift/Bucket Truck	250	Diesel	1		1	6	
Boom/Crane Truck	350	Diesel	1		1	6	
Auger Truck	210	Diesel	1		1	4	
Backhoe/Front Loader	125	Diesel	1		1	8	
Extendable Flat Bed Pole Truck	400	Diesel	1		1	8	
Install Conductor (18)				**20**	**96**		**10.5 Circuit Miles**
1-Ton Truck, 4x4	300	Gas	3		96	4	0.33 Mile
Manlift/Bucket Truck	250	Diesel	4		96	8	
Boom/Crane Truck	350	Diesel	1		96	8	
Dump Truck	350	Diesel	1		96	2	
Wire Truck/Trailer	350	Diesel	2		9	6	
Sock Line Puller	300	Diesel	1		34	6	
Bull Wheel Puller	350	Diesel	1		65	6	
Static Truck/ Tensioner	350	Diesel	1		96	6	
Backhoe/Front Loader	125	Diesel	1		96	2	

Table 3.7-8b: Subtransmission Construction Equipment and Workforce Estimates, Future Activities

Moorpark-Newbury Construction Equipment and Workforce Estimates by Activity — Future Activities							
Work Activity				**Activity Production**			
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hrs/Day)**	**Estimated Production Per Day**
Lowboy Truck/Trailer	450	Diesel	2		96	4	
Hughes 500 H'copter		Jet A	1		6	6	
Fuel Truck	300	Diesel	1		6	6	
Guard Structure Removal (19)				**6**	**2**		**14 Locations**
3/4-Ton Truck, 4x4	275	Gas	1		2	8	7 Structures
1-Ton Truck, 4x4	300	Gas	1		2	8	
Compressor Trailer	60	Diesel	1		2	4	
Manlift/Bucket Truck	250	Diesel	1		2	4	
Boom/Crane Truck	350	Diesel	1		2	6	
Extendable Flat Bed Pole Truck	400	Diesel	1		2	8	
Restoration (20)				**7**	**3**		**3 Miles**
1-Ton Truck, 4x4	300	Gas	2		3	4	1 Mile
Backhoe/Front Loader	125	Diesel	1		3	4	
Motor Grader	250	Diesel	1		3	6	
Water Truck	300	Diesel	1		3	8	
Drum Type Compactor	100	Diesel	1		3	4	
Lowboy Truck/Trailer	450	Diesel	1		3	4	
Duct Bank Installation (21)				**6**	**2**		**500 Trench Feet**
1-Ton Truck, 4x4	300	Gas	2		2	4	250 Feet
Compressor Trailer	60	Diesel	1		2	4	
Backhoe/Front Loader	125	Diesel	1		2	6	
Dump Truck	350	Diesel	2		2	6	
Pipe Truck/Trailer	275	Diesel	1		2	6	
Water Truck	300	Diesel	1		2	8	
Concrete Mixer Truck	350	Diesel	3		2	2	
Lowboy Truck/Trailer	450	Diesel	1		1	4	
Install Underground Cable (22)				**8**	**5**		**1200 Circuit Feet**
1-Ton Truck, 4x4	300	Gas	2		5	4	0.33 Mile
Manlift/Bucket Truck	250	Diesel	1		5	6	
Boom/Crane Truck	350	Diesel	1		5	6	
Wire Truck/Trailer	350	Diesel	2		5	6	
Puller	350	Diesel	1		5	6	
Static Truck/ Tensioner	350	Diesel	1		5	6	

Table 3.7-8b: Subtransmission Construction Equipment and Workforce Estimates, Future Activities

Moorpark-Newbury Construction Equipment and Workforce Estimates by Activity — Future Activities							
Work Activity				Activity Production			
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hrs/Day)	Estimated Production Per Day

Crew Size Assumptions:

#1 Survey = one 4-man crew
#2 Marshalling Yards = one 4-man crew
#3 Tree Trimming & Removal = one 4-man crew
#4 ROW Clearing = one 5-man crew
#5 Roads & Landings: Pre-Construction Preparation = one 5-man crew; assuming light brushing
#6 Guard Structure Installation = one 6-man crew
#7 Remove Existing Conductor & Ground Wire = one 14-man crew
#8 Remove Existing Wood Poles = one 6-man crew
#9 Remove Existing TSPs = one 8-man crew
#10 Remove Existing TSP Foundations = one 4-man crew
#11 Remove Existing LSTs = one 6-man crew
#12 Remove Existing LST Foundations = one 4-man crew. Note that the partially-installed TSP (pole location 23) is considered a whole TSP in this table as the top section remains to be hauled to the site, assembled, and erected on top of the previously-installed base portion.
#13 Install Foundations for TSPs = one 6-man crew
#14 TSP Haul = one 4-man crew
#15 TSP Assembly = one 8-man crew
#16 TSP Erection = one 8-man crew
#17 LWS Haul = one 4-man crew
#18 LWS Assembly = one 8-man crew
#19 Install LWS Pole = one 6-man crew
#20 Conductor & GW Installation = two 10-man crews
#21 Guard Structure Removal = one 6-man crew
#22 Restoration = one 7-man crew
#23 Vault Installation = one 6-man crew
#24 Duct Bank Installation = one 6-man crew
#25 Install Underground Cable = one 8-man crew

Note: All data provided on this table is based on planning level assumptions and may change based on any of the following: the completion of preliminary and final engineering; any updates and/or changes in project scope; any updates and/or changes to the project description; any changes to existing field conditions and/or the identification of yet unknown field conditions; outage constraints; the availability of labor, material, and equipment; as well as any constraints caused by environmental and/or permitting requirements.

3.7.5.2 Substation Construction Equipment and Workforce Estimates Table

The construction equipment and workforce used to accomplish the past substation related work at the substations, and that would be needed to accomplish the remaining work, are presented in Tables 3.7-9a and -9b below.

Table 3.7.9a: Substation Construction Equipment and Workforce Estimates, Past Activities

Moorpark-Newbury Substation Construction Equipment And Workforce Estimates By Activity — Past Activities						
Work Activity				**Activity Production**		
Primary Equipment Description	**Estimated Horse-Power**	**Probable Fuel Type**	**Primary Equipment Quantity**	**Estimated Workforce**	**Estimated Schedule (Days)**	**Duration of Use (Hours/Day)**
Civil Work, Moorpark Substation				**1**	**17**	
Pickup Truck	180	Gas	5	1	17	2
Wiring Work, Moorpark Substation				**3**	**55**	
Pickup Truck	180	Gas	2	1	55	2
Carry-All	180	Gas	1	2	55	2
Civil Work, Newbury Substation				**3**	**6**	
Bobcat	75	Gas	1	2	6	6
Pickup Truck	180	Gas	5	1	6	2
Wiring Work, Newbury Substation				**1**	**10**	
Pickup Truck	180	Gas	2	1	10	2

Table 3.7-9b: Substation Construction Equipment and Workforce Estimates, Future Activities

Moorpark-Newbury Substation Construction Equipment And Workforce Estimates By Activity — Future Activities						
Work Activity				Activity Production		
Primary Equipment Description	Estimated Horse-Power	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (Days)	Duration of Use (Hours/Day)
Electrical Work, Moorpark Substation				**25**	**10**	
40ft Manlift	75	Diesel	2	2	10	6
Forklift	75	Diesel	1	1	10	6
Boom Truck	100	Diesel	1	2	10	6
Flat Bed, 5 Ton	180	Gas/Diesel	1	1	10	2
Office Trailer	0	Electric	1	5	10	8
Wiring Trailer	0	Electric	1	5	10	8
Pickups	180	Gas/Diesel	2	1	10	2
Pickup w/ Fuel Tank	180	Gas/Diesel	1	1	10	2
Weld Truck	180	Gas/diesel	1	1	5	2
Tool Trailer	0	Electric	1	6	10	8
Wiring Work, Moorpark Substation				**3**	**55**	
Pickup Truck	180	Gas	2	1	55	2
Carry-All	180	Gas	1	2	55	2
Test/Maintenance Work, Moorpark Substation				**5**	**35**	
Pickup	180	Gas/diesel	2	1	35	2
Gas/Processing Trailer	0	Electric	1	2	4	4
40ft Manlift	75	Diesel	2	2	5	8
Electrical Work, Newbury Substation				**25**	**10**	
40ft Manlift	75	Diesel	2	2	10	6
Forklift	75	Diesel	1	1	10	6
Boom Truck	100	Diesel	1	2	10	6
Flat Bed, 5 Ton	180	Gas/Diesel	1	1	10	2
Office Trailer	0	Electric	1	5	10	8
Wiring Trailer	0	Electric	1	5	10	8
Pickups	180	Gas/Diesel	2	1	10	2
Pickup w/Fuel Tank	180	Gas/Diesel	1	1	10	2
Weld Truck	180	Gas/Diesel	1	1	5	2
Tool Trailer	0	Electric	1	6	10	8
Wiring Work, Newbury Substation				**2**	**30**	
Pickup Truck	180	Gas	2	2	30	10
Test/Maintenance Work, Newbury Substation				**5**	**35**	
Pickups	180	Gas/Diesel	2	1	35	2
Gas/Processing Trailer	0	Electric	1	2	4	4
40ft Manlift	75	Diesel	2	2	5	8

Table 3.7-10: Construction Equipment Types and Uses

Type of Equipment	Use(s)
1-Ton Truck, 4x4	Transport workers and small tools, towing
3/4-Ton Truck, 4x4	Transport workers and small tools, towing
Auger Truck	Drill holes for LWS poles and TSP foundations
Backhoe/Front Loader	Trenching, moving materials
Boom/Crane Truck	LWS pole installation, wood pole removal, guarding during stringing
Bull Wheel Puller	Conductor stringing
Chipper	Tree removal/trimming
Compressor Trailer	Powering compressed air tools
Drum Type Compactor	Compacting soils along access and spur roads, construction work sites, and laydown areas
Dump Truck, 4x4	Hauling excavated soils, broken concrete, removed LST sections, and other materials
Excavator	Excavation
Extendable Flat Bed Pole Truck	Hauling poles
Flat Bed Pole Truck	Hauling poles
Flat Bed Truck/Trailer	Moving construction equipment and materials
Lowboy Truck/Trailer	Moving construction equipment
Manlift/Bucket Truck	Lifting workers
Motor Grader	Grading soils along access and spur roads, construction work sites, and laydown areas
R/T Crane (M)	TSP and LWS pole installation
R/T Forklift	Moving materials
Sock Line Puller	Conductor stringing
Static Truck/ Tensioner	Conductor stringing
Stump Grinder	Tree removal/trimming
Track Type Dozer	Grading/blading soils along access and spur roads, construction work sites, and laydown areas
Truck, Semi-Tractor	Hauling materials
Water Truck	Dust control

3.7.6 Construction Schedule

Past construction activities occurred between October 2010 and November 2011. SCE anticipates that future construction activities of the Project would take approximately 10 months.[18] Construction would commence following CPUC approval, final engineering, procurement activities, and receipt of applicable permits (Table 3.7-11).

Table 3.7-11: Preliminary Schedule for Construction

Project Activity	Project Schedule (Month Year or Month Year to Month Year)
1.Permit To Construct decision adopted and effective	August 2015
2. Acquisition of remaining required permits, completion of remaining final engineering and final procurement completed	August 2015—January 2016
3.Construction begins	September 2015
4.Subtransmission line construction	October 2015—May 2016
5. Substation upgrades construction	May 2016—July 2016
6. Project operational	July 2016
7. Clean-up	July 2016—December 2016

In general, construction efforts would occur in accordance with accepted construction industry standards. To the extent possible, SCE would comply with local ordinances for construction activity; construction work would normally occur between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. Should the need arise to work outside the local ordinances, SCE would request a variance from the Caltrans, City of Moorpark, City of Thousand Oaks, or Ventura County. For example, it may be necessary to work during nighttime or outside normal work hours when electrical loads on the lines are reduced. SCE would also consult with and obtain the concurrence of COSCA to ensure compliance with its land management strategies.

3.7.7 Energizing Subtransmission Line

Energizing the new line is the final step in completing the subtransmission construction. Customer outages are not expected to affect customers served by either Moorpark Substation or Newbury Substation as a result of energizing the new Moorpark-Newbury 66 kV Subtransmission Line.

[18] The proposed construction schedule does not include delays due to inclement weather and/or stoppages necessary to protect biological resources (e.g., nesting birds).

However, during construction, the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line would be de-energized periodically to facilitate construction of the new Moorpark-Newbury 66 kV Subtransmission Line. The Pharmacy section of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line, which includes an existing customer-dedicated substation (Pharmacy 66/16 kV Substation) would need to be de-energized for the construction activities associated with terminating the new subtransmission line into Newbury Substation.[19]

To prevent any additional electric service interruptions during construction, de-energizing and re-energizing the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line may be required at night when electrical demand is low and outages can be arranged.

3.8 Operation and Maintenance

Ongoing operation and maintenance (O&M) activities are necessary to ensure reliable service, as well as the safety of the utility worker and the general public, as mandated by the CPUC.

The Project's 66 kV subtransmission lines would be maintained in a manner consistent with CPUC GO 95 and GO 128 as applicable. Normal operation of the 66 kV subtransmission lines would be controlled remotely through SCE control systems, and manually in the field as required.

SCE inspects its subtransmission and distribution overhead facilities, consistent with CPUC GO 165, a minimum of once per year; inspections could occur more frequently based on system reliability. No new access would need to be created to facilitate inspections. No new staff would be hired to conduct operation and maintenance activities.

Maintenance would occur as needed and could include activities such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, tree trimming, brush and weed control, and access road maintenance. Most regular O&M activities of overhead facilities are performed from existing access roads with no surface disturbance. Repairs done to existing facilities, such as repairing or replacing existing poles and towers, could occur in undisturbed areas. Existing conductors could require re-stringing to repair damages. Some pulling site locations could be in previously undisturbed areas and at times, conductors could be passed through existing vegetation on route to their destination.

Routine access road and work area maintenance is conducted on an annual and/or as-needed basis. This includes managing vegetation in a manner to facilitate access and for fire prevention and blading to smooth over washouts, eroded areas, and washboard surfaces as needed. Maintenance could include brushing (i.e., trimming or removal of shrubs) approximately 2-5 feet beyond berms or road's edge when necessary to keep vegetation from intruding into the roadway. Road maintenance would also include cleaning ditches, moving

[19] SCE would coordinate the required outage(s) with the single commercial customer served by Pharmacy 66/16 kV Substation to minimize disruption to their operations as feasible.

and establishing berms, clearing and making functional drain inlets to culverts, culvert repair, clearing and establishing water bars, and cleaning and repairing over-side drains. Maintenance activities could include the repair, replacement and installation of stormwater diversion devices on an as-needed basis. Insulators could require periodic washing with water to prevent the buildup of contaminants (dust, salts, droppings, smog, condensation, etc.) and reduce the possibility of electrical arcing which can result in circuit outages and potential fire. Frequency of insulator washing is based on local conditions and build-up of contaminants. Replacement of insulators, hardware, and other components is performed as needed to maintain circuit reliability.

Existing conductors could require re-stringing to repair damage. Some stringing site locations could be in previously undisturbed areas and at times, conductors could be passed through existing vegetation on route to their destination.

Regular tree trimming is performed in compliance with existing State and Federal laws, rules, and regulations and is crucial for maintaining reliable service, especially during severe weather or disasters. Tree trimming standards for distances from overhead lines have been set by the CPUC (GO 95, Rule 35), Public Resources Code Section 4293, Title 14 California Code of Regulations, Article 4, and other government and regulatory agencies. SCE's approach to tree trimming is to remove at least the minimum required by law plus one year's growth (species dependent).

A 10-foot radial clearance around non-exempt poles (as defined by Title 14 California Code of Regulations, Article 4) and a 25-50 foot radial clearance around non-exempt towers (as defined by Title 14 California Code of Regulations, Article 4) are maintained in accordance with Public Resources Code Section 4292. In addition, for structures within wildland fire areas, maintenance includes the clearing of vegetation around applicable structures. In some cases, poles do not have existing access roads and are accessed on foot, by helicopter, or by creating temporary access areas. O&M related helicopter activities could include transportation of transmission line workers, delivery of equipment and materials to structure sites, structure placement, hardware installation, and conductor stringing operations. Helicopter landing areas could occur where access by road is infeasible. In addition, helicopters must be able to land within or near SCE ROWs, which could include landing on access or spur roads.

In addition to regular O&M activities, SCE conducts a wide variety of emergency repairs in response to emergency situations such as damage resulting from high winds, storms, fires, and other natural disasters, and accidents. Such repairs could include replacement of downed poles, or lines or re-stringing conductors. Emergency repairs could be needed at any time.

3.9 Applicant Proposed Measures

No Applicant Proposed Measures are proposed or required. Instead, this section describes the Project features that were implemented to avoid or minimize environmental impacts during past construction activities; these features would also be implemented during future construction activities.

3.9.1 Air Quality Protection

SCE has implemented, and would implement, a number of practices, including minimizing equipment idling time and maintaining equipment engines in good condition and in proper tune as per manufacturers' specifications, to reduce emissions.

SCE's practices for the control of fugitive dust emissions, which were implemented during past construction activities and would be implemented during future construction activities, incorporate many of the recommended measures described in the Ventura County Air Pollution Control District's (VCAPCD) Model Fugitive Dust Mitigation Plan, which is reproduced verbatim below:[20]

1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.
3. Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:
    a. All trucks shall be required to cover their loads as required by California Vehicle Code §23114.
    b. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.
4. Graded and/or excavated inactive areas of the construction site shall be monitored by (indicate by whom) at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically

[20] This text is taken verbatim, including the parenthetical remark "(indicate by whom)", from the Ventura County Air Quality Control District's Ventura County Air Quality Assessment Guidelines.

treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust.[21]

5. Signs shall be posted on-site limiting traffic to 15 miles per hour or less.[22]
6. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive.
7. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.
8. Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

3.9.2 Biological Resources Protection

3.9.2.1 Biological Resource Protection – Past Activities

Prior to and during past construction activities the following biological surveys, avoidance and monitoring activities were implemented:

3.9.2.1.1 General

- Subtransmission poles are designed to be avian-safe consistent with the Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006 (Avian Power Line Interaction Committee 2006).
- A habitat assessment was conducted to identify and map plant communities within and surrounding the Project.
- Clearance surveys, including avian species, were conducted no more than 30 days prior to the start of construction in a particular area to identify potential plant and animal species that could be present during construction activities. Clearance surveys were conducted by a qualified botanist and wildlife biologist and were limited to areas directly impacted by construction activities.
- A jurisdictional waters desktop review was conducted for Poles 6, 38, 39, and 40.
- A qualified biologist was present during clearing and restoration activities to ensure that native habitat (coastal sage scrub) removal was minimized.

[21] SCE did not/may not always undertake soil stabilization activities in areas that were/are inactive for more than four days due to prohibition of construction activities to protect nesting birds.

[22] SCE did/will not post speed limit signs along the access roads; the design of the roads are not conducive to travel above 15 mph by the types of vehicles used during past construction activities.

- Restoration activities in disturbed areas of native habitat (coastal sage scrub) were implemented in accordance with the SWPPP and the CDFW Streambed Alteration Agreement (SAA) requirements, where applicable.
- Implemented Worker Environmental Awareness Training (See Section 3.9.7)
- Surveys for protected trees were conducted by a certified arborist to identify trees meeting regulatory protection standards. When applicable, the proper permit was obtained for trimming and/or removal of protected trees.

3.9.2.1.2 Special Status Plants

Two listed plant species were documented to occur in the Project Area: Conejo dudleya and Lyon's pentachaeta. Avoidance activities included:

- Focused surveys for Lyon's pentachaeta and Conejo dudleya were conducted no more than 30 days prior to start of construction in areas with potentially suitable habitat.[23]
- Areas supporting Lyon's pentachaeta were flagged prior to project activities by a qualified biologist and avoided during construction. In addition, a biological monitor was present during project activities occurring within the vicinity of these resources to ensure that no sensitive species were impacted.[24]
- Areas supporting Conejo dudleya were flagged prior to project activities by a qualified biologist and avoided during construction. In addition, a biological monitor was present during project activities occurring within the vicinity of these resources to ensure that no sensitive species were impacted.[25]
- When digging holes for pole replacements within Lyon's pentachaeta critical habitat the upper six (6) inches of topsoil were salvaged/stockpiled within Lyon's pentachaeta critical habitat in order to maintain the native seed bank. The topsoil was stored on a protective surface (such as a tarp), piled no more than three feet high, and was replaced (within two weeks) as the top layer when ground disturbing work was completed.[26]
- Where applicable, disturbed areas within Lyon's pentachaeta habitat were restored in accordance with the CDFW SAA requirements.[27]

[23] August 30, 2010 letter from SCE to Ms. Diane K. Noda, Field Supervisor, Ventura Fish and Wildlife Office in Appendix F.

[24] *Ibid*.

[25] *Op cit.* 23

[26] *Op cit.* 23

[27] February 16, 2010 California Department of Fish and Wildlife Streambed Alteration Agreement for the Moorpark Newbury Park 66kV Line Area Notification #1600-2011 0325-R5 Revision 2; contained in Appendix F.

3.9.2.1.3 Special Status Birds[28]

- Focused protocol surveys were conducted prior to construction for the coastal California gnatcatcher (*Polioptila californica californica*).
- During the breeding season (February 15 through August 30), a protocol survey for the coastal California gnatcatcher was conducted prior to construction by a wildlife biologist possessing a valid recovery permit from the USFWS for the coastal California gnatcatcher.
- When project activities occurred during the breeding season (February 15 through August 30), a 500-foot buffer was established around coastal California gnatcatcher nest sites, and this area was avoided until the young fledged or until the birds abandoned the nest.
- No grading of habitat occupied by nesting coastal California gnatcatchers (including a 500-foot buffer area in all direction from the nest) occurred during the breeding season (February 15 through August 30).
- Project activities that occurred within 500 feet of a mapped coastal California gnatcatcher territory were monitored by a qualified biologist who possessed a valid recovery permit for the species.

3.9.2.1.4 Nesting Bird Protection

- Surveys for active bird nests were conducted within one week prior to the start of construction in a particular area during nesting season (generally February 1 to August 31) by a qualified wildlife biologist.
- If an active nest was observed, the qualified wildlife biologist worked with construction crews and appropriate agencies to document and avoid the nest until the nest was no longer active.

3.9.2.2 Biological Resource Protection – Future Activities

For future construction activities the following biological surveys, avoidance and monitoring activities would be implemented, and would be similar to the past resource protection and avoidance activities:

[28] All measures taken from August 30, 2010 letter from SCE to Ms. Diane K. Noda, Field Supervisor, Ventura Fish and Wildlife Office in Appendix F.

3.9.2.2.1 General

- Where wood subtransmission poles have been replaced with LWS poles during past construction activities, the previously-installed poles would be retrofitted to be avian-safe with newly available equipment and consistent with the Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006 (Avian Power Line Interaction Committee 2006).
- During future construction activities, newly-installed LWS poles would be designed to be avian-safe with newly available equipment and consistent with the Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006 (Avian Power Line Interaction Committee 2006).
- Clearance surveys, including avian species, will be conducted no more than 30 days prior to the start of construction in a particular area to identify potential plant and animal species that could be present during construction activities. Clearance surveys will be conducted by a qualified botanist and wildlife biologist and will be limited to areas directly impacted by construction activities.
- A qualified biologist will be present during clearing and restoration activities to ensure that native habitat (coastal sage scrub) removal will be minimized.
- Restoration activities in disturbed areas of native habitat (coastal sage scrub) will continue to be implemented in accordance the CDFW SAA and HRMP requirements, as applicable.
- Implement Worker Environmental Awareness Training (See Section 3.9.7).
- Surveys for protected trees will be conducted by a certified arborist to identify trees meeting regulatory protection standards. When applicable, the proper permit will be obtained for trimming and/or removal of protected trees.

3.9.2.2.2 Special Status Plants

- Focused surveys for Lyon's pentachaeta and Conejo dudleya to be conducted no more than 30 days prior to start of construction in areas with potentially suitable habitat.[29]
- Areas supporting Lyon's pentachaeta will be flagged prior to project activities by a qualified biologist and avoided during construction. In addition, a biological monitor will be present during project activities occurring within the vicinity of these resources to ensure that no sensitive species will be impacted.[30]
- Areas supporting Conejo dudleya will be flagged prior to project activities by a qualified biologist and avoided during construction. In addition, a biological monitor will be present during project activities occurring within the vicinity of these resources to ensure that no sensitive species will be impacted.[31]

[29] *Op cit.* 23

[30] *Op cit.* 23

[31] *Op cit.* 23

- When digging holes for pole replacements within Lyon's pentachaeta critical habitat the upper six (6) inches of topsoil will be salvaged/stockpiled within Lyon's pentachaeta critical habitat in order to maintain the native seed bank. The topsoil will be stored on a protective surface (such as a tarp), piled no more than three feet high, and was replaced (within two weeks) as the top layer when ground disturbing work was completed.[32]
- Where applicable, disturbed areas within Lyon's pentachaeta habitat will continue to be restored in accordance with the CDFW SAA and HRMP requirements.[33]

3.9.2.2.3 Special Status Birds[34]

- Focused protocol surveys to be conducted prior to construction for the coastal California gnatcatcher (*Polioptila californica californica*).
- During the breeding season (February 15 through August 30), a protocol survey for the coastal California gnatcatcher will be conducted prior to construction by a wildlife biologist possessing a valid recovery permit from the USFWS for the coastal California gnatcatcher.
- If project activities occur during the breeding season (February 15 through August 30), a 500-foot buffer will be established around coastal California gnatcatcher nest sites, and this area will be avoided until the young fledged or until the birds abandoned the nest.
- No grading of habitat occupied by nesting coastal California gnatcatchers (including a 500-foot buffer area in all direction from the nest) will occur during the breeding season (February 15 through August 30).
- Project activities that will occur within 500 feet of a mapped coastal California gnatcatcher territory will be monitored by a qualified biologist who possesses a valid recovery permit for the species.

3.9.2.2.4 Nesting Bird Protection

SCE will develop and implement a project-specific nesting bird management plan (the plan) addressing nesting birds in collaboration with the CDFW and USFWS as needed. The plan would be an adaptive management plan to be updated as needed improvements are identified or conditions in the field change. Conditions typically implemented in this plan would include: nest management and avoidance, field approach (survey methodology, reporting, and monitoring), and the Project avian biologist qualifications. The avian biologist would be responsible for oversight of the avian protection activities including the biological monitors. In order to minimize impacts to nesting birds (common or special status), ongoing preconstruction surveys and daily sweep surveys of active construction areas by a qualified

[32] *Op cit.* 23

[33] *Op cit.* 25

[34] All measures taken from August 30, 2010 letter from SCE to Ms. Diane K. Noda, Field Supervisor, Ventura Fish and Wildlife Office in Appendix F.

biologist would focus on breeding behavior and a search for active nests, as defined by CDFW and USFWS, within 500 feet of the Project. At a minimum, the plan would include the following:

- For vegetation clearing that needs to occur during the typical nesting bird season (February 1 to August 31; as early as January 1 for raptors) qualified biologists would conduct nesting bird surveys. If an active nest were located, the appropriate avoidance and minimization measures from the management plan would be implemented. If active nest removal is required, SCE would consult with CDFW and USFWS;
- During the typical nesting bird season, SCE would conduct preconstruction clearance surveys no more than 14 days prior to construction and in accordance with the adaptive management plan, to determine the location of nesting birds and territories. Preconstruction sweeps would be conducted within 3 days before construction begins at a given project location;
- Nest monitoring would be conducted by Project biological monitors with knowledge of bird behavior;
- Nesting deterrents (e.g., mooring balls, netting, etc.) would be used for inactive nests at the direction of the Project avian biologist in consultation with CDFW and USFWS;
- A Project avian biologist would determine the appropriate buffer area around active nest(s) and provisions for buffer exclusion areas (e.g., highways, public access roads, etc.) along with construction activity limits. The Project avian biologist would determine, evaluate, and modify buffers as appropriate based on species tolerance and behavior, the potential disruptiveness of construction activities, and surrounding conditions; and,
- The Project biological monitor would ensure implementation of appropriate buffer areas around active nest(s) during project activities. The active nest site and applicable buffer would remain in place until nesting activity concluded. Nesting bird status reports would be submitted according to the management plan.

3.9.3 Cultural and Paleontological Resources Protection

A cultural resources survey of the Project area was conducted prior to past construction activities. Additionally, a number of physical protection and impact avoidance measures were implemented prior to, and during, past construction activities. These activities would also be implemented prior to, and during, future construction activities:

- Physically isolate within an Environmentally Sensitive Area (ESA) one cultural resource discovered during previous surveys. The ESA is an area in which construction activities are prohibited, and from which construction workers are excluded.
- Utilize an archaeological monitor on site during ground disturbing activity in the vicinity of identified archaeological resources.
- Conduct a preconstruction meeting to orient construction crews to sensitive areas prior to any ground disturbing activity within the vicinity of identified archaeological resources.
- Should cultural material that may yield sensitive information be uncovered during construction, then all work within a 15-meter radius of the discovery will be halted until the find is evaluated by a qualified archaeologist. In the case of unearthing human remains during excavation, no further disturbance occurs until the County Coroner makes the necessary findings as to origin and distribution, pursuant to Public Resources Code Section 5097.98. No cultural material or human remains were uncovered during past construction activities).
- If construction is halted because of an archaeological discovery, no work begins within that area until written notification from a qualified archaeologist is given to the Project Manager or construction foreman.

3.9.3.1 Unanticipated Discoveries

If previously unidentified cultural resources are discovered during construction, personnel would suspend work in the vicinity of the find. The resource would then be evaluated for listing in the California Register of Historical Resources (CRHR) by a qualified archaeologist, and, if the resource is determined to be eligible for listing in the CRHR, the resource would either be avoided or appropriate archaeological protective measures would be implemented.

If human skeletal remains are uncovered during Project construction, SCE and/or its contractors shall immediately halt all work in the immediate area, contact the applicable County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines. Per Health and Safety Code Section 7050.5, upon the discovery of human remains, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. If the applicable County Coroner determines that the remains are Native American, it is anticipated that the coroner would contact the Native American Heritage Commission in accordance with Health and Safety Code Section 7050.5(c) and Public Resources Code Section 5097.98 (as amended

by AB 2641). In addition, SCE shall ensure that the immediate vicinity where the Native American human remains are located is not damaged or disturbed by further development activity until SCE has discussed and conferred, as prescribed in Public Resource Code Section 5097.98, with the most likely descendants regarding their recommendations.

3.9.3.2 Paleontological Resources Protection

To protect paleontological resources, SCE would implement procedures including, but not limited to: preconstruction coordination; recommended monitoring methods; emergency discovery procedures; sampling and data recovery methods, if needed; museum storage coordination for any specimens and data recovered; and reporting requirements.

3.9.4 Geotechnical Design Considerations

A geotechnical data report was prepared for the Project prior to the beginning of construction. The investigation included a total of fourteen (14) soil and rock core borings to collect samples for laboratory testing and analyses and to evaluate the subsurface soil and bedrock conditions. The results of the investigation were utilized to identify the geologic setting and engineering properties of soil and bedrock underlying the ROW, as well as to provide recommendations for the design of foundations for the subtransmission line structures. A geotechnical investigation for the installation of TSPs at the Newbury Substation property would be performed prior to future construction activities at this location.

Based on the findings of the past and future geotechnical analyses, SCE did and would design Project components to minimize the potential for impacts from landslides, lateral spreading, subsidence, liquefaction, or collapse. Measures that have been, or may be, used to minimize impacts could include, but are not limited to avoidance of highly unstable areas and construction of pile foundations. Additionally, subtransmission poles are designed consistent with CPUC GO 95, Rules for Overhead Line Construction.

3.9.5 Noise Reduction

Noise-generating construction activities were, and would be, conducted generally only during daytime hours (7:00 a.m. to 7:00 p.m.), Monday through Saturday. Construction activities were, and would be, conducted or staggered to ensure that the noise generated during construction would not exceed significance thresholds or durations identified by the County of Ventura noise regulations set forth in the County's Construction Noise Threshold Criteria and Control Plan (2010).

3.9.6 Traffic Control

Construction activities completed within public street ROWs may require the use of a traffic control service, and lane closures conducted in accordance with local ordinances and city permit conditions. Traffic control measures used are consistent with those published in the California Joint Utility Traffic Control Manual (California Inter-Utility Coordinating Committee 2010) or local jurisdictional requirements.

As discussed in Section 4.16, during the past activities, traffic control measures were not needed due to the location and type of work conducted. During future construction activities, SCE would implement recommendations contained in the CJUTCM, including consulting and coordinating with local jurisdictions, to ensure the safe and efficient transit of vehicles, bicyclists, and pedestrians through laydown/work areas.

3.9.7 Worker Environmental Awareness Training

Prior to the start of past construction activities, a Worker Environmental Awareness Plan (WEAP) was developed. A presentation was prepared by SCE and used to train site personnel prior to the commencement of work. A record of all trained personnel was kept. This process would be repeated prior to and during the future construction activities.

The WEAP training included a list of phone numbers of SCE environmental specialist personnel associated with the Project (archaeologist, biologist, environmental compliance coordinator, and regional spill response coordinator), and covered the following topics:

- Archaeological Resources Training
  - An Environmentally Sensitive Area (ESA) has been physically delineated and marked to protect an archaeological resource
  - All work and equipment staging, storing, and placement shall remain outside the ESA
  - The Project has implemented procedures to follow if unanticipated archaeological resources are discovered, including:
    - If archaeological resources are discovered during construction activities, all work in the vicinity of the find shall halt
    - The archaeological monitor shall be informed
    - The archaeological monitor shall notify the project foreman and SCE archaeologist immediately
    - Archaeological monitors have the authority to temporarily halt work in the area of archaeological discoveries until the resource has been evaluated by a qualified archaeologist
    - Work in the area of the discovery shall not resume until written notification is received from the SCE archaeologist

  - The SCE archaeologist will provide an estimate of how long an excavation of the resource would take
  - The Project has established procedures to follow if human remains are encountered. If human remains are encountered during earth-disturbing activities, State Health and Safety Code Section 7050.5 states that there "shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered [has made the appropriate assessment and] the recommendations concerning the treatment and disposition of the human remains has been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code."

- Biological Resources Training. Workers were informed of general and Project-specific biological impact reduction measures, including:
  - Keep vehicles on existing roads and pads
  - Avoid impacts to drainages
  - Minimize clearing of vegetation
  - Avoid trapping animals by covering trenches/holes at the end of each day
  - Workers informed of requirements and actions under Migratory Bird Treaty Act
  - Workers informed of protected plant and wildlife species that may be found in the Project Area, where they have been identified during past surveys, and protection measures that may be implemented
- SWPPP Training
  - Background on the regulatory climate
  - Education on individual and corporate responsibilities under the Clean Water Act
  - Presentation of activities covered under the Construction General Permit, and requirements of the Construction General Permit
  - Develop and implement a SWPPP
  - Eliminate or control non-stormwater
  - Visual inspections
  - Identification of SWPPP requirements
  - Daily inspection checklist
  - Maps
  - BMPs
  - Presentation on spill prevention and control, and spill notification procedures
  - Identification of common stormwater violations
  - Education on how to identify problems and devise solutions

- Instruction on the importance of maintaining the construction site. All trash must be removed from the job sites daily, and all construction debris shall be removed at the end of construction
- Instructions to notify the foreman and regional spill response coordinator in case of a hazardous materials spill or leak from equipment, or upon the discovery of soil or groundwater contamination
- Instruction that noncompliance with any laws, rules, regulations, or mitigation measures could result in being barred from participating in any remaining construction activities associated with the Project

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4.0 ENVIRONMENTAL IMPACT ASSESSMENT SUMMARY

This chapter includes a discussion of the environmental setting and examines the potential environmental impacts of the Project.[35] The analysis of each resource category begins with a description of the existing physical setting (baseline conditions as determined pursuant to Section 15125(a) of the California Environmental Quality Act (CEQA) Guidelines) that may be affected by the Project.

Each section in Chapter 4: Environmental Impact Assessment Summary includes significance criteria that are used to determine if the Project would result in a significant adverse environmental impact when evaluated against the baseline. The effects of the Project are defined as changes to the environmental setting that are attributable to construction and operation of the Project.[36] According to CEQA Guidelines Section 15382, a significant effect on the environment means "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project…"

This chapter describes the affected environment and Project related environmental effects on the subject areas listed below:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismic Potential
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise

[35] The CPUC's "Working Draft Proponent's Environmental Assessment (PEA) Checklist for Transmission Line and Substation Projects," dated November 2008 (Checklist) provides two options for applicants for formatting PEAs. One option is to include a Chapter 4 entitled "Environmental Setting" along with a separate Chapter 5 entitled "Environmental Impact Assessment Summary." The other option offered by the Checklist is for both sections to be combined into a single section. SCE has chosen to combine both the discussion of environmental setting with the discussion of environmental impacts into a single Chapter 4.

[36] For the purposes of the analyses presented in Chapter 4, the term 'operations' is defined to also include project-related maintenance activities.

- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

The analysis and discussion of Project related environmental effects are divided into sections focused on past activities (that work conducted between October 2010 and November 2011) and future activities (the work remaining to be conducted to complete the Project) (Figures 3.4-1a and 3.4-1b). The environmental effects of past activities are those realized from the following past construction activities:

- Project Section 1
  - Installed 700 feet of underground duct bank and conduit
  - Installed two underground subtransmission vaults
  - Installed a single tubular steel pole (TSP) riser pole (pole location 1)
  - Equipped an existing 66 kV line position in a double bus-double breaker configuration, creating a new line position
  - Installed protection, control, and metering equipment for the new Moorpark-Newbury 66 kV Subtransmission Line
  - Upgraded protection equipment for the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line
- Project Section 2
  - Constructed 24 TSP foundations (pole locations 2-25)
  - Installed 21 complete TSPs (pole locations 2-22)
  - Installed partially one TSP (only base of pole installed) (pole location 23)
- Project Section 3
  - Excavated holes for three TSP foundations and then subsequently filled them with slurry (pole locations 29-31)
  - Constructed five TSP foundations (pole locations 33-37)
- Project Section 4
  - Replaced 27 wood subtransmission poles with 27 lightweight steel (LWS) subtransmission poles (pole locations 41-67)
  - Transferred the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line from wood subtransmission poles to newly-installed LWS poles
  - Installed a portion of the of 954 stranded aluminum conductor (SAC) for the new Moorpark-Newbury 66 kV Subtransmission Line

  - Installed a portion of fault return conductor (FRC)
  - Transferred existing distribution lines and third-party facilities to new subtransmission structures
  - Relocated the 66 kV bus tie position
  - Added a new 66 kV position on which to terminate the new Moorpark-Newbury 66 kV Subtransmission Line
  - Installed protection equipment for the new Moorpark-Newbury 66 kV Subtransmission Line Position

The environmental effects of future activities are those realized from the following future construction activities:

- Project Section 1
  - Construct approximately 500 feet of duct bank consisting of six 5-inch conduits
  - Install and splice subtransmission cable
  - Terminate new cable at a line position in the 66 kV switchrack
- Project Section 2
  - Install two TSP foundations (pole locations 26-27)
  - Install upper sections of one partially-installed TSP to complete construction (pole location 23)
  - Install four TSPs (pole locations 24-27)
  - Install approximately five circuit miles of 954 aluminum conductor steel-reinforced (ACSR) (from pole locations 1-28)
- Project Section 3
  - Install eight TSP foundations (five wholly new foundations at pole locations 28, 32, and 38-40; and complete the three that were slurried at pole locations 29-31)
  - Install 13 TSPs (pole locations 28-40)
  - Remove 14 existing lattice steel towers (LSTs)
  - Install approximately 2.5 miles of double circuit 954 ACSR on new TSPs (from pole locations 28-40) as follows:
    - Reconductor approximately 3 circuit miles of the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line by removing 653 ACSR and installing 954 ACSR on the new TSPs
    - Install approximately 3 circuit miles of new 954 ACSR on the new TSPs for the new Moorpark-Newbury 66 kV Subtransmission Line
- Project Section 4
  - Install approximately 0.5 mile of 954 SAC for the new Moorpark-Newbury 66 kV Subtransmission Line

- Install an additional length of FRC
- Install four TSP foundations at Newbury Substation
- Install four TSPs at Newbury Substation (pole locations 68, 70, 71, and 73)
- Install two LWS poles at Newbury Substation (pole locations 69 and 72)
- Remove six wood subtransmission poles at Newbury Substation
- Transfer existing subtransmission, distribution and telecommunications facilities to new structures
- Terminate the new Moorpark-Newbury 66 kV Subtransmission Line to the new line position

The sections contained within Chapter 4: Environmental Impact Assessment Summary include a discussion of relevant regional and local regulatory standards (e.g., General Plan goals and policies). However, the CPUC has adopted GO 131-D, Section XIV.B which states that "…local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction. However in locating such projects, the public utilities shall consult with local agencies regarding land use matters." As such, the regional and local regulatory standards are generally provided in the analyses in this chapter for information purposes only.

4.1 Aesthetics

This section discusses the visual resources in the area of the Project and the potential impacts to visual resources associated with construction and operation of the Project. Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that can be seen and that contribute to the public's experience and appreciation of the environment. Visual resource or aesthetic impacts are generally defined in terms of a Project's physical characteristics, potential visibility, and the extent to which a Project's presence could alter the perceived visual character and quality of the environment.

Portions of the Project have already been constructed, and operation impacts discussed in Section 4.1.6 are based on a comparison of the actual or reconstructed visual conditions prior to the start of past construction activities with those expected after Project completion.

4.1.1 Methodology

The visual analysis is based on review of technical data including Project maps and drawings provided by SCE, aerial and ground level photographs of the Project Area, county and city General Plans and other planning documents, and computer-generated visual simulations. Field observations were conducted in November 2012 to document existing visual conditions in the Project Area and to identify potentially affected sensitive viewing locations.

This visual assessment employs methods based, in part, on the United States (U.S.) Department of Transportation Federal Highway Administration, and other accepted visual analysis techniques as summarized by Smardon et al. (1986). The analysis describes changes to existing visual resources and assesses viewer response to those changes. Central to this assessment is an evaluation of representative views from which the Project would be visible to the public. To document the visual changes that have occurred, and would occur, visual simulations show the Project from key observation points (KOPs). These changes were assessed, in part, by evaluating photographs or computer-generated visual simulations and comparing them to photographs or computer-generated visual simulations of the visual environment prior to past construction activities.

Technical methods employed for producing the computer-generated simulation images include high resolution digital site photography using a single lens reflex (SLR) camera with a 50 millimeter (mm) lens or equivalent that represents a horizontal view angle of 40 degrees. Systematic documentation of photograph viewpoints employed Global Positioning System (GPS) recording and photograph log sheet and basemap annotation. Three-dimensional computer modeling was combined with geographic information system (GIS) and engineering data and digital aerial photographs of the existing site to produce digital modeling for visual analysis and simulation. Simulation viewpoint locations were incorporated based on GPS field data, using 5 feet as the assumed eye level.

To verify scale and viewpoint locations, computer wireframe perspective plots were overlaid on the KOP photographs. Digital visual simulation images were then produced based on computer renderings of the three dimensional models combined with selected photographs. The final hardcopy images contained in this visual analysis were printed from the digital image files and produced in color on 11x17 inch sheets. Simulation figures present two images per sheet:

- Figures 4.1-4a through 4.1-4c portray: 1) the simulated visual conditions prior to the beginning of Project construction (circa September 2010), and 2) the visual condition following the completion of past construction activities (circa November 2011).
- Figures 4.1-5a through 4.1-5f portray: 1) the actual or simulated visual condition prior to the beginning of Project construction (circa September 2010), and 2) the simulated visual condition following the completion of future construction activities.

4.1.2 Environmental Setting

4.1.2.1 Regional and Local Landscape Setting

Figure 4.1-1 shows the Project within its regional setting. Located in southern California, the Project lies approximately 10-15 miles east of the Pacific Ocean in southeastern Ventura County.

The Project traverses a varied topography, straddling east-west running valleys and ridges of the Transverse Range including Little Simi Valley, Las Posas Hills, Santa Rosa Valley, and Mountclef Ridge. Project elevations range from approximately 230 to 1,100 feet above sea level. Nearby Simi Peak in the Simi Hills to the east and Conejo Peak to the southwest rise to 2,403 and 1,814 feet, respectively, in elevation. From some areas, panoramic views include rugged hillside backdrops and mountain ranges. On clear days, the coastline is visible from a limited area along the Project alignment.

In the Project Area, steeper terrain tends to be undeveloped with vegetation comprised of chaparral and coastal sage scrub plant communities, scattered oaks, and some areas with dense trees and shrubs. Residential and commercial development and agriculture are typically found in the more level valley areas. The northern portion of the route passes through the suburban City of Moorpark, a city of approximately 34,400 residents, and the southern end of the Project lies in the City of Thousand Oaks, a city with a population of approximately 126,700 (U.S. Census 2010).

The central portion of the Project passes through less-developed lands characterized by mountains and steep-sided canyons that lie between the two cities; these lands are managed by the Conejo Open Space Conservation Agency (COSCA), and are located in an area identified by COSCA as the Conejo Canyons area.

U.S. Highway 101, State Route (SR)-118 and Santa Rosa Road run along east-west running valleys and provide the major connections between coastal Ventura County and Los Angeles County. North-south roadways that cross mountain ridges and valleys include SR-23. None of the highways crossed by or adjacent to the Project is an Officially Designated State Scenic

Highway; the nearest such highway is a portion of SR-33 located approximately 30 miles northwest of the Project.

Nighttime lighting in the area includes, among other sources, highway and street lights, lighting at public and recreational facilities such as parks and school yards, and localized lighting sources associated with residences and commercial facilities.

4.1.2.2 Project Viewshed

The Project viewshed is defined as the general area from which the Project is visible or can be seen by a member of the public from a public viewpoint. For purposes of describing the Project's visual setting and assessing potential visual impacts, the viewshed can be broken down into distance zones of foreground, middleground, and background. The foreground is defined as the zone approximately within 0.25 to 0.50 mile from the viewer. Landscape detail is most noticeable and objects generally appear most prominent when seen in the foreground. The middleground is defined as a zone that extends from the foreground up to approximately 3 to 5 miles from the viewer, and the background extends from about 3 to 5 miles to the horizon. In the analysis of the Project, emphasis is on the potential effects on foreground viewshed conditions, although consideration is also given to the potential effects on the middleground and background views.

In some areas, views of components of the Project are obscured by topography and vegetation and/or lack of public access. A portion of the Project is also located in open space where public access is restricted to parking areas and recreational trails.

Utility facilities, including two existing substations and various transmission, subtransmission, and distribution towers, poles and lines, are established features in the vicinity of the Project. The Project is located within existing SCE rights-of-way (ROWs) in which existing lattice steel towers (LSTs), rectangular portal-type steel towers, and wood and lightweight steel poles supporting power lines are currently found. Portions of the Project have already been completed and comprise part of the current landscape setting.

4.1.2.3 Potentially Affected Viewers

The primary potentially affected viewer groups within the Project Area are motorists, nearby residents, and recreationists.

Motorists, the largest viewer group, include people traveling on public roadways including regional highways such as SR-118 (Los Angeles Avenue) as well as local streets. Motorists include a variety of roadway travelers, including both local and regional travelers who are familiar with the visual setting, and travelers using these streets on a less regular basis. Affected motorist views are typically brief in duration, generally lasting less than 1 minute. Viewer sensitivity is considered low to moderate.

Residents of the City of Moorpark, City of Thousand Oaks, and unincorporated portions of Ventura County may have partial views of Project components. Recreationists at the parks and open space facilities located near the Project alignment might also view Project

components. Recreationists include equestrians, bicyclists, and hikers using trails located on COSCA-managed lands, and users of local parks including Santa Rosa Valley Park and local roads. Recreational views tend to be brief or moderate in duration, and the sensitivity of this viewer group is considered moderate to high.

4.1.2.4 Visual Character and Representative Views of the Project Area

The visual character of the Project Area is described in the following section and subsections. The discussion includes an overview of the current status of Project completion, as well as figures containing photographs demonstrating representative conditions. Figure 4.1-2 delineates the locations of Project components and the viewpoints from which photographs were taken and/or from which simulations are depicted on other figures. Figures 4.1-3a-h present a set of 16 photographs that show representative visual conditions and public views within the Project Area. Table 4.1-1 summarizes the Project Sections that are under evaluation in terms of their approximate length, potentially affected viewers, and representative photographic views. The table also includes Moorpark Substation and Newbury Substation where minor modifications within the substations are proposed. Because of the Project length, rugged existing topography, and mature vegetation, the Project would not be visible in its entirety from a single viewing location.

Table 4.1-1: Summary of Project Components, Primary Viewers, and Representative Photographs

Project Component	Primary Affected Viewers	Photograph Viewpoints and Simulation Photograph Viewpoints
Project Section 1 and Moorpark Substation	Motorists and Residents	Photograph Viewpoint 1 (Figure 4.1-3a)
Project Section 2	Motorists and Residents	Photograph Viewpoints 1 through 9 (Figures 4.1-3a through 4.1-3e) Simulation Photograph Viewpoint 6 (Figures 4.1-4a and 4.1-5a) Simulation Photograph Viewpoint 2 (Figure 4.1-5f) Simulation Photograph Viewpoint 7 (Figure 4.1-5b) Simulation Photograph Viewpoint 8 (Figure 4.1-5c) Simulation Photograph Viewpoint 9 (Figures 4.1-4b and 4.1-5d)
Project Section 3	Motorists, Recreationists, and Residents	Photograph Viewpoints 8, 10 through 13 (Figures 4.1-3d through 4.1-3g) Simulation Photograph Viewpoint 8 (Figure 4.1-5c) Simulation Photograph Viewpoint 10 (Figures 4.1-4c and 4.1-5e)
Project Section 4 and Newbury Substation	Motorists, Recreationists, and Residents	Photograph Viewpoints 10, 14 through 16 (Figures 4.1-3e through 4.1-3h) Simulation Photograph Viewpoint 10 (Figures 4.1-4c and 4.1-5e)

Project Section 1

Project Section 1 is located entirely within the existing fenceline of Moorpark Substation. Moorpark Substation is located along SR-118 at the base of Oak Ridge, a part of the Transverse Range. The substation is bordered on the south by SR-118, on the east by a local road, and to the north by a railroad. Open fields lie to the north and west, an office park development lies to the east, and a suburban residential development is located to the south.

Numerous 220 kV transmission lines and 66 kV subtransmission lines run into Moorpark Substation from various directions. Photograph 1 (on Figure 4.1-3a), taken from SR-118, shows the substation against a hillside backdrop with more than a dozen transmission towers visible and overhead lines (also known as wire or conductor) seen in the immediate foreground running parallel to the road. Lower portions of the towers and substation facility are screened by a row of conifers situated along the edge of the substation; however, some substation components are visible above the trees. Intermittent views of the facility are available from closer locations along SR-118, particularly at the intersection of SR-118 and Tierra Rejada Road. Limited views are also available from a residential area located south of SR-118; however, these views are largely screened by mature trees along SR-118.

Primary viewers in this section include motorists on SR-118 and adjacent local streets and a small number of residents south of SR-118.

Project Section 2

Project Section 2 extends southwest from Moorpark Substation for approximately 5 miles. As shown by Photographs 2 through 9 on Figures 4.1-3a through 4.1-3e, the visual character of Project Section 2 includes a mixture of agriculture, suburban residential development, and open space. Project Section 2 is routed over ridges and valleys including Little Simi Valley, Las Posas Hills, and Santa Rosa Valley, and crosses local, private and regional roads including SR-118, Santa Rosa Road, and Hitch Boulevard. Portions of Project Section 2 are visible from residences and locations along public roads.

As presented in Chapter 3: Project Description, the majority of work in Project Section 2, including the installation of TSPs, has already been completed. However, some work remains, including the installation of conductor. Photographs 1 through 6 (on Figures 4.1-3a through 4.1-3c) show views that include TSPs installed as part of the past construction activities.

As noted above, from Moorpark Substation the Project alignment (which is located within an existing SCE ROW) runs west through agricultural fields for approximately 0.7 mile, and then turns south at Montair Drive. In Photograph 2 (on Figure 4.1-3a), from SR-118 near Montair Drive, a Project TSP is shown adjacent to two portal-type towers supporting 220 kV transmission lines crossing over the road. Overhead 220 kV transmission line conductors are also visible in the foreground with a non-Project related 66 kV subtransmission line on the right (north) side of SR-118; a lower wood pole-supported utility line is seen on the left side of the road. Mature roadside trees provide some screening of existing utility line poles and conductors. Photograph 3 (on Figure 4.1-3b) is taken from the same roadway location, but looking toward the Project alignment where it runs south across agricultural fields into the

Las Posas Hills. In this view, the Project alignment and adjacent 220 kV transmission lines are routed through orchards that partially screen the lower portions of existing transmission and Project related subtransmission towers. The upper portions of these towers appear against a backdrop composed of a dark, tree-covered hillside and sky.

Photograph 4 (on Figure 4.1-3b) is taken from Hitch Boulevard, a two-lane street. On the left side of the road, two portal-type 220 kV transmission towers appear prominently just to the right of the Project related TSP that was installed during past construction activities. Various overhead conductors, including those of the existing adjacent 220 kV transmission lines and other wood pole-supported utility lines, are visible overhead. Mature trees located on residential properties partially screen the lower portions of some of these poles. Photograph 5 (on Figure 4.1-3c) is a view from Citrus Drive, a residential street at the base of the Las Posas Hills. From this location, mailboxes and residential driveways are visible in the foreground and houses are partially visible amidst mature trees with orchard-covered hills in the backdrop. Beyond the residences, portal-type 220 kV transmission towers as well as the smaller Project related TSPs installed as part of the past construction activities are visible as the route continues south through the hills. On the ridgeline, trees, the portal-type 220 kV transmission towers, and a Project related TSP appear silhouetted against the sky. Residential landscaping partially screens views of the portal-type 220 kV transmission towers and the TSPs.

Photograph 6 (on Figure 4.1-3c), taken from the gated entry of the Santa Rosa Valley Estates residential development on Yucca Drive, shows hillside residences in the foreground with existing 220 kV transmission lines supported by portal-type towers and Project related TSPs seen along the hilltop and at the base of the hill.

Photographs 7 and 8 (on Figure 4.1-3d) were both taken from Santa Rosa Road near where the Project alignment crosses the road; these photographs show views looking west and southwest respectively. Photograph 7 shows two prominent portal-type 220 kV transmission towers in the foreground near the left (south) edge of the road. Overhead conductors are also noticeable. Project related TSPs have not yet been installed at this location. Additional utility infrastructure including a wood pole-supported line are also visible from this location. In Photograph 8, hillsides provide a vivid backdrop to a foreground view dominated by row crops. From this vantage point, 220 kV transmission lines located adjacent to the Project alignment can be seen extending south into the Conejo Canyons area. The point where the southern end of Project Section 2 and the northern end of Project Section 3 meet is located approximately halfway up the hill in this view.

Photograph 9 (on Figure 4.1-3e) is a view toward the Project alignment and the existing SCE ROW from Santa Rosa Valley Park, a 50-acre open space area near Hill Canyon Road with equestrian facilities, hiking trails, and access to COSCA-managed lands and trails. Portal-type transmission towers located approximately 2,000 feet away are visible against an orchard and hillside backdrop, and a single Project related TSP installed during the past construction activities is visible at the far right of the picture.

Primary viewers of infrastructure in Project Section 2 include motorists and bicyclists on local streets, residents of Moorpark and unincorporated Ventura County, and commuters.

Project Section 3

Project Section 3 is largely located in the rugged landscape of public open space lands managed by COSCA. Project Section 3 extends approximately 2.5 miles from the northern edge of the Conejo Canyons area, running southeast through open space to the residential and commercial areas of Thousand Oaks. The Conejo Canyons area includes rugged terrain characterized by a mixture of chaparral and grassland with areas of exposed soil and rocks. Elevations along the Project alignment in this area range from approximately 425 feet to 1,100 feet. On clear days, panoramic views of mountain ranges and the Ventura coastline are available from higher, remote locations within the Conejo Canyons area.

Unpaved trails throughout the area are accessible to hikers, bicyclists, and equestrians; in addition, some trail areas south of US-101 have been designed for universal access (accessible to people with disabilities). Named hiking trails lie approximately 1 mile east of the Project, and informal, unnamed trails cross and are located near the Project alignment (COSCA 2008). Unobstructed, close-range and distant views of existing 220 kV transmission and 66 kV subtransmission infrastructure are available from places along trails and from some locations within nearby adjacent residential areas.

As described in the Project Description, some work has been completed in Project Section 3; however, these elements are not particularly visible from locations easily accessible by the public.

Photograph 8 (on Figure 4.1-3d) shows the northern end of Project Section 3, located approximately half way up the hills in this view, where an existing 66 kV subtransmission line joins the Project alignment. Existing 220 kV portal-type transmission towers and lattice steel towers are visible against the backdrop of the hillside, and are visible against the sky on the distant ridgeline.

Photograph 10 (on Figure 4.1-3e) is a view from a hiking trail near the end of Rancho Conejo Boulevard. This photograph shows an open, rugged landscape with a relatively unobstructed, panoramic view toward lightweight steel (LWS) poles that were installed during past Project construction activities. From this location, undulating topography partially screens some LWS poles. In addition, LSTs are visible against the hillside and also appear in the distance silhouetted against the sky.

Photograph 11 (on Figure 4.1-3f) is a view toward the Project alignment from Rancho Conejo Boulevard, an arterial that passes through an industrial area and a medium-density residential area in the western portion of the City of Thousand Oaks. From this location, LSTs and a radio tower located along the Project alignment on COSCA-managed lands are visible on the ridgeline, silhouetted against the sky from a distance of approximately 1.5 miles away. A light standard alongside the roadway is visible in the foreground.

Portions of Project Section 3 are also visible from more distant places to the east. Photograph 12 (on Figure 4.1-3f) is taken from Calle Yucca, a residential street approximately 2 miles to the east of the Project alignment. This photograph shows dense residential landscaping in the foreground with LSTs as well as water towers visible on the ridgeline. However, from this distance, the LSTs are barely perceptible. Photograph 13 (on Figure 4.1-3g) is taken from the Lynnmere Trail, located approximately 2.5 miles east of the Project alignment. From this location, panoramic views of COSCA-managed open space lands with rugged topography, and views of more distant mountain ranges, are available. On the left, residential development in the City of Thousand Oaks can also be seen along the hilltop. LSTs are visible on Mountclef Ridge, silhouetted against the sky. Although visible, the LSTs are minor elements and are barely noticeable within the overall context of this panoramic landscape.

Primary viewers of infrastructure in Project Section 3 include individuals utilizing the COSCA-managed lands for recreational purposes, motorists on nearby roads, and a limited number of residents in Thousand Oaks who have more distant views of the route.

Project Section 4

Project Section 4 runs approximately 1 mile across COSCA-managed lands from the termination of Project Section 3 to Newbury Substation. Portions of Project Section 4 are located near developed areas of the City of Thousand Oaks and are visible from residential and commercial areas in the city. When fully constructed, Project Section 4 would consist primarily of double-circuited overhead 66 kV subtransmission lines installed on TSPs and LWS poles. As detailed in the Project Description, much of the work in Project Section 4 has already been completed.

The Project Section 4 landscape is characterized by industrial/office park development located north of US-101, at the edge of the COSCA-managed lands. The Project alignment travels through an open space area behind residences and commercial buildings. In the western portions of the City of Thousand Oaks, the Project alignment is visible in the foreground from some places along public roads and within nearby residential and commercial areas, and from a school site.

Photograph 14 (on Figure 4.1-3g), taken near the Conejo Adventist Elementary School on North Wendy Drive, shows part of the school facility and adjacent hillside in the foreground. LWS poles that were installed during past Project construction activities, and other wood poles and associated overhead conductor not associated with the Project, are silhouetted against the sky. In comparison with the gray LWS poles, the darker wood poles are somewhat more noticeable against the sky. Water tanks are visible on the left, partially screened by trees. On the right, LWS and wood poles are partially screened by topography as the alignment continues to the east. From other locations within this residential area, a combination of buildings, topography, and mature vegetation provides partial screening of LWS and wood poles located along the Project alignment.

Photograph 15 (on Figure 4.1-3h), taken from a residential area on Marion Street located approximately 600 feet west of Newbury Substation, shows residences and numerous Project related LWS and non-Project related wood poles and associated conductor. The LWS and

wood poles appear prominently against the sky on the hillside behind the one-story residences. Overhead conductor is also visible in the foreground. Photograph 16 (on Figure 4.1-3h), a close-range, unobstructed view toward Newbury Substation from Lawrence Drive, includes substation equipment and non-Project related poles in the foreground. A row of tall shrubs partially screens lower portions of substation components, and hillsides are visible in the background. Numerous wood and steel poles located on the substation property and on the ridge to the west are visible against a combination of hillside and sky backdrop. From this location, the LWS and wood subtransmission poles and the substation are prominent elements seen in the landscape.

Primary viewers of infrastructure located in Project Section 4 include motorists, recreationists, and a limited number of residents in the City of Thousand Oaks.

4.1.3 Regulatory Setting

4.1.3.1 Federal Regulatory Setting

There are no Federal regulations applicable to the Project related to aesthetic or visual resources.

4.1.3.2 State Regulatory Setting

4.1.3.2.1 California Department of Transportation (Caltrans): Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The California Department of Transportation (Caltrans) manages the State Scenic Highway Program. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a State Scenic Highway changes from "eligible" to officially "designated" when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and State legislation is passed to make the designation official. California Scenic Highways are defined in California Streets and Highways Code Sections 260-263.

4.1.3.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.1.3.3.1 Ventura County General Plan

Section 1.7 of the Ventura County General Plan describes policies for Scenic Resources in Ventura County (Ventura County 2011a). The viewshed of Lake Sherwood, located approximately 5 miles to the southeast, is the nearest designated Scenic Resource Area (Ventura County 2011b).

Highway 101 and SR-118 are eligible Ventura County scenic roads (Ventura County 2011b). Highway 101 is located approximately 0.5 mile south of the Project, and the Project crosses SR-118. However, the General Plan does not contain specific policies regarding eligible county scenic roads.

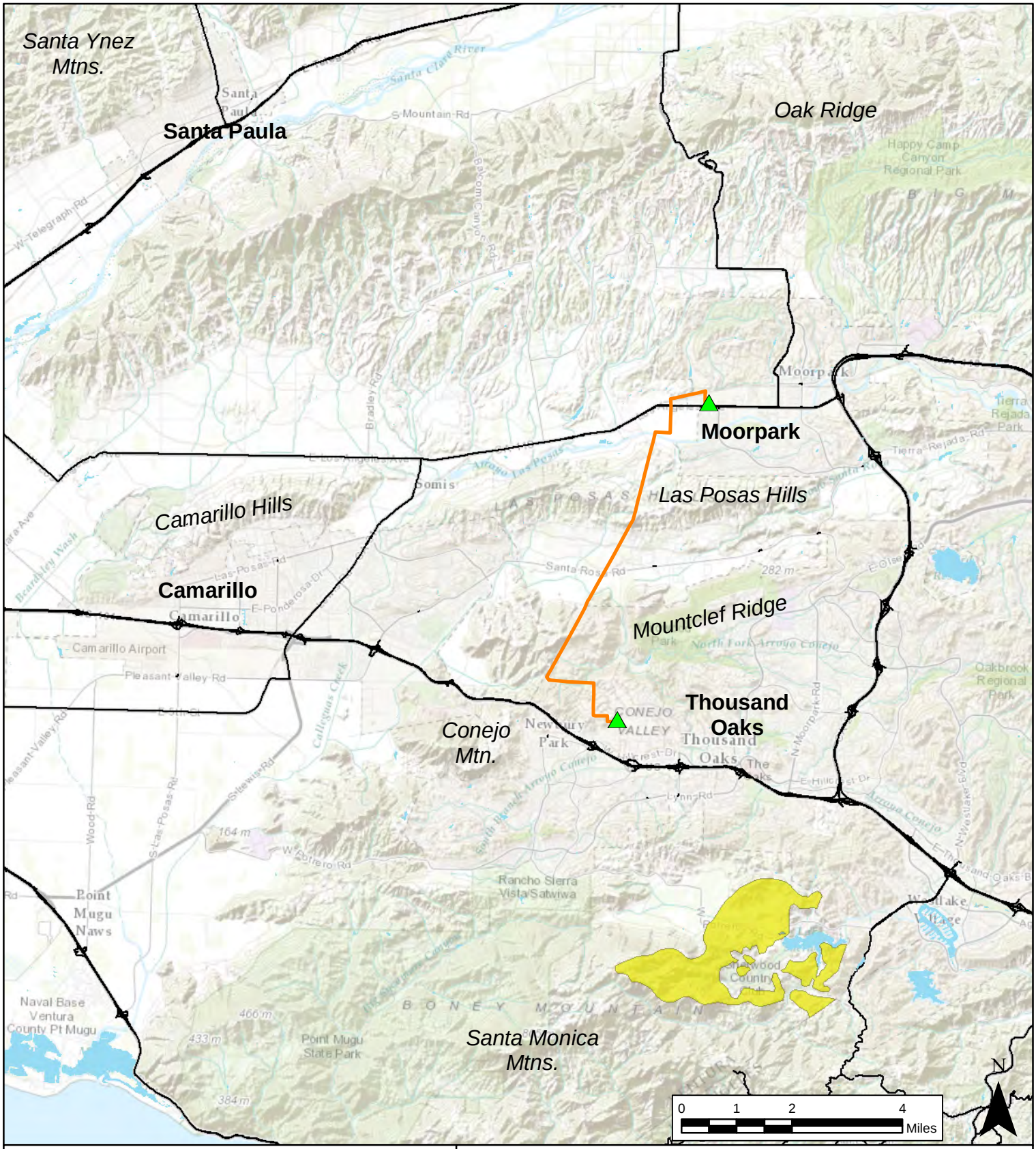
4.1.3.3.2 City of Moorpark General Plan

The Open Space, Conservation, and Recreation Element of the City of Moorpark General Plan lists scenic corridors and policies regarding preserving resources (City of Moorpark 1986). Scenic corridors identified in this General Plan Element include:

- SR-118/Los Angeles Avenue (the scenic corridor is located east of the location where the Project alignment crosses SR-118)
- Arroyo Simi (which is crossed by the Project alignment)
- SR-23 (which lies 2.3 miles or more east of the Project alignment)
- The Tierra Rejada Road extension (which lies east of the Project alignment)

The plan also addresses the importance of preserving scenic viewsheds including views of the Santa Susana Mountains to the north and open space areas to the south. Goals and policies related to scenic resources include the following:

> Goal 1. Preserve and enhance the unique aesthetic and visual qualities of Moorpark as a city with scenic topographic features and elements that promote the quality of life that Moorpark citizens pursue.
>
> Policy 1.1. Protect the scenic viewsheds both to and from the City of Moorpark. This shall include those views extending north to the Santa Susana Mountains and south to Tierra Rejada Valley. This would extend to any new development and to any future renovations and additions that may potentially obscure a viewshed.
>
> Policy 1.2. Study, monitor and link the existing Greenbelt Agreement Area to include landscaped arterial roadways as entrance ways to the City, bikeways, equestrian paths and hiking trails, to create a network of aesthetically pleasing links into and around the City.
>
> Policy 1.4. Develop a hillside conservation, preservation and management program that functions to discourage ridgeline development and/or alteration.
>
> Policy 1.5. Explore with SCE and local utilities the potential to underground existing above-ground lines.



Substation

Proposed Project

Major Roads and Highways

Lake Sherwood Scenic Resource Area Viewshed

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

REGIONAL LANDSCAPE CONTEXT

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Figure
4.1-1

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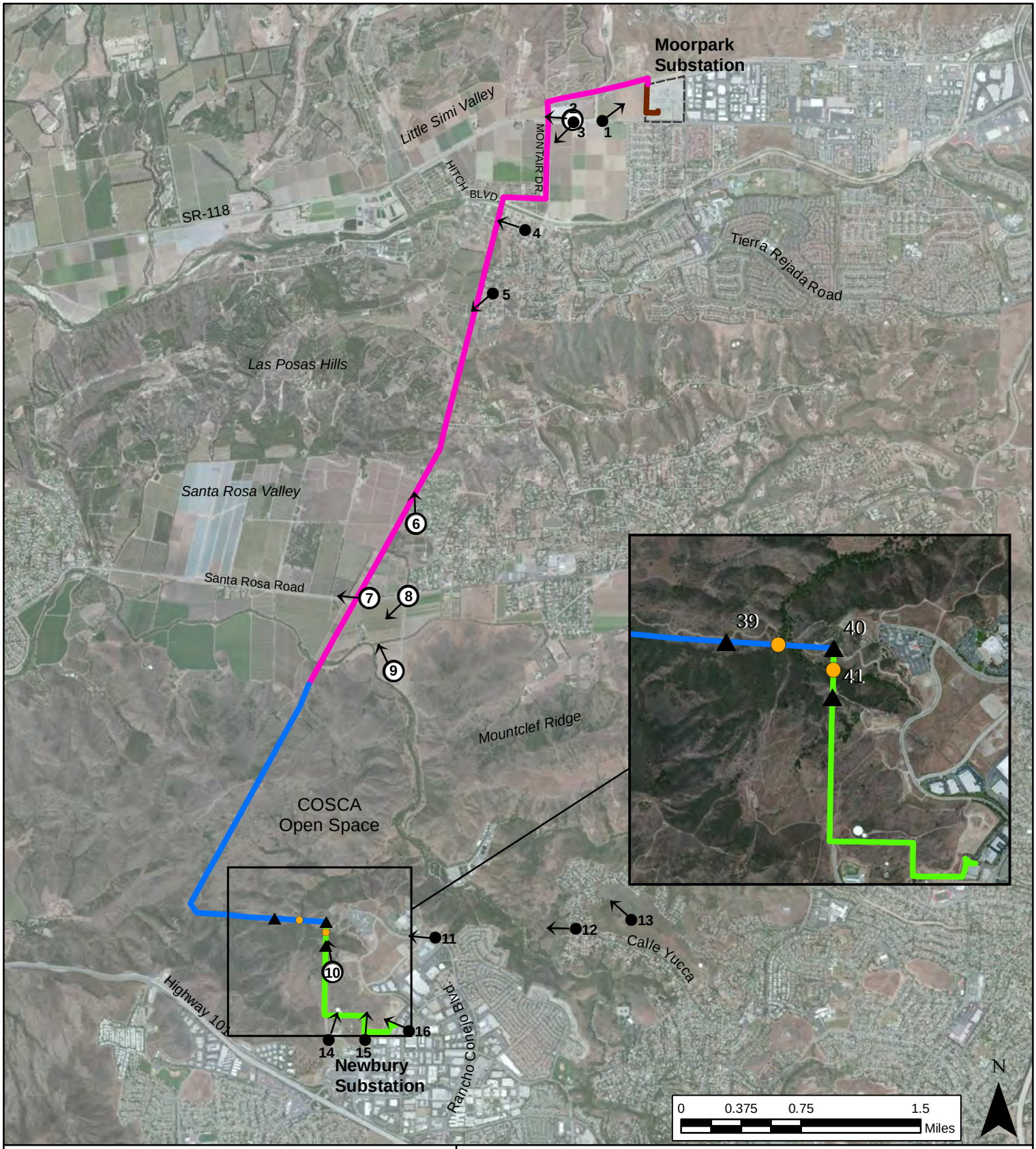

Project Sections

- Project Section 1
- Project Section 2
- Project Section 3
- Project Section 4
- ▲ Proposed Poles
- Spans On Which Marker Balls May Be Installed
- Photograph Viewpoint Location and Direction
- 6 Simulation Photograph Viewpoint Location and Direction

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PHOTOGRAPH VIEWPOINT LOCATIONS

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Figure
4.1-2

ARCADIS: SCEMN_080, 07/18/13, R03

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Photograph Viewpoint 1. SR-118 looking northeast toward Moorpark Substation

Photograph Viewpoint 2. SR-118 looking west

NOTE: Refer to Figure 4.1-2 for viewpoint locations.

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MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PHOTOGRAPHS OF PROJECT ROUTE AND VICINITY

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Figure
4.1-3a

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Photograph Viewpoint 3. SR-118 looking southwest

Photograph Viewpoint 4. Hitch Boulevard looking west

NOTE: Refer to Figure 4.1-2 for viewpoint locations.

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MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
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PHOTOGRAPHS OF PROJECT ROUTE AND VICINITY

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Figure
4.1-3b

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Photograph Viewpoint 5. Citrus Drive looking southwest

Photograph Viewpoint 6. Yucca Drive looking north *

* Simulation Photograph Viewpoint
NOTE: Refer to Figure 4.1-2 for viewpoint locations.

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Figure
4.1-3c

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Photograph Viewpoint 7. Santa Rosa Road looking west *

Photograph Viewpoint 8. Santa Rosa Road looking southwest *

* Simulation Photograph Viewpoint
NOTE: Refer to Figure 4.1-2 for viewpoint locations.

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MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
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Figure
4.1-3d

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Photograph Viewpoint 9. Santa Rosa Valley Park looking northwest *

Photograph Viewpoint 10. COSCA Open Space looking north *

* Simulation Photograph Viewpoint
NOTE: Refer to Figure 4.1-2 for viewpoint locations.

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MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
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Figure
4.1-3e

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Photograph Viewpoint 11. Rancho Conejo Boulevard looking west

Photograph Viewpoint 12. Calle Yucca looking west

NOTE: Refer to Figure 4.1-2 for viewpoint locations.

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Figure
4.1-3f

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Photograph Viewpoint 13. Conejo Open Space - Lynnmere Trail looking northwest

Photograph Viewpoint 14. Conejo Adventist Elementary School looking north

NOTE: Refer to Figure 4.1-2 for viewpoint locations.

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MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
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Figure
4.1-3g

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Photograph Viewpoint 15. Marion Street looking north

Photograph Viewpoint 16. Lawrence Drive looking northwest toward Newbury Substation

NOTE: Refer to Figure 4.1-2 for viewpoint locations.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PHOTOGRAPHS OF PROJECT ROUTE AND VICINITY

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Figure
4.1-3h

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4.1.3.3.3 City of Thousand Oaks General Plan

The City of Thousand Oaks General Plan Scenic Highways Element lists scenic roads (identified as "scenic highways") in Thousand Oaks and contains provisions calling for elimination or undergrounding of overhead utility lines along scenic roads. Highway 101, located 0.5 mile south of the southern end of the Project alignment, is the nearest city-identified "scenic highway." (City of Thousand Oaks 1974)

The Open Space Element (City of Thousand Oaks 1996) contains policies broadly related to scenic resources and preservation of open space, and addresses development of utility lines:

> Policy OS-25: Facilities necessary to serve visitors, such as trails, trailheads, access roads and parking lots, kiosks, restrooms, signage shall be designed and installed so as to have no impact on sensitive natural resources within the open space area, and minimal impact on non-sensitive resources. Where emergency facilities or public service and utility facilities must be located in a natural open space area, they and any necessary access roads shall be located and designed to minimize impacts.
>
> Policy OS-30: Continue to work with utility companies and agencies, and the Ventura County Flood Control District to accommodate utility lines and flood control facilities where such improvements are necessary for public health and safety, while minimizing disturbance to open space resources.

4.1.3.3.4 Conejo Open Space Conservation Agency

COSCA is a joint powers agency that was formed between the City of Thousand Oaks and the Conejo Recreation and Park District in 1977 in order to implement the adopted goals of the Open Space and Conservation Elements of the City of Thousand Oaks General Plan. COSCA manages more than 11,300 acres of discontinuous open space lands and 140 miles of trails in the undeveloped open space in the City of Thousand Oaks.

The ordinance creating COSCA contains general provisions regarding management of open space and preservation of the natural and scenic resources of the area; however, it does not contain specific provisions applicable to the Project.

4.1.4 Significance Criteria

The significance criteria for assessing the impacts to aesthetics come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a Project causes a potentially significant impact if it would:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- Substantially degrade the existing visual character or quality of the site and its surroundings
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area

4.1.5 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project have a substantial adverse effect on a scenic vista?

Assessment Summary: No Impact

Construction Impacts

For the purposes of this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is identified in a planning document as valued for its scenic quality.

Public views from locations in the Lake Sherwood Scenic Resource Area (SRA) in Ventura County could be considered scenic vistas. The Project lies approximately 5 miles from the Lake Sherwood SRA, and is not visible from this area; therefore, past construction activities or infrastructure installed during the past construction activities did not affect the public views from locations in the Lake Sherwood SRA in Ventura County that could be considered scenic vistas. There is no other designated SRA closer to the Project. Therefore, because there are no defined scenic vistas in the vicinity of the Project, and because past construction activities did not affect the views from the Lake Sherwood SRA, the past construction activities had no effect on a scenic vista.

Although not designated as scenic vistas, panoramic views are available from some trails on COSCA-managed lands. Named trails within this area are located approximately 1 mile away from the Project alignment, and unnamed trails near the Project alignment often coincide with utility access roads. As shown in Figure 4.1-4c, the installation of LWS poles during past construction activities did not have a substantial adverse effect on the panoramic views available from trails in the vicinity of the Project's infrastructure, as the light-colored LWS poles blend into the background more readily than the darker wood poles, and become hard to distinguish at distance from the viewer.

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

Assessment Summary: No Impact

Construction Impacts

There are no Officially Designated State Scenic Highways as defined in California Streets and Highways Code Sections 260-263 crossed by, or adjacent to, any components of the Project. The nearest Officially Designated State Scenic Highway is a portion of SR-33 located approximately 30 miles northwest of the Project; no component of the Project would be visible from this road.

Because the past construction activities were not located within view of an Officially Designated State Scenic Highway, they did not substantially affect scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within an Officially Designated State Scenic Highway, and therefore there were no impacts realized under this criterion.

Did the project substantially degrade the existing visual character or quality of the site and its surroundings?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Construction related visual impacts resulted from the presence of equipment, materials, and work crews along the route and at the substations. To varying degrees, construction activity may have been seen by local residents, motorists, and recreationists, and was likely most noticeable from the residential areas located in close proximity to the Project and by users of trails on COSCA-managed lands that also serve as SCE access roads.

As noted in Chapter 3: Project Description, the past construction activities included rehabilitating access and spur roads and establishing temporary staging yards for vehicle and equipment parking and material storage. In addition, past construction activities included grading of areas that may have been noticeable to the public. As described in Chapter 3: Project Description, restoration of some temporary work areas and graded slopes has already occurred, thus reducing potential visual contrast with the surrounding landscape setting. Due to the temporary nature of construction activities, this short-term visual impact was less than significant.

Project elements installed during past construction activities, including TSPs and LWS poles, are presented in Table 4.1-2. These TSPs and LWS poles were installed within SCE's existing ROW, which contained existing portal-type transmission towers and subtransmission, LSTs and wood poles. TSPs along some portions of the Project Sections were installed adjacent to existing portal-type towers, and are either shorter than, or roughly equivalent in height to, the existing portal-type transmission towers and subtransmission LSTs and wood poles. The introduction of these towers and other construction related modifications along the Project alignment represented an incremental visual change to the

pre-construction landscape setting. Figures 4.1-4a, 4.1-4b, and 4.1-4c present a set of views as seen from KOPs in the area where past construction activities occurred. These figures show the impacts to date of the past construction activities. The pre-construction view (the top picture in Figures 4.1-4a, 4.1-4b, and 4.1-4c) is actually a simulation that portrays landscape conditions prior to the commencement of past construction activities. The following comparison of the pre-construction view and the current view on each of these figures demonstrates that the Project has not substantially changed the existing landscape character found within these viewsheds.

Table 4.1-2: Summary of Past and Future Project-Related Change and Visual Effect

Project Component ***Primary Viewers*** **(Representative Photographs / Visual Simulations)**	**Past Project Construction and Visual Effect**	**Future Project Construction and Visual Effect**
Project Section 1 *Motorists, Residents* Photograph Viewpoint 1	• Installed one new TSP riser pole and made minor modifications at Moorpark Substation Minor visual change within the context of an established substation with numerous transmission and subtransmission towers, poles, and lines present.	• Construct approximately 500 feet of duct bank • Install and splice 66 kV subtransmission cable • Terminate new cable at a line position in the 66 kV switchrack and at the TSP riser pole Visual change would be almost imperceptible.
Project Section 2 *Motorists, Residents, bicyclists* Photograph Viewpoints 1 through 9 Simulation Photograph Viewpoint 2 (Figure 4.1-5f) Simulation Photograph Viewpoint 6 (Figures 4.1-4a and 4.1-5a) Simulation Photograph Viewpoint 7 (Figure 4.1-5b) Simulation Photograph Viewpoint 8 (Figure 4.1-5c)	• 21 new TSPs were installed • The foundation and base portion of one TSP was installed • Two TSP foundations were installed Minor visual change to the established SCE ROW that has numerous transmission and subtransmission towers, poles, and lines present.	• Install two TSP foundations • Install upper sections of one partially-installed TSP to complete construction • Install four TSPs • Install marker balls on two conductor spans, if appropriate • Install approximately 5 circuit miles of single-circuit 954 aluminum conductor steel-reinforced (ACSR) Minor visual change to the established SCE ROW that has numerous transmission and subtransmission towers, poles, and lines present.

Table 4.1-2: Summary of Past and Future Project-Related Change and Visual Effect

Project Component ***Primary Viewers*** **(Representative Photographs / Visual Simulations)**	**Past Project Construction and Visual Effect**	**Future Project Construction and Visual Effect**
Project Section 3 *Motorists, Recreationists, Residents* Photograph Viewpoints 8, 10 through 13 Simulation Photograph Viewpoint 8 (Figure 4.1-5c) Simulation Photograph Viewpoint 10 (Figures 4.1-4c and 4.1-5e)	• Holes for three TSP foundations were excavated and filled with slurry • Five TSP foundations were completed Minor visual change; almost imperceptible.	• Install eight TSP foundations • Install 13 TSPs (pole locations 28-40) • Remove 14 existing LSTs • Install marker balls on two conductor spans, if appropriate • Install approximately 2.5 miles of double circuit 954 ACSR on new TSPs Minor visual change within established SCE ROW with numerous transmission and subtransmission towers, poles, and lines present.
Project Section 4 *Motorists, Residents, Recreationists* Photograph Viewpoints 10, and 14 through 16 Simulation Photograph Viewpoint 10 (Figures 4.1-4c and 4.1-5e)	• Replaced 27 wood poles with 27 LWS poles were installed, most of which were 5 feet taller than the removed wood poles • New 66 kV 954 SAC conductor and a portion of the total length of new 4/0 ACSR fault return conductor (FRC) were installed Minor incremental visual change within established SCE ROW with numerous subtransmission poles and lines present.	• Install approximately 0.5 mile of 954 SAC conductor • Install additional length of 4/0 ACSR FRC • Install four TSP foundations at Newbury Substation • Install four TSPs and two LWS poles at Newbury Substation • Install marker balls on one span, if appropriate • Remove six wood subtransmission poles at Newbury Substation • Transfer existing subtransmission, distribution and telecommunications facilities to new poles Visual change would be minor and not particularly noticeable.

Figure 4.1-4a, a view from Yucca Drive near the entrance to the Santa Rosa Valley Estates gated residential development, represents a view experienced by motorists on this local road as well as residents in this area. The entry gate and residences are visible in the foreground. The 220 kV transmission lines supported by portal-type towers, visible on the undeveloped, scrub-covered hillside above the houses, are seen against a combination of sky and muted green landscape backdrop. Project TSPs were constructed alongside existing portal-type towers; the new TSPs, although noticeable, are grouped closely with these portal-type towers and are lower in height than the adjacent portal-type towers. A comparison of the pre-construction and current views indicates that, given the presence of existing portal-type towers, the installation of TSPs during past construction activities did not substantially alter the character of this landscape setting.

Figure 4.1-4b shows a view from Santa Rosa Valley Park, a public open space area located on Hill Canyon Road. The view in Figure 4.1-4b is looking northwest toward the Project alignment as it crosses Santa Rosa Valley. This pre-construction view simulates that of recreational users of the park including hikers and equestrians, as well as that of a limited number of rural residents in the area. A picnic bench, rustic fence, and unpaved trail appear in the foreground and an agricultural building with a reddish colored roof located near a residence can also be seen on the left. The existing 220 kV transmission lines are supported by three pairs of light colored portal-type towers located approximately 2,000 feet away that appear against the darker green orchard backdrop. These towers are less noticeable in areas where they are seen against the muted-colors of scrub vegetation and bare soil of Las Posas Hills. As shown in the current view photograph, a single TSP has been constructed alongside the portal-type towers. From this viewing distance, the TSP installed during past construction activities (located on the far right of the current view) represents a very minor change given the number of pre-existing utility elements seen within this existing ROW. A comparison of the pre-construction view and the current view demonstrates that given the distance and presence of existing utility towers, the change is not particularly noticeable and does not affect the character of the landscape seen from this location.

Figure 4.1-4c portrays a simulated pre-construction view and a current view of the Project as seen from a trail located within the Conejo Canyons area, approximately 1,000 feet north of the terminus of North Wendy Drive. This view is representative of those experienced by recreationists including hikers, bicyclists, and equestrians. Some trails in the Conejo Canyons area afford panoramic views toward undeveloped rugged landscape and mountains beyond. The pre-construction simulation in Figure 4.1-4c was modified from a picture of the current state of the area to portray the condition of the area prior to the start of the past construction activities. In this area, the Project route travels north (away from the viewpoint) for approximately 0.4 mile. In the pre-construction view, five wood poles are visible in the foreground. LSTs are barely visible on the hillside against the rough texture and muted colors of the background landscape. In the distance on the ridge and against the hillside backdrop, LSTs are visible alongside a radio tower. Comparing the pre-construction and current views in Figure 4.1-4c, the replacement LWS poles are visible in the foreground. Although slightly taller, the replacement LWS poles in the foreground are similar in form to the previously-installed wood subtransmission poles. The light-colored LWS poles blend into the background more readily than the darker wood poles at distance from the viewer. Given these characteristics, past construction activities have not substantially affected the composition or character of the landscape setting as seen from this recreational trail location.

Did the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Construction activity did not involve installation of permanent lighting along the route. Past activities occurred primarily during daytime hours. On occasion, construction activities were performed at night; lighting used during nighttime work was directed and focused away from potentially sensitive receptors to the extent feasible.

With respect to potential glare effects, the majority of the conductor installed in Project Section 4 as part of the past construction activities is non-specular. In addition, as presented in Chapter 3: Project Description, the TSPs and LWS poles are galvanized steel and the TSPs have a dulled finish; all poles will dull further over time. Therefore, past construction activities did not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

4.1.6 Impact Analysis, Future Activities

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

Assessment Summary: No Impact

Construction Impacts

For the purposes of this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is identified in a planning document as valued for its scenic quality.

Public views from locations in the Lake Sherwood SRA in Ventura County could be considered scenic vistas. The Project lies approximately 5 miles from the Lake Sherwood SRA, and is not visible from this area; therefore, future construction activities or infrastructure installed during the future construction activities would not affect the public views from locations in the Lake Sherwood SRA in Ventura County that could be considered scenic vistas. There is no other designated SRA closer to the Project. Therefore, because there are no defined scenic vistas in the vicinity of the Project, and because future construction activities would not affect the views from the Lake Sherwood SRA, the future construction activities would have no effect on a scenic vista.

Panoramic views are available from some trail locations on COSCA-managed lands. The named trails within this area are located approximately 1 mile away from the Project alignment, and trails near the Project are less formal, often collocated on utility access roads. As shown in Figure 4.1-5e, the physical infrastructure to be installed as part of the future activities would not substantially affect or obstruct views from these unnamed trails given the LSTs, poles, and conductor already located in the area and the relatively small scale of Project infrastructure compared against the substantial geographic features, including large

hillsides. Therefore, future construction activities or infrastructure installed during construction would not substantially affect the panoramic views available from trails.

Operation Impacts

As described in Chapter 3: Project Description, Project related operation and maintenance activities would usually be periodic and infrequent; therefore, these activities would not have a substantial impact on a scenic vista. As described above, the physical infrastructure (e.g., TSPs, LWS poles, conductor) of the Project would also not substantially affect any views. Therefore, less than significant impacts would occur under this criterion.

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

Assessment Summary: No Impact

Construction Impacts

No part of the Project is or would be visible from an Officially Designated State Scenic Highway as defined in California Streets and Highways Code Sections 260-263. The closest such roadway is SR-33, which is located approximately 30 miles distant. No Project activities or infrastructure would be visible from this road.

Because the future construction activities would not be located within view of an Officially Designated State Scenic Highway, they would not substantially affect scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within an Officially Designated State Scenic Highway, and therefore there would be no impacts realized under this criterion.

Operation Impacts

No part of the Project is or would be visible from an Officially Designated State Scenic Highway. The closest such roadway is SR-33, which is located approximately 30 miles distant. No operations and maintenance related activities or Project related infrastructure would be visible from this road. Therefore, neither future operations and maintenance related activities nor Project related infrastructure would affect scenic resources within an Officially Designated State Scenic Highway.

Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Assessment Summary: Less than Significant Impact

Construction Impacts

Construction related visual impacts would result from the presence of equipment, materials, and work crews along the route and at the substations. Completion of construction activities would take place over an approximately 10-month long construction period; however, construction at specific locations along the Project route would be much shorter, lasting only days to weeks at each location. To varying degrees, construction activity would be seen by

local residents, motorists, and recreationists. It is expected that construction would be most noticeable from residential areas located in close proximity to the Project. Due to its temporary nature, the short-term visual impact of construction equipment and activities would be less than significant.

As noted in Chapter 3: Project Description, Project construction would also require rehabilitating some access and spur roads and establishing temporary staging yards for vehicle and equipment parking and material storage. No new access or spur roads would be constructed. In addition, Project construction is anticipated to require grading in some locations that may be noticeable to the public. When Project construction has been completed, most areas would be restored to pre-construction conditions where possible, thus reducing the potential visual contrast with the surrounding landscape setting.

The Project would introduce TSPs, LWS poles, and overhead conductors into a landscape in which the public already views existing electric utility towers and poles not associated with the Project, including LSTs, wood poles, portal-type towers, and overhead conductor. The Project also includes minor modifications at the existing Moorpark Substation and existing Newbury Substation; these modifications would take place entirely within the existing substation fencelines and would not involve expansion of the substation footprints. The aesthetic effects associated with these Project changes would therefore be minor and incremental, and would not substantially alter the visual setting.

The appearance of Project infrastructure as seen from KOPs within the area is portrayed in a set of before and after views on Figures 4.1-5a through 4.1-5f. In most locations where portions of the Project have been partially constructed, one view is a simulation that portrays landscape conditions prior to the start of past construction activities (on Figure 4.1-5f, the first view is of the current condition, including a TSP installed during past construction activities). The second view is a simulation of conditions following future construction activities. This allows an assessment of potential aesthetic impacts based on a comparison of visual conditions prior to the start of the past construction activities with expected conditions following completion of construction and during operation of the Project. Table 4.1-2 summarizes the results of this evaluation. As documented in Section 4.1.2.4, the Project is located within viewsheds where existing utility towers and poles are established features in the landscape setting. A comparison between the set of pre-construction views and corresponding post-construction simulations demonstrates that the Project would not substantially change the existing landscape character found within these viewsheds.

Figure 4.1-5a, a view from Yucca Drive near the entrance to the Santa Rosa Valley Estates gated residential development, represents a view that would be experienced by motorists on this local road as well as residents in this area. The entry gate and residences are visible in the foreground. The 220 kV transmission lines supported by portal-type towers, visible on the undeveloped, scrub-covered hillside above the houses, are seen against a combination of sky and muted green landscape backdrop. Project related TSPs have been constructed alongside the portal-type towers (Photograph 6, Figure 4.1-3c); the Visual Simulation of Conditions Prior to Past Construction Activities image on Figure 4.1-5a portrays the pre-Project visual conditions without these TSPs.

The visual simulation of conditions at the conclusion of future construction activities in Figure 4.1-5a shows the addition of TSPs supporting a single-circuit 66 kV subtransmission line. The new TSPs are lower in height than the adjacent portal-type towers and are grouped closely with these towers. A comparison of the two images indicates that, given the presence of the existing portal-type towers and 220 kV transmission lines, the Project would not substantially alter the character of this setting.

Figure 4.1-5b, a view from Santa Rosa Road looking west, is representative of a motorist's view. Two existing portal-type towers are prominent in the foreground approximately 700 feet away from the left edge of the road, and 220 kV transmission lines are visible above the road. A wood pole-supported 16 kV distribution line runs along the left side of the road, and the towers associated with another 66 kV subtransmission line are seen approximately 0.5 mile farther away. The visual character along this roadway is dominated by agriculture, including orchards and field crops, with occasional rural residences and relatively open views toward the nearby hills. Low orchard trees provide limited visual screening.

As shown in Figure 4.1-5b, the visual simulation of conditions at the conclusion of future construction activities shows a new Project related TSP visible adjacent to the two existing portal-type towers. The simulation also shows the overhead Project related 66 kV subtransmission conductor that would cross the road. A comparison of the two images indicates that the Project related change is noticeable; however, given the presence of numerous existing utility facilities, including the somewhat larger-scale existing transmission towers in the SCE ROW, the Project represents a minor, incremental visual effect. Therefore, the Project would not substantially alter the character or composition of the existing landscape setting as seen from this area.

Figure 4.1-5c represents a motorist's view of the Project from Santa Rosa Road, a three-lane arterial that traverses the Santa Rosa Valley. The viewpoint is located on the floor of the valley at an elevation of approximately 230 feet above sea level. From this location, LSTs and overhead conductor can be seen where the SCE ROW rises approximately 1,000 feet up the hillside. Given the viewing distance and because the LSTs and conductor blend with the muted color of the landscape backdrop, the existing LSTs and conductor are visible but not particularly noticeable.

As shown in Figure 4.1-5c, the visual simulation of conditions at the conclusion of future construction activities shows three new Project related TSPs installed on the hillside; these TSPs are installed alongside existing LSTs within the SCE ROW. The simulation also shows four double-circuited TSPs in the distance; these TSPs replaced four LSTs. In addition, new marker balls are shown against the hillside on two spans in the center of this simulation and one marker ball is barely visible against the sky, on the span at the top of the hill.[37] Given the

[37] In order to capture the most conservative simulation of visual impacts, Figure 4.1-5c includes marker balls on these two spans. However, as discussed in Chapter 3 of the PEA, SCE is still evaluating whether notification to the FAA is required for these spans. If notification is not determined to be required, or if the installation of marker balls is determined to be not practicable, then the actual construction of these spans would not include the marker balls conservatively shown on Figure 4.1-5c.

viewing distance, color of the landscape backdrop, and the presence of existing portal-type towers and LSTs, the change would be almost imperceptible and would not affect the character of the landscape seen from this roadway location.

Figure 4.1-5d shows a view from Santa Rosa Valley Park looking northwest toward the SCE ROW as it crosses Santa Rosa Valley. This view represents that of recreationists at the park including hikers and equestrians, as well as that of a small number of rural residents in this area. A picnic bench, rustic fence, and unpaved trail appear in the foreground and an agricultural building with a reddish colored roof located near a residence can also be seen on the left. The existing 220 kV transmission lines supported by three pairs of light colored portal-type towers located approximately 2,000 feet away appear against the darker green orchard backdrop. These towers are less noticeable in areas where they are seen against the muted-colors of scrub vegetation and bare soil of the Las Posas Hills.

As shown in Figure 4.1-5d, the visual simulation of conditions at the conclusion of future construction activities shows the addition of three Project related TSPs adjacent to the pairs of existing portal-type towers in the SCE ROW. From this viewing distance, the Project would represent a minor increase in the number of electrical utility elements in the landscape. A comparison of the images on Figure 4.1-5d demonstrates that given the distance and presence of existing utility towers, the change would not be particularly noticeable and would not affect the character of the landscape seen from this location.

Figure 4.1-5e portrays a pre-construction simulation and visual simulation of the Project following completion of all construction activities as seen from a trail in the Conejo Canyons area, approximately 1,000 feet north of the North Wendy Drive park access. This represents a view that may be experienced by recreationists including hikers, bicyclists, and equestrians. Trails in the open space afford panoramic views toward undeveloped rugged landscape and mountains beyond. The pre-construction view on Figure 4.1-5e was modified to portray the pre-Project condition. In this area, the Project alignment travels north (away from the viewpoint) for approximately 0.4 mile. The Project alignment then travels west for about 0.5 mile before continuing north where it can be seen on the hillside approximately 1.3 miles away. In the pre-construction view, five wood subtransmission poles are visible in the foreground. Project related LSTs are barely visible against the rough texture and muted colors of the background landscape. In the distance on the ridge and against the hillside backdrop, existing LSTs are visible.

As shown in Figure 4.1-5e, the visual simulation of conditions at the conclusion of future construction activities shows new LWS poles in the foreground. The new LWS poles support both existing and proposed 66 kV subtransmission conductors. Although slightly taller, the LWS poles in the foreground would be similar in form to the replaced wood subtransmission poles, and provide the same visual continuity as seen with the previously-existing wood poles. Further away, on the hillside below and in the distance, one Project related TSP would replace an existing LST in the middleground, and another LST located further to the left (west) would be removed. This span and the adjacent span would also potentially have new marker balls installed. The new TSP and marker balls could appear somewhat more noticeable against the hillside backdrop. This replacement TSP could be somewhat more visible than the LST; however, to the casual observer this is a minor,

incremental change that likely would not be noticeable. A replacement TSP would also be seen on the far ridgeline next to two lattice towers. New marker balls would be barely visible on the span from the ridgeline TSP to a TSP out of the view on the left. The TSPs, LWS poles and marker balls would not obstruct panoramic views of the surrounding landscape. Given the presence of existing towers and poles, the Project would not substantially affect the composition or character of the landscape setting as seen from this recreational trail location.

Figure 4.1-5f, a view from SR-118/Los Angeles Avenue looking west, is representative of a motorist's view. Two existing portal-type towers and a TSP installed during past construction activities are prominent in the foreground approximately 300 feet away, and 220 kV transmission lines are visible above the road. A wood pole-supported 66 kV subtransmission line and 16 kV distribution line runs along the right side of the road, and third-party communications cable located on short wood poles is located on the left side of the road. The visual character along this segment of SR-118/Los Angeles Avenue includes a mix of agricultural landscapes, light industrial facilities, and residential developments. Views are open to the south toward the nearby hills; views to the north are blocked by trees and development.

As shown in Figure 4.1-5f, the visual simulation of conditions at the conclusion of future construction activities shows a new Project related TSP visible adjacent to the two existing portal-type towers. The simulation also shows the overhead Project related 66 kV subtransmission conductor that would cross the road. A comparison of the two images indicates that the change following future construction activities would be barely noticeable given the presence of the 220 kV transmission line conductor that spans the roadway. The Project would represent a minor, incremental visual effect, and therefore the Project would not substantially alter the character or composition of the existing landscape setting as seen from this area.

Operation Impacts

As described in the Project Description, Project related operation and maintenance activities would be periodic and infrequent. No degradation of the existing visual character or quality of the site and its surroundings greater than those described above under Construction Impacts would occur during operations, and therefore, less than significant impacts would occur under this criterion.

Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Assessment Summary: Less than Significant Impact

Construction Impacts

Future construction activities would generally occur primarily during daytime hours. On occasion, it may be necessary to conduct construction activities at night. In addition, staging yards may be lit for staging and security. If temporary nighttime construction lighting is necessary, the required lighting would be directed and focused away from potentially sensitive nearby receptors to the extent feasible. Therefore, potential short-term temporary construction related lighting effects would be less than significant.

With respect to potential glare effects, the conductor to be installed as part of the future construction activities would be non-specular. In addition, as presented in Chapter 3: Project Description, the TSPs and LWS poles would be galvanized steel and the TSPs would have a dulled finish; all poles would dull further over time. Therefore, future construction activities would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area, and impacts would be less than significant.

Operation Impacts

No new permanent lighting is proposed along the 66 kV subtransmission line or at Moorpark Substation or Newbury Substation. Therefore, operation of the Project would not create a substantial source of new nighttime lighting.

With respect to potential glare effects, the conductor installed as part of the Project would be non-specular, and the TSPs and LWS poles would be galvanized steel and the TSPs would have a dulled finish; all poles would dull further over time. Therefore, no substantial glare effects would occur, and impacts would be less than significant.

4.1.7 References

Benchmark Maps. 2009. California Road and Recreation Atlas. Santa Barbara, California.

Caltrans. 2012. Officially Designated State Scenic Highways and Historic Parkways. [Web page]. http://www.dot.ca.gov/hq/LandArch/scenic_highways/.

City of Moorpark. 1986. General Plan – Open Space, Conservation, and Recreation Elements. Adopted August 4, 1986.

City of Thousand Oaks.1974. Thousand Oaks General Plan – Scenic Highways Element. Adopted September 1974.

City of Thousand Oaks. 1996. Thousand Oaks General Plan – Open Space Element. Adopted July 2, 1996.

Conejo Open Space Conservation Agency (COSCA). 2009. COSCA Ordinance No. 01 2009.

COSCA. 2008. COSCA Trails, March 2008.

DeLorme Mapping Company. 2011. California Atlas and Gazetteer, Third Edition. Freeport, ME.

Fenneman, Nevin M. 1931. Physiography of the Western United States. New York: McGraw-Hill Book Company, Inc.

Smardon, R.C., J.F. Palmer, and J.P. Felleman, editors. 1986. Foundations for Visual Project Analysis. New York: Wiley.

Ventura County. 2011a. Ventura County General Plan. June 28, 2011.

Ventura County. 2011b. Ventura General Plan – Resources Appendix.

U.S. Census Bureau. 2010. [Web Page]. http://www.census.gov.

U.S. Forest Service (USFS). 1995. Landscape Aesthetics: A Handbook for Scenery Management. USDA Agriculture Handbook No. 701.

U.S. Department of Transportation, Federal Highway Administration. 1988. Visual Impact Assessment for Highway Projects. Washington, D.C.: Publication No: FHWA-HI-88-054.

U.S.Geological Survey (USGS). Terraserver Maps. 1988. [Web Page]. Located at http://www.terraserver-usa.com/.

Visual Simulation of Conditions Prior to Past Construction Activities

Photograph of Conditions at the Conclusion of Past Construction Activities

NOTE: Refer to Figure 4.1-2 for viewpoint location.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PAST CONSTRUCTION ACTIVITIES ANALYSIS: VIEW FROM YUCCA DRIVE

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Figure
4.1-4a

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Visual Simulation of Conditions Prior to Past Construction Activities

Photograph of Conditions at the Conclusion of Past Construction Activities

NOTE: Refer to Figure 4.1-2 for viewpoint location.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PAST CONSTRUCTION ACTIVITIES ANALYSIS: VIEW FROM SANTA ROSA VALLEY PARK

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Figure
4.1-4b

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Visual Simulation of Conditions Prior to Past Construction Activities

Photograph of Conditions at the Conclusion of Past Construction Activities

NOTE: Refer to Figure 4.1-2 for viewpoint location.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PAST CONSTRUCTION ACTIVITIES ANALYSIS: VIEW FROM COSCA OPEN SPACE TRAIL

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Figure
4.1-4c

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Visual Simulation of Conditions Prior to Past Construction Activities

VIsual Simulation of Conditions at the Conclusion of Future Construction Activities

NOTE: Refer to Figure 4.1-2 for viewpoint location.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FUTURE CONSTRUCTION ACTIVITIES ANALYSIS: VIEW FROM YUCCA DRIVE

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Figure
4.1-5a

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Photograph of Conditions Prior to Past Construction Activities

Visual Simulation of Conditions at the Conclusion of Future Construction Activities

NOTE: Refer to Figure 4.1-2 for viewpoint location.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FUTURE CONSTRUCTION ACTIVITIES ANALYSIS: VIEW FROM SANTA ROSA ROAD AT CROSSING

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Figure
4.1-5b

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Photograph of Conditions Prior to Past Construction Activities

Visual Simulation of Conditions at the Conclusion of Future Construction Activities

NOTE: Refer to Figure 4.1-2 for viewpoint location.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FUTURE CONSTRUCTION ACTIVITIES ANALYSIS: VIEW FROM SANTA ROSA ROAD

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Figure
4.1-5c

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Visual Simulation of Conditions Prior to Past Construction Activities

Visual Simulation of Conditions at the Conclusion of Future Construction Activities

NOTE: Refer to Figure 4.1-2 for viewpoint location.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FUTURE CONSTRUCTION ACTIVITIES ANALYSIS: VIEW FROM SANTA ROSA VALLEY PARK

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Figure
4.1-5d

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Visual Simulation of Conditions Prior to Past Construction Activities

Visual Simulation of Conditions at the Conclusion of Future Construction Activities

NOTE: Refer to Figure 4.1-2 for viewpoint location.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FUTURE CONSTRUCTION ACTIVITIES ANALYSIS: VIEW FROM COSCA OPEN SPACE TRAIL

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Figure
4.1-5e

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Visual Simulation of Conditions at the Conclusion of Past Construction Activities

Visual Simulation of Conditions at the Conclusion of Future Construction Activities

NOTE: Refer to Figure 4.1-2 for viewpoint location.

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FUTURE CONSTRUCTION ACTIVITIES ANALYSIS: VIEW FROM STATE ROUTE 118

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Figure
4.1-5f

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4.2 Agriculture and Forestry Resources

This section describes the agriculture and forestry resources in the area of the Project, and the potential impacts to agriculture and forestry resources associated with the Project.

4.2.1 Environmental Setting

Agriculture and horticulture are common land uses along Project Sections 2 and 3; citrus crop trees account for the majority of agricultural production. California Public Resources Code Section 21060.1 defines agricultural land as "prime farmland, farmland of statewide importance, or unique farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California." The State of California has modified the farmland classifications such that no farmland would be designated as Prime Farmland or Farmland of Statewide Importance unless it is irrigated (CDOC Undated).

Within Ventura County, the Project would cross farmlands included in the California Department of Conservation (CDOC) Farmland Mapping and Monitoring Program (FMMP). GIS data for Ventura County were obtained from the FMMP website (CDOC 2010a, 2010b), and are presented on Figures 4.2-1a and 4.2-1b. Portions of the existing SCE utility ROWs in which the Project would be constructed and operated are located on lands that have been identified by the FMMP as prime farmland, farmland of statewide importance, or unique farmland, or that are covered under a Williamson Act contract (see Section 4.2.2.2.1). The Project would not cross farmlands in the City of Moorpark or City of Thousand Oaks.

Forest lands are defined in California Public Resources Code Section 12220(g) as being those that "can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Figure 4.2-2 illustrates the distribution of lands categorized by the California Department of Forestry and Fire Protection (CAL FIRE) as having greater than 10 percent tree density.

Ventura County has established Timberland Preserve Zones for six Christmas tree farms in the County, none of which are located within the vicinity of the Project (Ventura County 2011d). There are no timberlands zoned or identified on lands that would be traversed by the Project.

4.2.2 Regulatory Setting

4.2.2.1 Federal Regulatory Setting

4.2.2.1.1 Farmland Protection Policy Act

The National Agricultural Land Study of 1980-1981 found that millions of acres of farmland were being converted out of agricultural production in the United States each year. The 1981 Congressional report, "Compact Cities: Energy-Saving Strategies for the Eighties" (Compact Cities report), identified the need for Congress to implement programs and policies to protect farmland and combat urban sprawl and the waste of energy and resources that accompanies sprawling development.

The Compact Cities report indicated that much of the sprawl was the result of programs funded by the Federal Government. With this in mind, Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98) containing the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994. The FPPA and its implementing rules and regulations set forth provisions intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses.

4.2.2.2 State Regulatory Setting

4.2.2.2.1 Williamson Act

The California Land Conservation Act of 1965 (Williamson Act) enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments receive an annual subvention of forgone property tax revenues from the State via the Open Space Subvention Act of 1971. California Government Code Section 51238 provides that, unless local organizations declare otherwise, the erection, construction, alteration, or maintenance of gas, electric, water, or communication facilities is compatible with Williamson Act contracts.

Ventura County voluntarily participates in the Williamson Act program. Guidelines for qualification and participation in the program are provided in the Ventura County Land Conservation Act Guidelines (Ventura County 2011c).

4.2.2.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.2.2.3.1 Ventura County General Plan

The Ventura County General Plan establishes six basic land use designations: Urban, Existing Community, Rural, Agricultural, Open Space, and State and Federal Facilities. Those related to agriculture and forestry resources are defined as follows:

- "The Rural designation identifies areas suitable for low-density and low-intensity land uses such as residential estates of two acres or greater parcel size and other rural uses which are maintained in conjunction with agricultural and horticultural uses or in conjunction with the keeping of farm animals for recreational purposes."
- "The Agricultural designation is applied to irrigated lands which are suitable for the cultivation of crops and the raising of livestock."
- "The Open Space designation encompasses land as defined under Section 65560 of the State Government Code as any parcel or area of land or water which is essentially unimproved and devoted to an open-space use as defined in this section, and which is designated on a local, regional or State open-space plan as any of the following:

  Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands not designated agricultural; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply."

Policy 4.5.2 of the General Plan states in part that "[a]ll transmission lines should be located and constructed in a manner which minimizes disruption of … agricultural activities … when not in conflict with the rules and regulations of the California Public Utilities Commission."

4.2.2.3.2 Ventura County Non-Coastal Zoning Ordinance

The Ventura County Non-Coastal Zoning Ordinance, Division 8, Chapter 1 sets forth comprehensive zoning regulations for the unincorporated area of the County of Ventura, excluding the Coastal Zone, and was adopted to protect and promote the public health, safety, and general welfare; to provide the environmental, economic, and social advantages which result from an orderly, planned use of resources; to establish the most beneficial and convenient relationships among land uses; and to implement Ventura County's General Plan.

Section 8104-1.2 – Agricultural Exclusive (AE) Zone, states

> "The purpose of this zone is to preserve and protect commercial agricultural lands as a limited and irreplaceable resource, to preserve and maintain agriculture as a major industry in Ventura County and to protect these areas from the encroachment of nonrelated uses which, by their nature, would have detrimental effects upon the agriculture industry." (Ventura County 2011)

Section 8104-2.1 – Rural Agricultural (RA) Zone, states

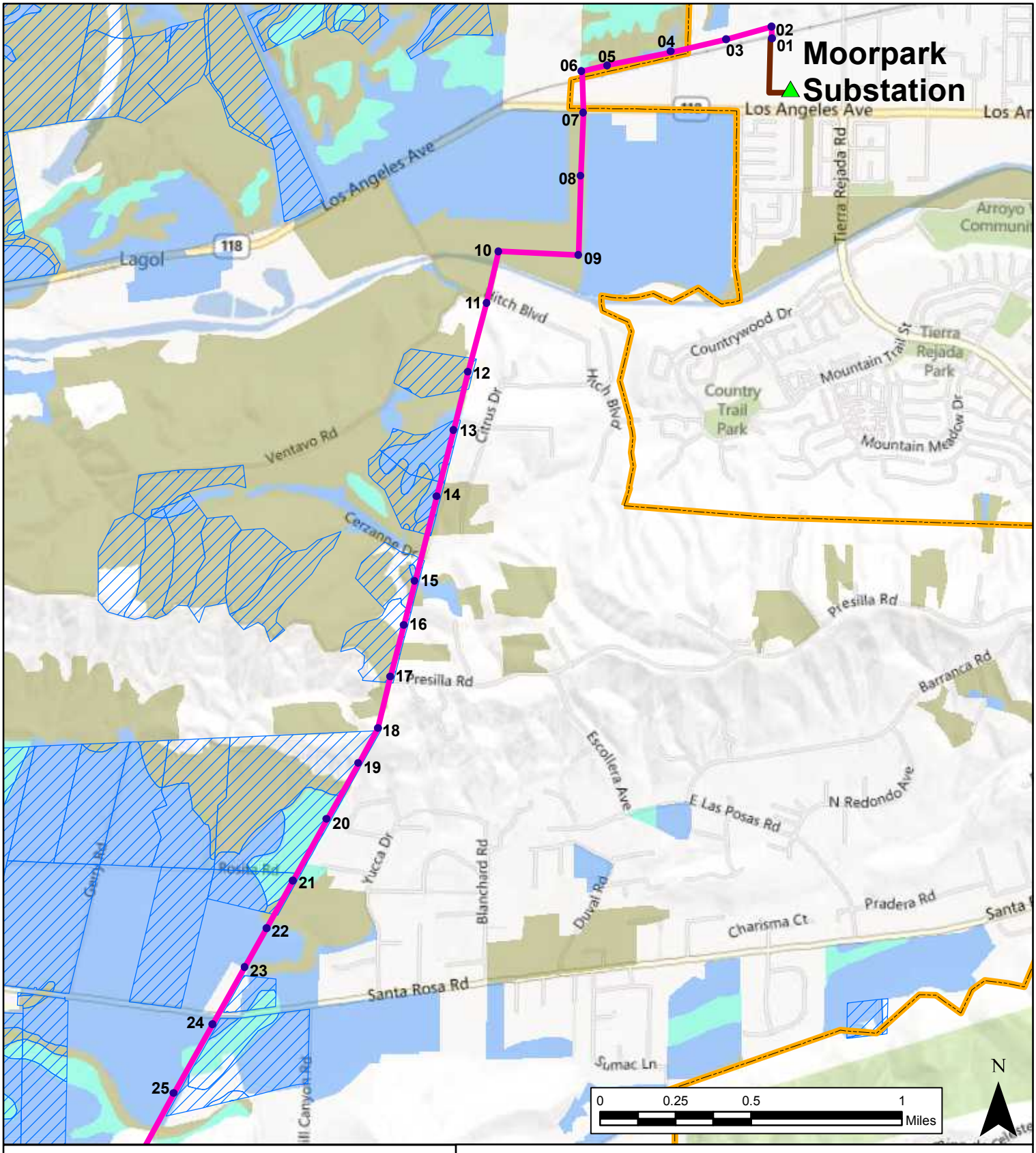
> "The purpose of this zone is to provide for and maintain a rural setting where a wide range of agricultural uses are permitted while surrounding residential land uses are protected."

Section 8105-4 – Permitted Uses in Open Space, Agricultural, Residential and Special Purpose Zones. Transmission lines are permitted uses requiring a Planning Director-approved conditional use permit. However, pursuant to GO 131-D, Section XIV.B., the Project would not require a conditional use permit from the County.

4.2.3 Significance Criteria

The significance criteria for assessing the impacts to agricultural resources come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use
- Conflict with existing zoning for agricultural use, or a Williamson Act contract
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))
- Result in the loss of forest land or conversion of forest land to non-forest use
- 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



Project Sections
- Project Section 1
- Project Section 2
- Pole Locations
- SCE Substations
- City Boundaries
- Williamson Act Lands

Important Farmland
- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

IMPORTANT FARMLANDS AND WILLIAMSON ACT LANDS (NORTH)

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Figure
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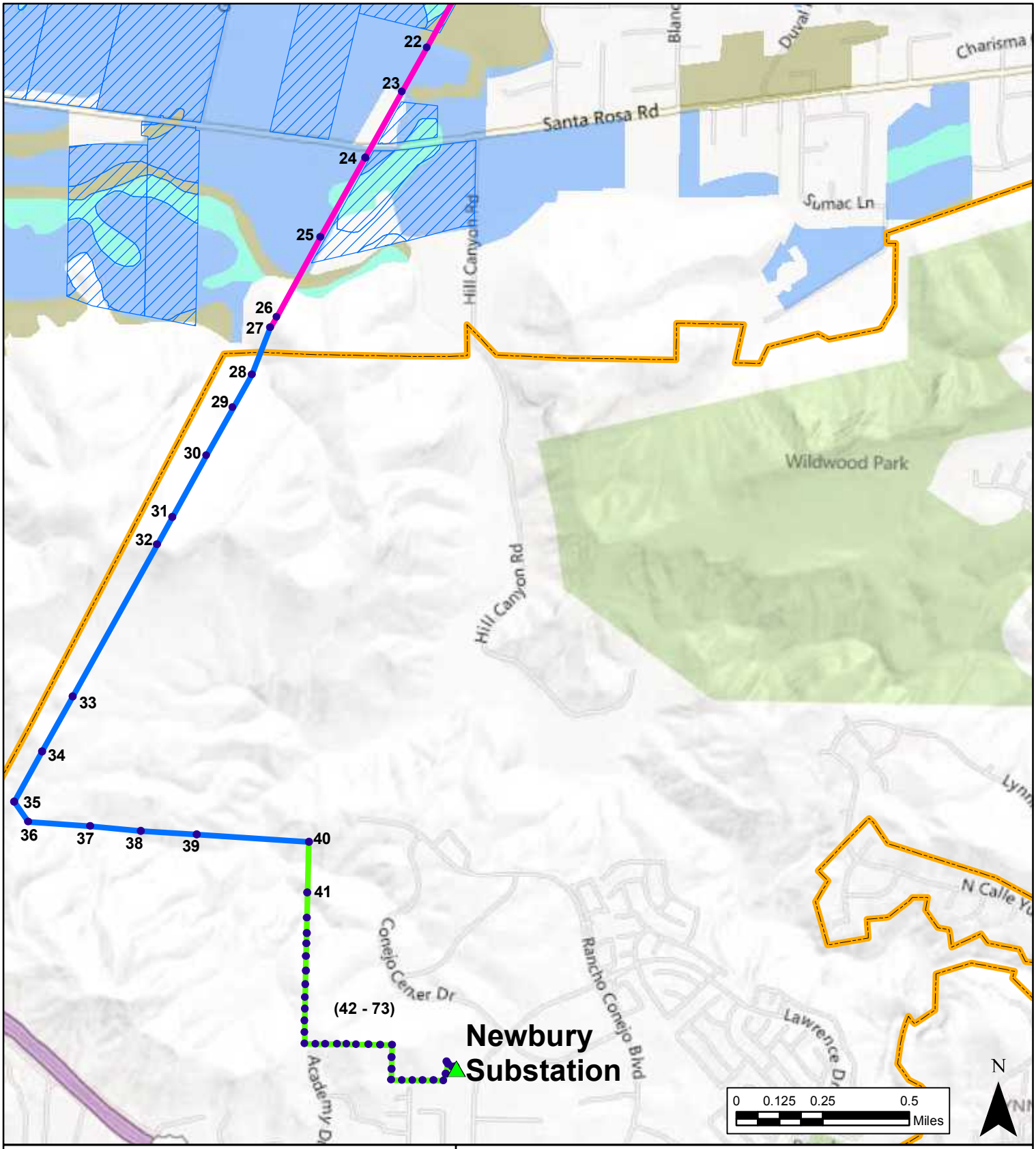

Project Sections
- Project Section 2
- Project Section 3
- Project Section 4
- Pole Locations
- SCE Substations
- City Boundaries
- Williamson Act Lands

Important Farmland
- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland

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MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

IMPORTANT FARMLANDS AND WILLIAMSON ACT LANDS (SOUTH)

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Figure
4.2-1b

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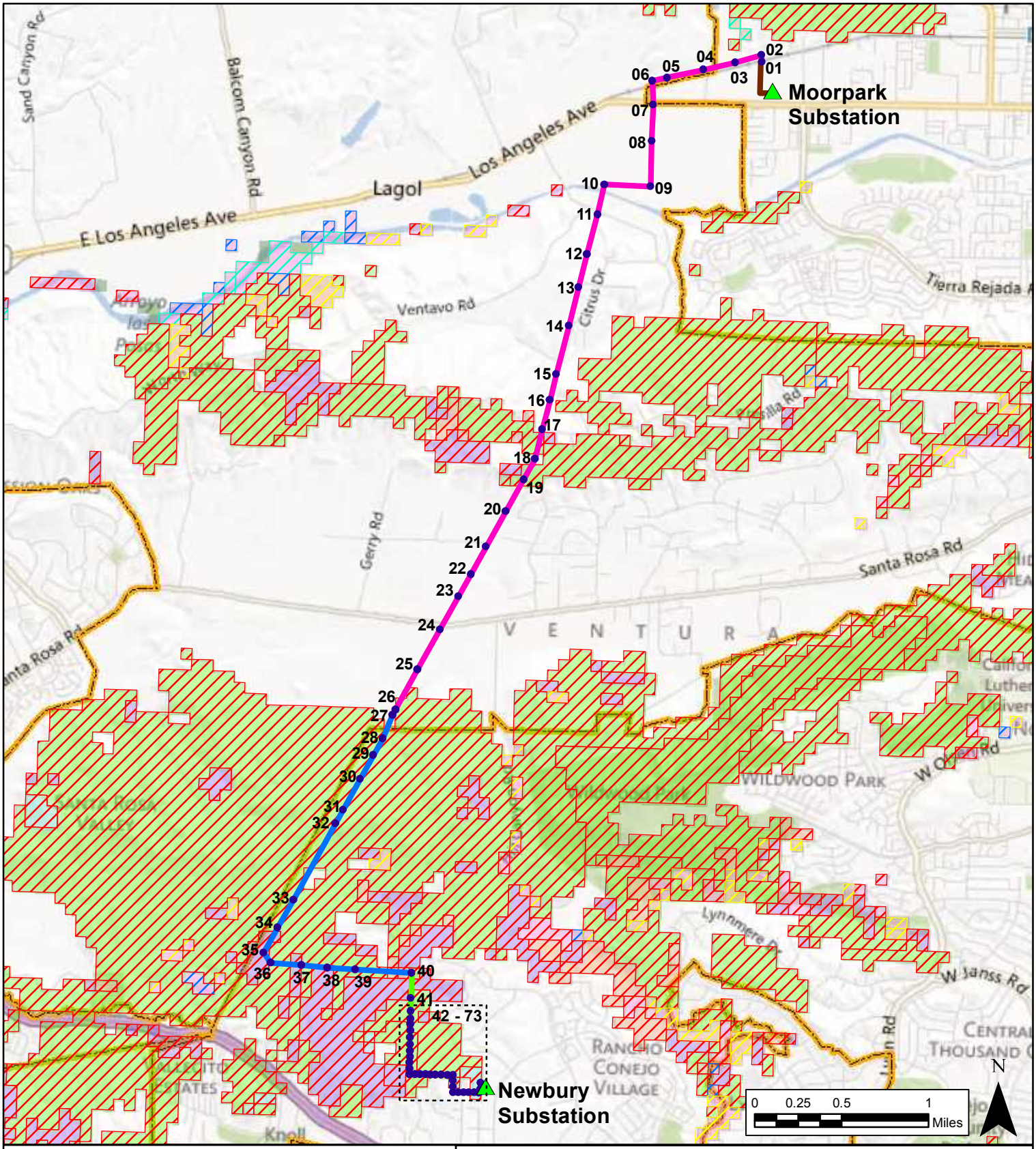

Project Sections
- Project Section 1
- Project Section 2
- Project Section 3
- Project Section 4
- Pole Locations
- SCE Substations
- City Boundaries

Tree Density
- 10 to 24%
- 25 to 39%
- 40 to 59%
- 60 to 100%

Habitat Type
- Chamise-Redshank Chaparral
- Coastal Oak Woodland
- Coastal Scrub
- Mixed Chaparral
- Montane Riparian
- Valley Foothill Riparian

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FOREST LANDS

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Figure
4.2-2

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4.2.4 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past construction activities in Project Sections 2 and 3, including the establishment of construction work sites for the installation of TSPs, the rehabilitation of access and spur roads, and the establishment of three stringing sites, occurred on lands identified as Important Farmlands (see Table 4.2-1). Since the conclusion of the past construction activities, all disturbed areas have been, and will remain, maintained (i.e., graded and/or kept free of vegetation) subject to agreements between SCE and landowners.

Table 4.2-1: Permanent Disturbances to Important Farmlands and Williamson Act Lands Within Project Sections 2 and 3

Agricultural Lands Category	Total Acreage, Ventura County	Past Activities[1,2]	Future Activities
Prime Farmland	42,420	3.5 TSPs: 0.21 acre Access road rehabilitation: 0.076 acre	2 TSPs: 0.12 acre
Farmland of Statewide Importance	33,482	2.5 TSPs: 0.15 acre	0
Unique Farmland	28,793	8 TSPs: 0.48 acre Access road rehabilitation: 2.31 acres	0
Williamson Act Land[3]	128,993	9 TSPs: 0.54 acre Access road rehabilitation: 1.08 acres	0

Notes:
1. Disturbance areas calculated from information in Chapter 3. Permanent disturbance associated with TSP installation = 0.06 acres/TSP.
2. One TSP (pole location 21) is located partially on Farmland of Statewide Importance and on Unique Farmland, and another TSP (pole location 15) is located partially on Prime Farmland and Unique Farmland; hence the '.5' notation in the table.
3. TSPs at pole locations 12-17, and 19-21 are located on Williamson Act lands.

Source: CDOC 2010, 2011

As presented in Table 4.2-1, a total of approximately 3.23 acres of Important Farmlands were permanently disturbed by past activities; these conversions represent a loss of approximately 0.003 percent of the approximately 104,695 acres of Important Farmland identified in Ventura County. The permanent disturbance as a result of past construction of approximately 3.23 acres of the Important Farmlands inventory in Ventura County was less than significant.

Did the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Assessment Summary: No Impact

Construction Impacts

In Ventura County, past construction activities occurred in existing ROWs on lands zoned for agricultural use. Section V.A.4 of the Ventura County Land Conservation Act Guidelines states:

> "In accordance with Government Code Sections 51231, 51238, and 51238.1, 'compatible uses' are those which are permitted, or conditionally permitted by the Ventura County Zoning Ordinance in the AE-40 ac or CA zones."

The Project traverses lands zoned "AE-40 ac." Section 8105-4, Permitted Uses in Open Space, Agricultural, Residential and Special Purpose Zones, of the Ventura County Non-Coastal Zoning Ordinance states that overhead transmission lines are a permitted use subject to receipt of a "Planning Director-approved Conditional Use Permit." However, pursuant to GO 131-D, Section XIV.B, the Project does not require a conditional use permit. Therefore, past construction activities did not conflict with existing zoning for agricultural use within Ventura County.

Past construction activities were conducted on lands under Williamson Act contracts. Electrical transmission facilities are recognized in the California Government Code as a compatible use on Williamson Act lands. California Government Code 51238 (a) (1) states:

> "Notwithstanding any determination of compatible uses by the county or city pursuant to this article, unless the board or council after notice and hearing makes a finding to the contrary, the erection, construction, alteration, or maintenance of gas, electric, water, communication, or agricultural laborer housing facilities are hereby determined to be compatible uses within any agricultural preserve."

For these reasons, past Project construction activities did not conflict with applicable zoning regulations regarding agricultural use, and did not conflict with any applicable Williamson Act contract, and thus had no impact under this criterion.

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

Assessment Summary: No Impact

Construction Impacts

Forest lands are identified by CAL FIRE on the scale of 100-meter squared grids (CAL FIRE 2002). Forest lands as defined in Public Resources Code Section 12220(g) are present in Project Sections 2, 3 and 4. Although these lands are not managed for timber, they provide for management of other forest resources such as aesthetics, fish and wildlife, biodiversity, and water quality.

Some past construction activities occurred on lands defined as forest lands; these activities permanently disturbed approximately 4.47 acres (see Table 4.2-2). However, neither the temporary nor permanent disturbances associated with past construction activities impacted the lands' ability to support 10 percent native tree cover of any species, and thus no forest lands were reclassified as non-forest lands under Public Resources Code Section 12220(g). No timberland or lands zoned Timberland Production as defined above are crossed by the Project. Therefore, no impacts occurred under this criterion.

Did the project result in the loss of forest land or conversion of forest land to non-forest use?

Assessment Summary: No Impact

Construction Impacts

As mentioned above, some past construction activities in Project Sections 2 and 4 occurred on lands defined as forest lands; these activities permanently disturbed an area of approximately 4.47 acres (see Table 4.2-2). However, the disturbances associated with past construction activities did not impact the lands' ability to support 10-percent native tree cover of any species, and thus no forest lands as defined in Public Resources Code Section 12220(g) were lost. In addition, no such lands were converted to non-forest use as a result of past construction activities. Therefore, there were no impacts under this criterion.

Table 4.2-2: Forest Land Permanent Disturbance Impacts

	Past Activities	Future Activities
Project Section 2	1 TSPs: 0.06 acre Access road rehabilitation: 0.04 acre	0
Project Section 3	Access road rehabilitation: 2.14 acres	14 TSPs: 0.84 acre
Project Section 4	LWS poles: 0.96 acres Access road rehabilitation: 1.27 acres	0

Notes:
Project Section 1 is contained entirely within Moorpark Substation, which has no forest lands identified.
Permanent disturbance per Tables 3.7-4a and 3.7-4b

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

Assessment Summary: No Impact

Construction Impacts

Past construction activities of the Project did not involve any other changes in the existing environment that resulted in the conversion of farmland to non-agricultural use or forest land to non-forest use. In addition, staging yards were sited to avoid conversion of farmland or forest land to other uses. Therefore, no impacts occurred under this criterion.

4.2.5 Impact Analysis, Future Activities

Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Future construction activities that would be performed on lands identified as Important Farmlands include the installation of two whole TSPs and the completion of the partially-installed TSP in Project Section 2. The locations of these lands are shown on Figures 4.2-1a and 4.2-1b.

As presented in Chapter 3: Project Description, construction work sites were established during past construction activities, and thus no additional permanent or temporary disturbances are anticipated during future construction activities.

Some components of the Project would represent a permanent impact to the current use of lands. The foundations of TSPs, for example, cannot be used for any other purpose, and per California Public Resources Code Section 4292, an area around each TSP and LWS pole would be maintained in a cleared state (Table 4.2-1).

As presented in Table 4.2-1, a total of 0.12 acres of Important Farmlands would be permanently disturbed by future activities; these conversions represent a loss of approximately 0.0001 percent of the approximately 104,695 acres of Important Farmland identified in Ventura County. The permanent disturbance as a result of future construction of approximately 0.12 acres of the Important Farmlands inventory in Ventura County would be less than significant.

Operation Impacts

No additional impacts would occur to Important Farmlands beyond those anticipated during construction. Therefore, there would be no impacts under this criterion.

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

Assessment Summary: No Impact

Construction Impacts

In Ventura County, the Project would be routed in existing ROWs across lands zoned for agricultural use. The Ventura County Land Conservation Act Guidelines state:

> "In accordance with Government Code Sections 51231, 51238, and 51238.1, 'compatible uses' are those which are permitted, or conditionally permitted by the Ventura County Zoning Ordinance in the AE-40 ac or CA zones."

The Project would traverse lands zoned "AE-40 ac." Section 8105-4, Permitted Uses in Open Space, Agricultural, Residential and Special Purpose Zones, of the Ventura County Non-Coastal Zoning Ordinance states that overhead transmission lines are a permitted use subject to receipt of a "Planning Director-approved Conditional Use Permit." However, pursuant to GO 131-D, Section XIV.B, the Project would not require a conditional use permit. Therefore, the Project would not conflict with existing zoning for agricultural use within Ventura County.

Electrical transmission facilities are recognized in the California Government Code as a compatible use on Williamson Act lands. California Government Code 51238 (a) (1) states:

> "Notwithstanding any determination of compatible uses by the county or city pursuant to this article, unless the board or council after notice and hearing makes a finding to the contrary, the erection, construction, alteration, or maintenance of gas, electric, water, communication, or agricultural laborer housing facilities are hereby determined to be compatible uses within any agricultural preserve."

For these reasons, construction of the Project would not conflict with applicable zoning regulations regarding agricultural use, and would not conflict with any applicable Williamson Act contract, and thus would have no impacts under this criterion.

Operation Impacts

The Project would be operated and maintained on lands zoned for agricultural use and lands under Williamson Act contracts. Operation of the Project would not conflict with applicable zoning regulations regarding agricultural use, and would not conflict with any applicable Williamson Act contract, and thus would have no impacts under this criterion.

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

Assessment Summary: No Impact

Construction Impacts

Forest lands are identified by CAL FIRE on the scale of 100-meter squared grids (CAL FIRE 2002). Forest lands as defined in Public Resources Code Section 12220(g) are present in Project Sections 2, 3 and 4. Although these lands are not managed for timber, they provide for management of other forest resources such as aesthetics, fish and wildlife, biodiversity, and water quality.

Some future construction activities would occur on lands defined as forest lands; these activities would permanently disturb approximately 0.84 acres (see Table 4.2-2). However, neither the temporary nor permanent disturbances associated with future construction activities would impact the lands' ability to support 10 percent native tree cover of any species, and thus no forest lands would be reclassified as non-forest lands under Public Resources Code Section 12220(g). No timberland or lands zoned Timberland Production as defined above are crossed by the Project. Therefore, no impacts would occur under this criterion.

Operation Impacts

No additional impacts would occur to forest lands beyond those anticipated during construction. Operation of the Project would not conflict with zoning of forest land, timberland, or Timberland Production zones. Therefore, there would be no impacts under this criterion.

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

Assessment Summary: No Impact

Construction Impacts

As mentioned above, some future construction activities would occur on lands defined as forest lands; these activities would permanently disturb an area of approximately 0.84 acres (see Table 4.2-2). However, the disturbances associated with future construction activities would not impact the lands' ability to support 10-percent native tree cover of any species, and thus no forest lands as defined in Public Resources Code Section 12220(g) would be lost.

In addition, no such lands would be converted to non-forest use as a result of future construction activities. Therefore, there would be no impacts under this criterion.

Operation Impacts

No additional impacts would occur to forest lands beyond those anticipated during construction. Operation and maintenance activities as described in Chapter 3: Project Description would be conducted along the length of the Project. These activities would not result in the loss or conversion of forest land as defined above to non-forest use. Therefore, there would be no impacts under this criterion.

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

Assessment Summary: No Impact

Construction Impacts

Future construction activities of the Project would not involve any other changes in the existing environment that results in the conversion of farmland to non-agricultural use or forest land to non-forest use. In addition, staging yards would be sited to avoid conversion of farmland or forest land to other uses. Therefore, no impacts would occur under this criterion.

Operation Impacts

It is not anticipated that operation of the Project would result in other changes to the environment that would result in the conversion of farmland to non-agricultural use, or conversion of forest land to non-forest use. As noted in Section 4.13, the Project would not be growth-inducing and therefore would not be expected to induce conversion of agricultural or forest land. Therefore, no impacts would occur under this criterion.

4.2.6 References

California Department of Forestry and Fire Protection (CDFFP). 2002. Multi-source Land Cover Data. Version: v02_2. [Online Resource]. Located at http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=fveg02_.

California Division of Conservation (CDOC). 2009. 2009 Ventura County Williamson Act GIS Data. [Online Resource]. Located at ftp://ftp.consrv.ca.gov/pub/dlrp/wa/WA%20GIS%20to%202009/shapefile/.

CDOC. 2010. Ventura County Important Farmland GIS Data. Farmland Mapping and Monitoring Program. [Online Resource]. Located at ftp://ftp.consrv.ca.gov/pub/dlrp/fmmp/2010/ .

CDOC. 2011. California Land Conservation (Williamson) Act 2010 Status Report. Located at http://www.conservation.ca.gov/dlrp/lca/stats_reports/Documents/2010%20Williamson%20Act%20Status%20Report.pdf.

CDOC. Undated. FMMP Guidelines Excerpt: Important Farmland Mapping Categories And Soil Taxonomy Terms. Located at http://www.conservation.ca.gov/dlrp/fmmp/Documents/soil_criteria.pdf.

Ventura County. 2011a. Ventura County Non-Coastal Zoning Ordinance. Amended June 28, 2011.

Ventura County. 2011b. Ventura County Land Conservation Act Guidelines. Adopted November 22, 2011.

Ventura County. 2011c. Ventura County General Plan – Land Use Appendix. Amended June 28, 2011.

4.3 Air Quality

This section describes the air quality in the area of the Project. The potential impacts as a function of the past and future construction activities, and future operation, are also discussed.

4.3.1 Environmental Setting

The Project lies within the South Central Coast Air Basin (SCCAB), a region that is comprised of Ventura County, Santa Barbara County, and San Luis Obispo County. The portion of the SCCAB in which the Project is located is regulated by the Ventura County Air Pollution Control District (VCAPCD).

The climate of the SCCAB is dominated by the strength and position of the semi-permanent high-pressure center over the Pacific Ocean near Hawaii. The air above Ventura County often exhibits weak vertical and horizontal dispersion due to persistent temperature inversions (a warm air mass moves above a cooler air mass, limiting mixing of the two masses) and the air movement is restricted by the presence of nearby mountain ranges.

It is the responsibility of the VCAPCD to ensure that State and Federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by California (California Ambient Air Quality Standards – CAAQS) and by the Federal government (National Ambient Air Quality Standards – NAAQS) for the following criteria air pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter with a mean diameter of less than 10 microns (PM_{10}), particulate matter with a mean diameter of less than 2.5 microns ($PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). Furthermore, California has additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility. Attainment of the State and Federal ambient air quality standards protects sensitive receptors and the public from criteria pollutants that are known to have adverse human health effects.

4.3.1.1 Ozone

Ground-level O_3 is an oxidant and the major component of smog. Ozone is generated by a complex series of chemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO_x) in the presence of ultraviolet radiation. The presence of both ROG and NO_x in the lower atmosphere is typically the result of incomplete combustion. The rate of ground-level ozone formation is dependent on the concentrations of ROG and NO_x, daytime wind flow patterns, mountain barriers, persistence of temperature inversions, and the intensity of sunlight. For this reason, ROG and NO_x are considered precursors to ozone, and emissions of ROG and NO_x are regulated in place of O_3.

4.3.1.2 Nitrogen Dioxide

NO_x emissions are primarily generated from the combustion of fuels. NO_x includes nitric oxide (NO) and nitrogen dioxide (NO_2). Because NO converts to NO_2 in the atmosphere over time, NO_2 is the listed criteria pollutant.

4.3.1.3 Carbon Monoxide

CO is a product of incomplete combustion, principally from automobiles and other mobile sources of pollution. CO emissions from wood-burning stoves and fireplaces can also be measurable contributors. Typically, peak CO levels occur during winter months, due to a combination of higher emission rates and stagnant weather conditions such as ground-level radiation inversions.

4.3.1.4 Sulfur Dioxide

SO_2 is produced when any sulfur-containing fuel is combusted. Processed natural gas contains trace amounts of sulfur, while fuel oils contain much larger amounts. SO_2 reacts in the atmosphere to form acid rain, which is destructive to lakes and streams, crops and vegetation, as well as to buildings, materials, and cultural resources.

4.3.1.5 Particulate Matter

PM emissions are caused by a combination of windblown fugitive or road dust, particles emitted from combustion sources (usually carbon particles), and organic sulfate and nitrate aerosols formed in the air from emitted hydrocarbons, sulfur oxides, and NO_x. Respirable particulate matter is referred to as PM_{10}, because it has a diameter size of equal to or less than 10 microns. Concentrations of fine particulates ($PM_{2.5}$) are separately measured and reported.

4.3.1.6 Lead

Lead gasoline additives, non-ferrous smelters, and battery plants were historically significant contributors to atmospheric lead emissions. Legislation in the early 1970s required the gradual reduction of lead content in gasoline. This required reduction has dramatically reduced lead emissions from mobile and other combustion sources. In addition, unleaded gasoline was introduced in 1975. These controls have essentially eliminated violations of the lead standard for ambient air in most urban areas.

4.3.1.7 Ambient Air Quality Standards

The United States Environmental Protection Agency (USEPA) compares ambient air criteria pollutant measurements with NAAQS to assess the status of air quality of regions within the states. Similarly, the California Air Resources Board (CARB) compares air pollutant measurements in California to CAAQS. Based on these comparisons, regions within the states and California are designated as one of the following categories:

- **Attainment.** A region is designated as attainment if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, areas that have been re-designated from nonattainment to attainment are classified as “maintenance areas” for a 10-year period to ensure that the air quality improvements are sustained.

- **Nonattainment.** If the NAAQS or CAAQS is exceeded for a pollutant, then the region is designated as nonattainment for that pollutant.
- **Unclassifiable.** An area is designated as unclassifiable if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Presently, the ambient air in the area of the Project is classified by the CARB as nonattainment for O_3, PM_{10}, and $PM_{2.5}$. The ambient air in the area is either unclassified or classified as attainment for all other State regulated air pollutants (CARB 2010). The attainment status of each CAAQS and NAAQS pollutant is shown in Table 4.3-1.

The closest ambient air quality monitoring station to the Project that monitors for O_3 and $PM_{2.5}$ is the Thousand Oaks Monitoring Station, located approximately 3.7 miles from the Project site. The closest ambient air quality monitoring station to the Project that monitors for PM_{10} is the Simi Valley Monitoring Station, located approximately 12 miles from the Project. The following exceedances of the NAAQS and CAAQS were measured at these stations during 2009, 2010, and 2011 (CARB, 2012b):

- The 1-hour ozone CAAQS was exceeded on 4 days during 2009, 2 days during 2010, and was not exceeded during 2011.
- The 8-hour ozone CAAQS was exceeded on 9 days during 2009, 9 days during 2010, and 7 days during 2011.
- The 8-hour ozone NAAQS was exceeded on 5 days during 2009, 6 days during 2010, and 1 day during 2011.
- The annual $PM_{2.5}$ CAAQS was not exceeded between 2009 and 2011.
- The daily PM_{10} CAAQS was exceeded 6 days during 2009 and was not exceeded during 2010 or 2011.
- The annual PM_{10} CAAQS was exceeded in 2009 but not exceeded in 2010 or 2011.

Table 4.3-1: Federal and California Ambient Air Quality Standards and Ventura County Attainment Status

Air Pollutant	Federal Primary Standard Averaging Time and Concentration	Ventura County Attainment Status Federal Standards	State Standard Averaging Time and Concentration	Ventura County Attainment Status State Standards
Ozone (O_3)	8-hr avg. 0.075 ppm (147 µg/m^3)	Nonattainment	8-hr avg. 0.070 ppm (137 µg/m^3)	Nonattainment
	None		1-hr. avg. 0.09 ppm (180 µg/m^3)	
Carbon Monoxide (CO)	8-hr avg. 9 ppm (10 mg/m^3)	Attainment	8-hr avg. 9.0 ppm (10 mg/m^3)	Attainment
	1-hr avg. 35 ppm (40 mg/m^3)		1-hr avg. 20 ppm (23 mg/m^3)	
Nitrogen Dioxide (NO_2)	Annual arithmetic mean 0.053 ppm (100 µg/m^3)	Attainment	Annual arithmetic mean 0.030 ppm (56 µg/m^3)	Attainment
	0.100 ppm (188 µg/m^3)		1-hr avg. 0.18 ppm (339 µg/m^3)	
Sulfur Dioxide (SO_2)	None	Attainment	24-hr avg. 0.04 ppm (105 µg/m^3)	Attainment
	1-hr avg. 75 ppb (197 µg/m^3)		1-hr. avg. 0.25 ppm (655 µg/m^3)	
Respirable Particulate Matter (PM_{10})	None	Attainment	Annual arithmetic mean 20 µg/m^3	Nonattainment
	24-hr avg. 150 µg/m^3		None	
Fine Particulate Matter ($PM_{2.5}$)	Annual arithmetic mean 15 µg/m^3	Attainment	Annual arithmetic mean 12 µg/m^3	Nonattainment
	24-hr avg. 35 µg/m^3		None	
Sulfates	None	--	24-hr avg. 25 µg/m^3	Attainment Unclassified

Table 4.3-1: Federal and California Ambient Air Quality Standards and Ventura County Attainment Status

Air Pollutant	Federal Primary Standard Averaging Time and Concentration	Ventura County Attainment Status Federal Standards	State Standard Averaging Time and Concentration	Ventura County Attainment Status State Standards
Lead	Calendar quarter 1.5 μg/m^3	Attainment	None	Attainment
	Rolling 3-month avg. 0.15 μg/m^3		None	
	None		30-day avg. 1.5 μg/m^3	
Hydrogen Sulfide (H_2S)	None	--	1-hr. avg. 0.03 ppm (42 μg/m^3)	Attainment/ Unclassified
Visibility-Reducing Particles	None	--	See note (1) below	Attainment/ Unclassified
Vinyl Chloride	None	--	24-hr avg. 0.01 ppm (26 μg/m^3)	Not reported

Notes:
μg/m^3 = microgram per cubic meter
mg/m^3 = milligram per cubic meter
ppb = parts per billion
ppm = parts per million
1. State criterion for nonattainment of visibility-reducing particles is the amount of particles present to produce an extinction coefficient of 0.23 per kilometer when relative humidity is less than 70 percent.

Source: CARB 2010, CARB 2012a

4.3.2 Regulatory Setting

4.3.2.1 Federal Regulatory Setting

4.3.2.1.1 Federal Clean Air Act and Amendments

The Clean Air Act of 1970 (Federal CAA), 42 U.S.C. § 7401 et seq. as amended in 1977 and 1990, is the basic Federal statute governing air quality. The USEPA is the principal agency responsible for overseeing enforcement of Federal CAA statutes and regulations. The USEPA also oversees implementation of Federal programs for permitting new and modified stationary sources, controlling toxic air contaminants, and reducing emissions from motor vehicles and other mobile sources. The Sections of the Federal CAA that are most applicable to the Project include Title I (Air Pollution Prevention and Control) and Title II (Emission Standards for Mobile Sources).

4.3.2.2 State Regulatory Setting

4.3.2.2.1 California Clean Air Act

The California Clean Air Act (California CAA, Stats. 1988, Ch. 1568) outlines a statewide air pollution control program in California. CARB is the primary administrator of the California CAA, while local air quality districts administer air rules and regulations at the regional level. CARB is responsible for establishing CAAQS, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and preparing the State Implementation Plan.

4.3.2.3 Local Regulatory Setting

Local air districts in California are responsible for issuing stationary source air permits, developing emissions inventories, maintaining air quality monitoring stations, and reviewing air quality environmental documents required by CEQA. The California CAA also designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The VCAPCD is the administrator of air pollution rules and regulations in Ventura County.

4.3.2.3.1 Ventura County Air Pollution Control District

Air Quality Management Plan

To comply with the Federal and California CAAs, the VCAPCD has prepared a series of Air Quality Management Plans (AQMPs), the most recent of which is the 2007 AQMP, approved by the VCAPCD Board on May 13, 2008. The 2007 AQMP aimed to achieve the Federal 8-hour ozone standard by June 15, 2013. Control programs to achieve the Federal 8-hour ozone standard described in the 2007 AQMP focus on mobile sources, consumer products, and pesticides. Ventura County continues to achieve the Federal 1-hour ozone standard.[38]

Rules and Regulations

The VCAPCD is responsible for limiting the amount of emissions that can be generated throughout Ventura County by various stationary and mobile sources. Specific rules and regulations have been adopted by the VCAPCD that limit the emissions that can be generated by various uses and activities, and that identify specific pollution-reduction measures that must be implemented for various uses and activities. Stationary emission sources subject to these rules are generally regulated through VCAPCD's permitting process. Some of the activities associated with the Project may be subject to VCAPCD rules and regulations. A description of several of the rules that may apply to the Project is provided below:

- **Rule 50 (Opacity):** This rule sets opacity standards on the discharge from sources of air contaminants.
- **Rule 51 (Nuisance):** This rule prohibits any person from discharging air contaminants or any other material from a source that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public or which endangers the comfort, health, safety, or repose to any considerable number of persons or the public.
- **Rule 55 (Fugitive Dust):** This rule requires fugitive dust generators to implement control measures to limit the amount of dust from vehicle track-out, earth moving, bulk material handling, and truck hauling activities.
- **Rule 55.1 (Paved Roads and Public Unpaved Roads):** This rule requires fugitive dust generators to begin the removal of visible roadway accumulation within 72 hours of any written notification from the VCAPCD. The use of blowers is expressly prohibited under any circumstances. This rule also requires controls to limit the amount of dust from any construction activity or any earthmoving activity on a public unpaved road.

[38] The California CAA does not expressly require air quality plans for the state particulate matter standards. However, many of the control measures in the AQMP will reduce ambient PM levels by reducing ROG and NO_X emissions. ROG and NO_X can transform in the atmosphere into aerosols, which are a constituent of particulate matter.

4.3.3 Significance Criteria

The significance criteria for assessing the impacts to air quality come from the CEQA Environmental Checklist. The State CEQA Guidelines (Section 15064.7) provide that, when available, the significance criteria established by the applicable air pollution control district may be relied upon to make determinations of significance.

The VCAPCD adopted the Ventura County Air Quality Assessment Guidelines (Guidelines) in 2003. The purpose of the Guidelines is to provide lead agencies, consultants, and project applicants with a framework and uniform methods for preparing air quality evaluations for environmental documents. The Guidelines recommend specific criteria and threshold levels for determining whether a proposed project may have a significant adverse air quality impact. The Guidelines also provide measures that may be useful for mitigating the air quality impacts of proposed projects. Although these are guidelines only, and their use is not required or mandated by the VCAPCD, they are considered appropriate for evaluating potential air quality impacts from the Project since it is located in Ventura County.

The potential air quality impacts of the Project are, therefore, evaluated according to criteria developed by VCAPCD in the Guidelines (VCAPCD 2003). These criteria generally incorporate the checklist questions contained in Appendix G of the State CEQA Guidelines.

- Conflict with or obstruct implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation. Specifically, implementation of the Project would have a significant impact on air quality if the Project would exceed any of the following thresholds:

  Construction

  The VCAPCD has not adopted quantitative significance thresholds for temporary construction emissions. Instead, for emissions occurring in the geographic area where the Project would be located, the VCAPCD recommends construction related emissions be offset if estimates exceed the following:

  - ROG – 25 pounds per day
  - NO_x – 25 pounds per day

  Operations

  - ROG – 25 pounds per day[39]
  - NO_x – 25 pounds per day

[39] The VCAPCD uses the term "Reactive Organic Compounds (ROC)" to represent an ozone precursor (along with NO_x). However, for consistency with CARB terminology, the term "Reactive Organic Gases (ROG)" is used in this document.

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Specifically, the Project would have cumulatively considerable impacts if the Project emits greater than 2 pounds per day of ROG or greater than 2 pounds per day of NO_x during operation and is inconsistent with the AQMP
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people

4.3.4 Impact Analysis, Past Activities

During past construction activities, emissions were generated from operation of heavy equipment and support vehicles. Air pollutant emissions were estimated using the CalEEMod model for both on-road and off-road sources. CalEEMod is a program that calculates air pollutant emissions from land use sources and incorporates CARB's EMFAC2007 model for on-road vehicle emissions and CARB's OFFROAD2007 model for off-road vehicle emissions. The model also incorporates factors specific to the project region, such as ROG content in architectural coatings and vehicle fleet mixes. The emission estimates reflect a conservative calculation based on estimated total use of each type of equipment anticipated for construction.

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project conflict with or obstruct implementation of the applicable air quality plan?

Assessment Summary: No Impact

Construction Impacts

The VCAPCD Guidelines set forth a process for assessing a project's consistency with the Ventura County AQMP; this process includes assessing a project's conformity with the applicable General Plan and comparing the population growth associated with the project with that forecasted in the AQMP. Projects that do not conform to the applicable General Plans and that result in an increase in population above that which is forecasted in the AQMP are inconsistent with the AQMP. As presented in Section 4.10 and Section 4.13, past construction activities involved the installation of upgraded and new electrical subtransmission infrastructure which did not induce, directly or indirectly, population growth in the area in a manner inconsistent with any applicable General Plan.

The emissions associated with past construction activities were temporary and represented a very small fraction of the regional emission inventories included in the 2007 Ventura County AQMP. Thus, construction emissions did not substantially contribute to the regional emissions.

Because previous activities at the Project did not induce, directly or indirectly, population growth in the area in a manner inconsistent with any applicable General Plan, and did not substantially contribute to the regional emissions, the Project did not conflict with the applicable air quality plan. Past construction activities therefore did not conflict with the implementation of the applicable air quality plan, and there was no impact.

Did the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Assessment Summary: No Impact

Construction Impacts

The VCAPCD Guidelines state, in part:

> "Construction related emissions…of [ROG] and NO_x are not counted towards the two significance thresholds, since these emissions are temporary. However, construction related emissions should be mitigated if estimates of [ROG] and NO_x emissions from the heavy-duty construction equipment anticipated to be used for a particular project exceed the 5 pounds per day threshold in the Ojai Planning Area, or the 25 pounds per day threshold in the remainder of the county."[40]

As shown in Table 4.3-2, past activities potentially exceeded these levels for ROG and NO_x. SCE practices, including minimizing equipment idling time and maintaining equipment engines in good condition and in proper tune as per manufacturers' specifications, reduced emissions of ROG and NO_x. These measures are also listed as mitigation measures in the VCAPCD Guidelines. In addition, construction activities were delayed and or stopped between the months of March and September due to the need to avoid impacts to nesting birds; this resulted in a lengthening of the construction schedule, therefore reducing emissions during VCAPCD's identified smog season (May through October).

Table 4.3-2: Summary of Estimated Project Construction Emissions, Past Activities

Year	Source	Estimated Project Emissions (lbs/day)			
		ROG	NO_x	PM_{10}	$PM_{2.5}$
2010-2011	Subtransmission Line and Substation	**78.91**	**726.64**	52.28	38.20

Notes:
Bolded figures indicate those instances where the VCAPCD recommends measures designed to reduce constituent emissions, as feasible.

[40] The Project is not located within the Ojai Planning Area.

The VCAPCD Guidelines further state, in part:

> "The Ventura County Air Pollution Control District (APCD or District) recommends minimizing fugitive dust, especially during grading and excavation operations, rather than quantifying fugitive dust emissions. Therefore, the mitigation measures described in Section 7.4.1, 'Fugitive Dust Mitigation Measures,' should be applied to all project related dust-generating operations and activities."

SCE's practices, which were implemented during past construction activities, incorporate many of the recommended measures described in Section 7.4.1.1, Model Fugitive Dust Mitigation Plan, which is reproduced verbatim below:[41]

1. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.
3. Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:
    a. All trucks shall be required to cover their loads as required by California Vehicle Code §23114.
    b. All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible.
4. Graded and/or excavated inactive areas of the construction site shall be monitored by (indicate by whom) at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust.[42]

[41] This text is taken verbatim, including the parenthetical remark "(indicate by whom)", from the Ventura County Air Quality Control District's Ventura County Air Quality Assessment Guidelines.

[42] SCE did not always undertake soil stabilization activities in areas that were inactive for more than four days due to prohibition of construction activities to protect nesting birds.

5. Signs shall be posted on-site limiting traffic to 15 miles per hour or less.[43]
6. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive.
7. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.
8. Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

Because the VCAPCD has not adopted air quality standards related to construction activities, and because SCE's practices implemented during past construction activities incorporate many of the measures suggested by the VCAPCD, the past construction activities did not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and there was no impact under this criterion.

Did the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The VCAPCD Guidelines do not include construction emissions in their significance threshold limits (VCAPCD 2003). Ventura County is in nonattainment for ozone and particulate matter. Past construction activities resulted in the emission of both ozone and particulate matter as a result of fuel combustion from the operation of construction equipment. As presented above, SCE employed a number of practices that are consistent with the VCAPCD Model Fugitive Dust Mitigation Plan, including minimizing equipment idling time, maintaining equipment engines in good condition and in proper tune as per manufacturers' specifications, and minimizing fugitive dust emissions, which reduced emissions of these nonattainment pollutants, as well as ozone precursors ROG and NO_x as a result of past construction activities.

[43] SCE did not post speed limit signs along the access roads; the design of the roads are not conducive to travel above 15 mph by the types of vehicles used during past construction activities.

Because the VCAPCD Guidelines do not include construction emissions in the determination of significance, and because SCE employed practices to reduce emissions of criteria pollutants, emissions associated with past construction activities did not result in a cumulatively considerable net increase in the nonattainment criteria pollutants and impacts were less than significant under this criterion.

Did the project expose sensitive receptors to substantial pollutant concentrations?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The VCAPCD identifies residences, schools, playgrounds, day care centers, job sites, retirement homes, convalescent homes, and hospitals as sensitive receptors. Residences are located approximately 50 to 75 feet from some Project components, and the nearest school is located approximately 850 feet from the subtransmission line (Figures 4.3-1a and 4.3-1b).

Pollutant emissions were distributed over the construction period, and were not concentrated in any one area. In addition, pollutant emissions during construction were reduced through implementation of SCE practices, including minimizing equipment idling time, maintaining equipment engines in good condition and in proper tune as per manufacturers' specifications, and employing measures to reduce fugitive dust emissions; as presented above, these practices are consistent with the measures described in Section 7.4.1, Fugitive Dust Mitigation Measures of the VCAPCD's Guidelines. Therefore, the Project did not expose sensitive receptors (as defined above) to substantial pollutant concentrations. Less than significant impacts occurred under this criterion as a result of past construction activities.

Did the project create objectionable odors affecting a substantial number of people?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Potential odor sources associated with the past construction activities included equipment exhaust during construction activities. The emission of these odors was temporary, short-term and intermittent in nature, and ceased upon completion of construction. Because the odors were temporary and dispersed rapidly with distance from the source, construction-generated odors did not result in the frequent exposure of a substantial number of people to objectionable odors, and less than significant impacts occurred under this criterion.

4.3.5 Impact Analysis, Future Activities

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

Assessment Summary: No Impact

Construction Impacts

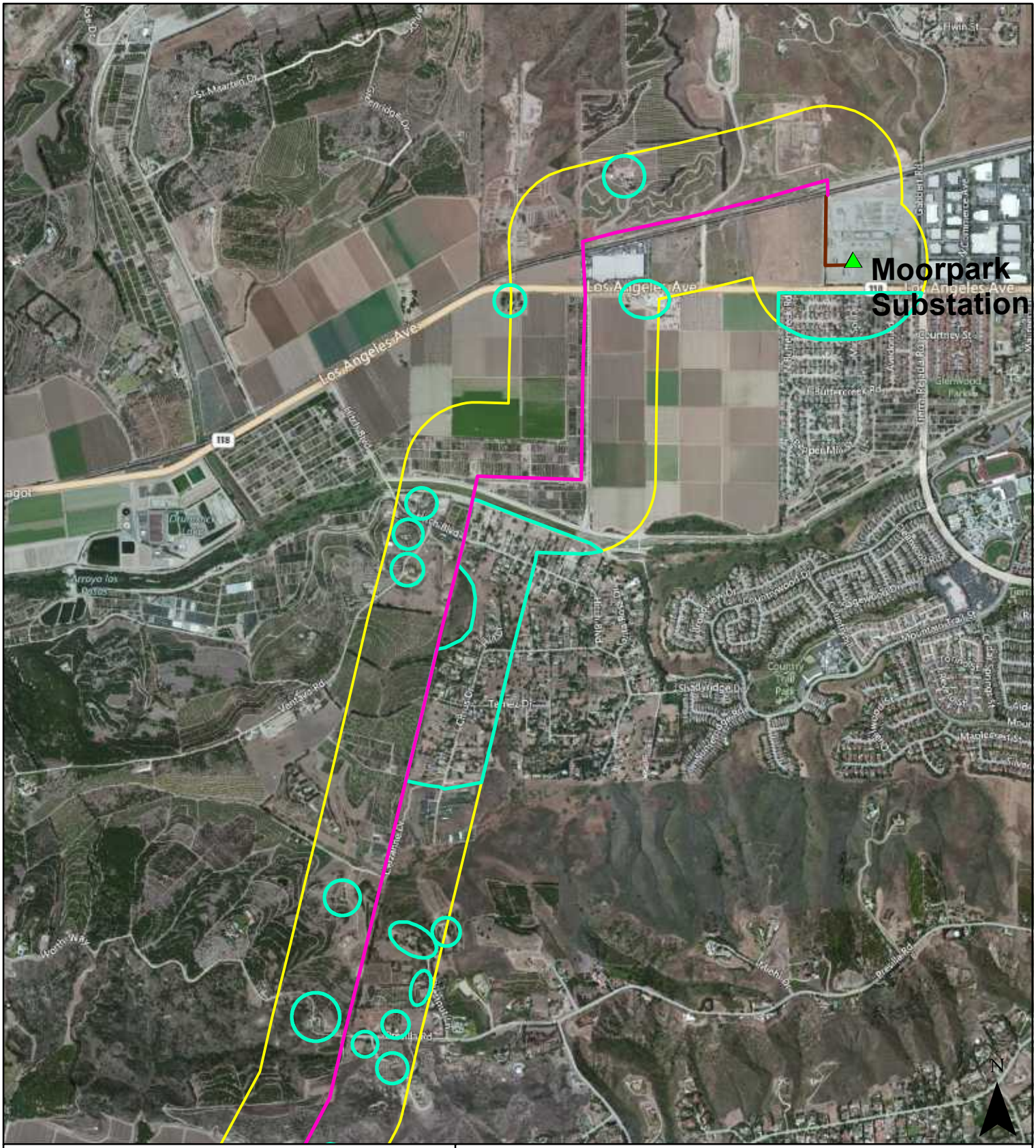
The VCAPCD Guidelines sets forth a process for assessing a project's consistency with the Ventura County AQMP; this process includes assessing a project's conformity with the applicable General Plans and comparing the population growth associated with the project with that forecasted in the AQMP. Projects that do not conform to the applicable General Plans and that result in an increase in population above that which is forecasted in the AQMP are inconsistent with the AQMP. As presented in Section 4.10 and Section 4.13, future construction activities would involve the installation of upgraded and new electrical subtransmission infrastructure which would not induce, directly or indirectly, population growth in the area in a manner inconsistent with any applicable General Plan.

The emissions associated with future construction activities would be temporary and would represent a very small fraction of the regional emission inventories included in the 2007 Ventura County AQMP. Thus, construction emissions would not substantially contribute to the regional emissions.

Because future construction activities would not induce, directly or indirectly, population growth in the area in a manner inconsistent with any applicable General Plan, and would not substantially contribute to the regional emissions, the Project would not conflict with the applicable air quality plan. Future construction activities therefore would not conflict with the implementation of the applicable AQMP, and there would be no impact.

Operation Impacts

Operation of the Project would not differ in scope or scale from activities currently conducted in SCE's ROWs in which the Project would be operated. Additionally, operation of the Project would not induce, directly or indirectly, population growth in the area in a manner inconsistent with any applicable General Plan. Therefore, operation of the Project would not conflict with the applicable AQMP or its implementation, and there would be no impact under this criterion.



0 0.1 0.2 0.4 Miles

Substation

Project Sections

- Project Section 1
- Project Section 2
- Project Alignment (1000' each side of centerline)
- Potentially Sensitive Receptor Locations within 1000' of Project centerline

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

POTENTIALLY SENSITIVE RECEPTOR LOCATIONS (NORTH)

SOUTHERN CALIFORNIA EDISON®
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Figure
4.3-1a

ARCADIS: SCEMN_092, 09/27/13, R02

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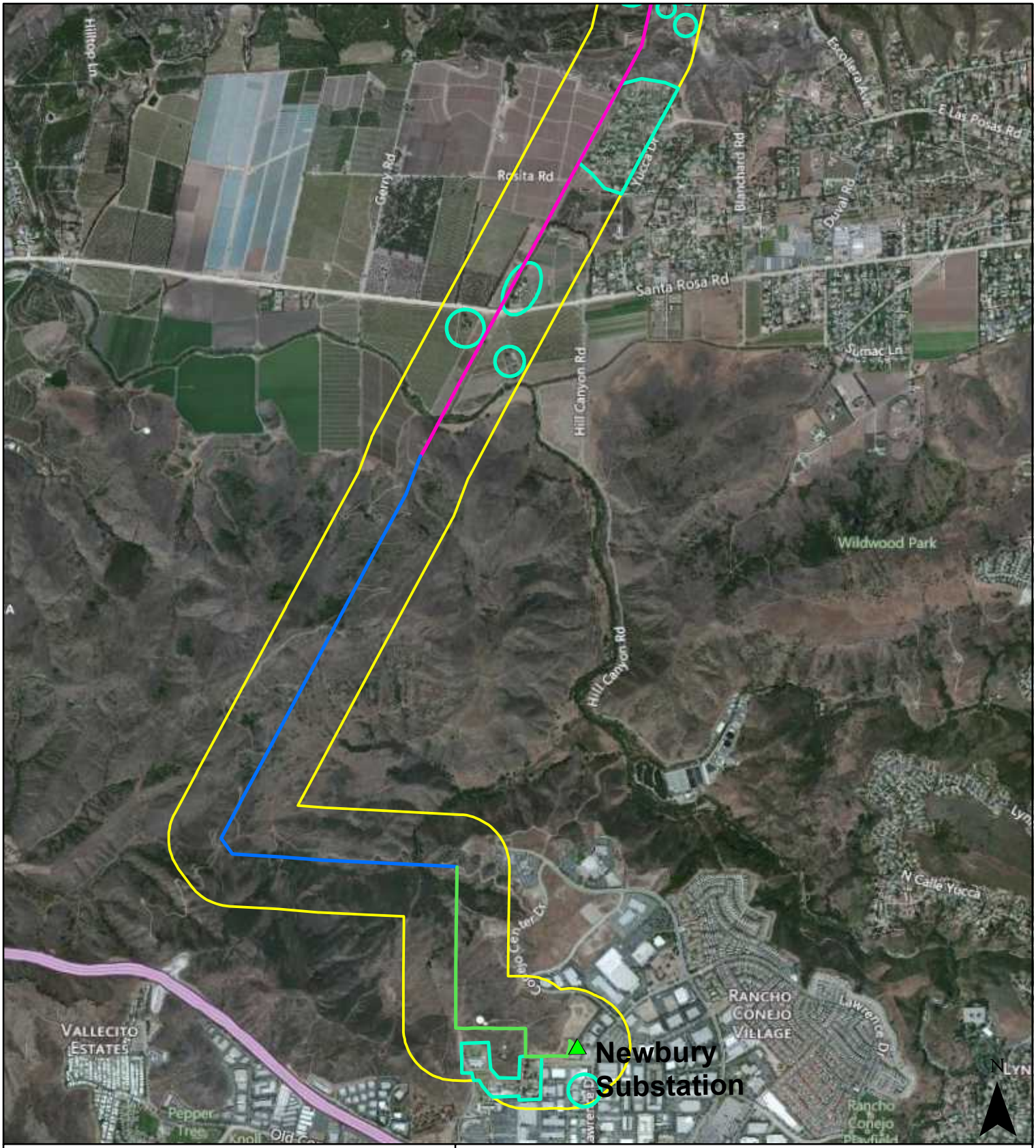

0 0.125 0.25 0.5 Miles

▲ Substation

Project Sections

- Project Section 2
- Project Section 3: Poles 28 - 40
- Project Section 4: Poles 41 - 73 and Newbury Substation
- Project Alignment (1000' each side of centerline)
- Potentially Sensitive Receptor Locations within 1000' of Project centerline

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

POTENTIALLY SENSITIVE RECEPTOR LOCATIONS (SOUTH)

SOUTHERN CALIFORNIA EDISON®
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Figure
4.3-1b

ARCADIS: SCEMN_093, 09/27/13, R02

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Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Assessment Summary: No Impact

Construction Impacts

The VCAPCD Guidelines state, in part:

> "Construction related emissions…of [ROG] and NO_x are not counted towards the two significance thresholds, since these emissions are temporary. However, construction related emissions should be mitigated if estimates of [ROG] and NO_x emissions from the heavy-duty construction equipment anticipated to be used for a particular project exceed the 5 pounds per day threshold in the Ojai Planning Area, or the 25 pounds per day threshold in the remainder of the county."[44]

As shown in Table 4.3-3, future construction activities could potentially exceed these levels for ROG and NO_x. SCE practices, including minimizing equipment idling time and maintaining equipment engines in good condition and in proper tune as per manufacturers' specifications, would reduce emissions of ROG and NO_x; these measures are also listed in the Guidelines.

The VCAPCD Guidelines further state, in part:

"The Ventura County Air Pollution Control District (APCD or District) recommends minimizing fugitive dust, especially during grading and excavation operations, rather than quantifying fugitive dust emissions. Therefore, the mitigation measures described in Section 7.4.1, 'Fugitive Dust Mitigation Measures,' should be applied to all project related dust-generating operations and activities."

SCE's practices, which would be implemented during future construction activities, overlap many of the recommended measures described in VCAPCD Guidelines Section 7.4.1.1, Model Fugitive Dust Mitigation Plan, as presented in Section 4.3.5 above.

Because the VCAPCD has not adopted air quality standards related to construction activities, and because SCE's practices that would be implemented during future construction activities overlap many of the measures suggested by the VCAPCD, the future construction activities would not violate any air quality standard or contribute substantially to an existing or projected air quality violation, and there would be no impact under this criterion.

[44] The Project is not located within the Ojai Planning Area.

Table 4.3-3: Summary of Estimated Project Construction Emissions, Future Activities

Year	Source	Estimated Project Emissions (lbs/day)			
		ROG	NO_x	PM_{10}	$PM_{2.5}$
2014-2015	Subtransmission Line and Substation	**62.57**	**504.24**	27.22	21.00

Notes:
Bolded figures indicate those instances where the VCAPCD recommends measures designed to reduce constituent emissions, as feasible.

Operation Impacts

Operation activities of the Project would consist of routine maintenance and emergency repair activities. These activities would be very similar in scope or scale to the operations related activities currently conducted along SCE's existing ROWs in which the Project would be constructed. These activities would be conducted periodically, infrequently, and consistent with CPUC GO 165. These activities would be minimal and would not violate an air quality standard; therefore, there would be no impact to an air quality standard from operation of the Project.

Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The Ventura County Air Quality Assessment Guidelines do not include construction emissions in their significance threshold limits (VCAPCD 2003). Ventura County is in nonattainment for ozone and particulate matter. Future construction activities would result in the emission of both ozone and particulate matter as a result of fuel combustion from the operation of construction equipment. As presented above, SCE would employ a number of practices that are consistent with VCAPCD's mitigation measures, including minimizing equipment idling time and maintaining equipment engines in good condition and in proper tune as per manufacturers' specifications, which would reduce emissions of these nonattainment pollutants, as well as ozone precursors ROG and NO_x.

Because the Guidelines do not include construction emissions in the determination of significance, and because SCE would employ practices to reduce emissions of criteria pollutants, emissions associated with future construction activities would not result in a cumulatively considerable net increase in the nonattainment criteria pollutants and impacts would be less than significant under this criterion.

Operation Impacts

Operation activities of the Project would consist of routine maintenance and emergency repair. These activities would be very similar in scope or scale to the operations related activities currently conducted along SCE's existing ROWs in which the Project would be constructed. Emissions associated with these maintenance activities would be from worker vehicle trip exhaust, and would be nominal. These operational activities would be conducted periodically but infrequently.

The Ventura County Air Quality Assessment Guidelines state that the operation of a project would have a cumulatively considerable impact if the project: a) emits greater than 2 pounds per day of ROG or greater than 2 pounds per day of NO_x during operation; and b) is inconsistent with the AQMP. Operational emissions from infrequent maintenance and emergency activities would be nominal, and would not exceed 2 pounds per day of ROG or NO_x. In addition, as presented in Section 4.13, operation of the Project would not result in any increase in population, and therefore would be consistent with the AQMP. Therefore, no impacts would occur under this criterion.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The VCAPCD identifies residences, schools, playgrounds, day care centers, job sites, retirement homes, convalescent homes, and hospitals as sensitive receptors. Residences are located as close as 50 to 75 feet from some Project components, and the nearest school is located approximately 850 feet from the subtransmission line.

Pollutant emissions would be distributed over the construction period, and would not be concentrated in any one area. In addition, pollutant emissions during construction would be reduced through implementation of SCE practices, including minimizing equipment idling time, maintaining equipment engines in good condition and in proper tune as per manufacturers' specifications, and employing practices to reduce fugitive dust emissions. Therefore, the Project would not expose sensitive receptors (as defined above) to substantial pollutant concentrations. Less than significant impacts would occur under this criterion as a result of future construction activities.

Operation Impacts

Operation activities of the Project would consist of routine maintenance and emergency repair. These activities would be very similar in scope or scale to the operations related activities currently conducted along SCE's existing ROWs in which the Project would be constructed. These activities would be conducted periodically but infrequently. The emissions associated with future Project operation would represent a very small fraction of the regional emission inventories and would not be expected to expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

Would the project create objectionable odors affecting a substantial number of people?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Potential odor sources associated with construction of the Project would include equipment exhaust. These emissions would be temporary, short-term and intermittent in nature, and would cease upon completion of construction. Because odors would be temporary and would disperse rapidly with distance from the source, and because the majority of future construction activities would occur in open space and agricultural areas, construction-generated odors would not result in the frequent exposure of a substantial number of people to objectionable odorous emissions. Therefore, impacts would be less than significant.

Operation Impacts

The Project does not propose a land use typically associated with the emission of objectionable odors (i.e., wastewater treatment plants, chemical plants, composting operations, refineries, landfills and dairies). Potential odors associated with operation of the Project would be limited to vehicle/helicopter exhaust during periodic but infrequent operations and maintenance activities. Operation of the Project would not create objectionable odors that would affect a substantial number of people. Therefore, impacts would be less than significant.

4.3.6 References

California Air Resources Board (CARB). 2010. Ambient Air Quality Standards September 2010. [Web Page]. Located at http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

CARB. 2012a. Area Designation Maps/State and National. [Web Page]. Located at http://www.arb.ca.gov/desig/adm/adm.htm.

CARB. 2012b. Air Quality and Meteorological Information System. [Web Page]. Located at http://www.arb.ca.gov/aqmis2/aqmis2.php.

Ventura County Air Pollution Control District (VCAPCD). 2003. Ventura County Air Quality Assessment Guidelines. Located at http://www.vcapcd.org/pubs/Planning/VCAQGuidelines.pdf.

VCAPCD. 2007. Final Ventura County 2007 Air Quality Management Plan. Located at http://www.vcapcd.org/Final2007AQMP.htm.

4.4 Biological Resources

This section describes the biological resources in the area of the Moorpark-Newbury 66 kV Subtransmission Line Project. Potential impacts to biological resources associated with the Project are also discussed. For purposes of this section, Project Area is defined as those locations where the work described in Chapter 3: Project Description has been or would be conducted.

Throughout Section 4.4, a number of terms are used when discussing special status biological resources. A summary of the regulatory definitions for these resources is provided here; Section 4.4.3, presents additional information specific to the regulatory definitions.

A Federally Endangered species is one that has been determined by a Federal resource agency as facing extinction throughout all or a significant portion of its geographic range. A Federally Threatened species is one likely to become Endangered within the foreseeable future throughout all or a significant portion of its range. Proposed species or Candidate species are those officially proposed to be added to the Federal Threatened and Endangered species list by the USFWS.

The State of California considers an Endangered species to be one whose prospects of survival and reproduction are in immediate jeopardy; a Threatened species as one present in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management; and a Rare species as one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. California Species of Special Concern (CSSC) is an informal designation used by the California Department of Fish and Wildlife (CDFW; formerly California Department of Fish and Game) for some declining wildlife species that are not State Candidates for listing. Recently, the CDFW downlisted several species from Species of Special Concern to the Watch List. Although not considered special status, Watch List species are tracked by the California Natural Diversity Database (CNDDB).

Species that are California Fully Protected include those identified by a State of California resource agency that are protected by special legislation and may not be taken or possessed at any time. A species that is considered a Special Animal is one that is monitored by the CNDDB. Species of Local Concern are those that have no official status with the resource agencies, but are being watched because either there is a unique population in the region or the species is declining in the region.

The California Rare Plant Ranks (CRPR, formerly known as the CNPS List) lists California's special status plant on four lists: Rank 1A (Plants Presumed Extinct in California); Rank 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere); Rank 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere); Rank 3 (Plants About Which We Need More Information—A Review List); and Rank 4 (Plants of Limited Distribution—A Watch List). The CRPR also assigns a threat code extension: 0.1 ("seriously threatened" in California); 0.2 ("fairly threatened" in California); and 0.3 ("not very

threatened" in California). The absence of a threat code extension indicates plants lacking any threat information.

4.4.1 Methodology for Developing the Environmental Setting

A multi-step process was performed to develop the environmental setting presented in Section 4.4.2, including:

- Literature review to identify special status plants, wildlife and habitats known to occur in the Project Area.
- General habitat assessment surveys for sensitive species conducted along the Project alignment from 2007 through 2011, and vegetation mapping as acquired from the Ventura County Geographic Information System (GIS) Department (2012) for areas within 500 feet of both sides of the centerline of the subtransmission line alignment.
- Focused surveys for special status plants: Areas surveyed for the presence of special status plant species consist of areas within 50 feet of each tower location that was within or adjacent to native habitat areas as well as associated spur roads. The main access roads were surveyed as biologists travelled between towers.
- Focused surveys for special status wildlife: The study area for special status wildlife species consisted of potentially suitable habitat within 500 feet of both sides of the centerline of the subtransmission line alignment. Use of binoculars and listening for vocalizations resulted in the effective survey area being greater than 500 feet in many cases.

As used in this section, 'study area' is defined as the area within 50 feet of each tower location for special status plants and 500 feet on either side of the centerline of the subtransmission line infrastructure, where centerline is defined as a straight line drawn between one structure and an adjoining structure in the Project alignment for special status wildlife.

4.4.1.1 Literature and Database Review

Prior to conducting field surveys, a literature search was conducted to identify special status plants, wildlife, and habitats known to occur in the vicinity of the Project. Sources that were reviewed include the CNPS' Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2010 and 2012) and the CDFW's CNDDB (CDFG 2010 and 2012). Database searches included the U.S. Geological Survey's (USGS) Newbury Park, Thousand Oaks, Moorpark, and Simi 7.5-minute quadrangles. In addition, a review of Federal Endangered Species Act Critical Habitat documents identified a segment of the study area in the southern portion of the project alignment occurring within Critical Habitat (Montclef Ridge Unit 2a) for Lyon's pentachaeta (*Pentachaeta lyonii*) (USFWS 2006).

4.4.1.2 General Habitat Assessment and Special Status Species Survey, 2007

A general habitat assessment was conducted on May 9, 2007, to determine the potential for three Federally-listed species to occur along the Project alignment. These species were Federally- and State-listed Endangered Lyon's pentachaeta, Federally-listed Threatened Conejo dudleya (*Dudleya parva*), and Federally-listed Threatened coastal California gnatcatcher (*Polioptila californica californica*). Potentially suitable habitat for these species was identified during the habitat assessment, primarily within natural open space located along the southern portion of the Project alignment beginning at pole location 26 (Figures 4.4-1a and b). The survey report is provided in Appendix F.

4.4.1.3 Focused Special Status Botanical Surveys, 2008 and 2010

Two focused botanical surveys were conducted for two special status plant species identified to potentially occur in the southern section of the Project alignment: Lyon's pentachaeta and Conejo dudleya.

Focused surveys were performed for both species on May 20 and 21, 2008, and repeated on May 3 and 5, and June 21, 2010. Prior to the surveys, known reference populations of these species were visited to ensure survey times were appropriate. The plant survey area included a 30- to 50-foot buffer around each tower location, and the route between the main dirt access road and each tower. Meandering transects were used to search the survey area; slopes that were too steep to access on foot were carefully examined using binoculars. All plant species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Hickman (1993) and Munz (1974). Taxonomy follows Hickman (1993) and current scientific data (e.g., scientific journals) for scientific and common names. Botanical survey reports for the 2008 and 2010 survey efforts are provided in Appendix F.

4.4.1.4 Focused Special Status Wildlife Surveys, 2008, 2010, 2011

4.4.1.4.1 Coastal California Gnatcatcher

Focused surveys for the coastal California gnatcatcher were conducted in 2008, 2010 and 2011. Surveys were conducted according to guidelines established by USFWS. Surveys were conducted on April 3, 4, May 1, 20, 21, June 4, 11, and 18, 2008. Additional pre-construction surveys were conducted on April 26, 28, May 3, 5, 10, 12, 18, 19, 26, 28, June 11 and 14, 2010; and April 4, 5, 11, 12, 18, 19, 25, and 28, May 2, 5, 11, and 13, 2011. Surveys were conducted within coastal sage scrub habitat along the Project alignment at towers 2 and 3 (Segment 1) and pole locations 46 -63 (Segments 2 and 3). Reports for these surveys are provided in Appendix F.

4.4.1.4.2 Least Bell's Vireo

Focused surveys for least Bell's vireo (*Vireo bellii pusillus*) were conducted within an area of potentially suitable habitat on May 12 and 22; June 2, 12, and 22; and July 2, 12, and 22, 2010. The survey area consisted of riparian habitat within Arroyo Santa Rosa, a blueline/perennial stream that bisects Project alignment between pole locations 25 and 26. The survey area was located approximately one-half mile south of Santa Rosa Road. All surveys followed the updated guidelines for least Bell's vireo surveys issued by the USFWS on January 19, 2001. The survey report is provided in Appendix F.

4.4.2 Environmental Setting

The Project alignment follows existing SCE ROW generally located in the southeastern portion of unincorporated Ventura County, the City of Moorpark, and the City of Thousand Oaks. The Project alignment, as described in Chapter 3: Project Description, is found generally at elevations between 250 and 900 feet above mean sea level (amsl) and is located on the Thousand Oaks and Simi Valley West U.S. Geological Survey (USGS) 7.5-minute quadrangle maps. For reference, pole locations are numbered from 1 through 73 beginning at Moorpark Substation.

Soil types in the Project Area are dominated by Gilroy very rocky clay loam, Hambright very rocky loam, and igneous rock land, but also include badland, Castaic-Balcom complex, Cropley clay, Diablo clay, Gilroy clay loam, and San Benito clay loam (USDA NRCS 2008) (see Section 4.6 for detailed information regarding soils in the Project Area).

The temperature in the region is moderated by the coastal influence of the Pacific Ocean, which creates mild conditions throughout most of the year. The stable atmosphere creates cloudless conditions, producing dry summers and a subtropical climate with many days of sunshine (Ritter 2006). The most distinguishing characteristic of a Mediterranean climate is its seasonal precipitation. In southern California, precipitation is characterized by brief, intense storms between November and March. It is not unusual for a majority of the annual precipitation to fall during a few storms over a close span of time. Rainfall patterns are subject to extreme variations from year to year and longer-term wet and dry cycles. The average annual rainfall for the area is approximately 14.7 inches (VCWPD 2012). The climatic conditions of the Project Area have a significant influence on the existing vegetation types.

Project Section 1 is located entirely within Moorpark Substation, and therefore there is no habitat or vegetation in this Project Section. Project Section 2, from pole locations 2 to 6, passes through disturbed and developed areas as the Project alignment runs along Los Angeles Avenue (SR-118) (Figures 4.4-1a and 4.4-1b). Once the Project alignment crosses Los Angeles Avenue, it passes through areas that are dominated by agricultural activity (pole locations 6 through 25). Native habitat areas, consisting of sage scrub and chaparral, dominate areas in Project Sections 3 and 4 (pole locations 26 through 67). The Project passes through the Conejo Canyons area managed by the Conejo Open Space Conservation Agency (COSCA) beginning at pole location 28 and continuing through pole location 67. Pole location locations 68-73 are located on SCE-owned property at Newbury Substation.

Two Federally-listed plant species and one Federally-listed wildlife species have been observed generally along the southern portion of the Project alignment between pole locations 27 and 63:

- Lyon's pentachaeta—Federally and State-listed Endangered
- Conejo dudleya—Federally-listed Threatened
- Coastal California gnatcatcher—Federally-listed Threatened

Additional special status species that have been observed along the Project alignment include Catalina mariposa lily (*Calochortus catalinae*, a CRPR List 4 species), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*, a CDFW Watch List species), and coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*, a CSSC).

Critical habitat for Lyon's pentachaeta (as designated by the USFWS) is located in the southern portion of the Project alignment. The Lyon's pentachaeta population noted above is located within the designated critical habitat area (Figure 4.4-2).

The cities of Thousand Oaks, Moorpark, Simi Valley and Camarillo are located generally to the south, north, east and west, respectively, of the existing SCE ROWs in which the Project is located. The ROWs and surrounding areas serve as a corridor for wildlife species to move between the Santa Monica Mountains National Recreation Area (SMMNRA) to the south and east and the Los Padres National Forest (LPNF) to the north. A detailed discussion of regional wildlife movement is provided in Section 4.4.2.3.

As discussed in Section 4.15, the Project alignment traverses the Conejo Canyons Open Space area. This area is managed by COSCA, which is a joint powers agency between the City of Thousand Oaks and the Conejo Recreation and Park District. Management strategies for the area are described in COSCA's Conejo Canyons Open Space Management Plan. SCE has an easement that crosses through this area; this easement is identified in COSCA's Conejo Canyons Open Space Management Plan. Pursuant to the easement, SCE performs construction and maintenance activities along the existing utility corridor.

No Habitat Conservation Plans or Natural Community Conservation Plans apply to areas along the Project alignment.

The Project alignment passes through three jurisdictions: the City of Moorpark, the City of Thousand Oaks, and portions of unincorporated areas of the County of Ventura. Each of these jurisdictions regulates the removal of various tree species, requiring a permit for activities such as removal or trimming.

4.4.2.1 Description of Vegetation Communities

This section describes the botanical and plant community resources that occur or potentially occur along the Project alignment. Special status species are discussed in greater detail in the "Special Status Biological Resources" section.

4.4.2.1.1 Plant Community Types

Generally speaking, the vegetation types in the Project Area include sage scrub, chaparral, native grassland, riparian/streambed, agriculture and developed. Sage scrub vegetation is located in the vicinity of pole locations 18 and 19 in the Las Posas Hills, while sage scrub and chaparral co-dominate and intermix within the natural open space located south of pole location 26, generally in the Conejo Canyons area.

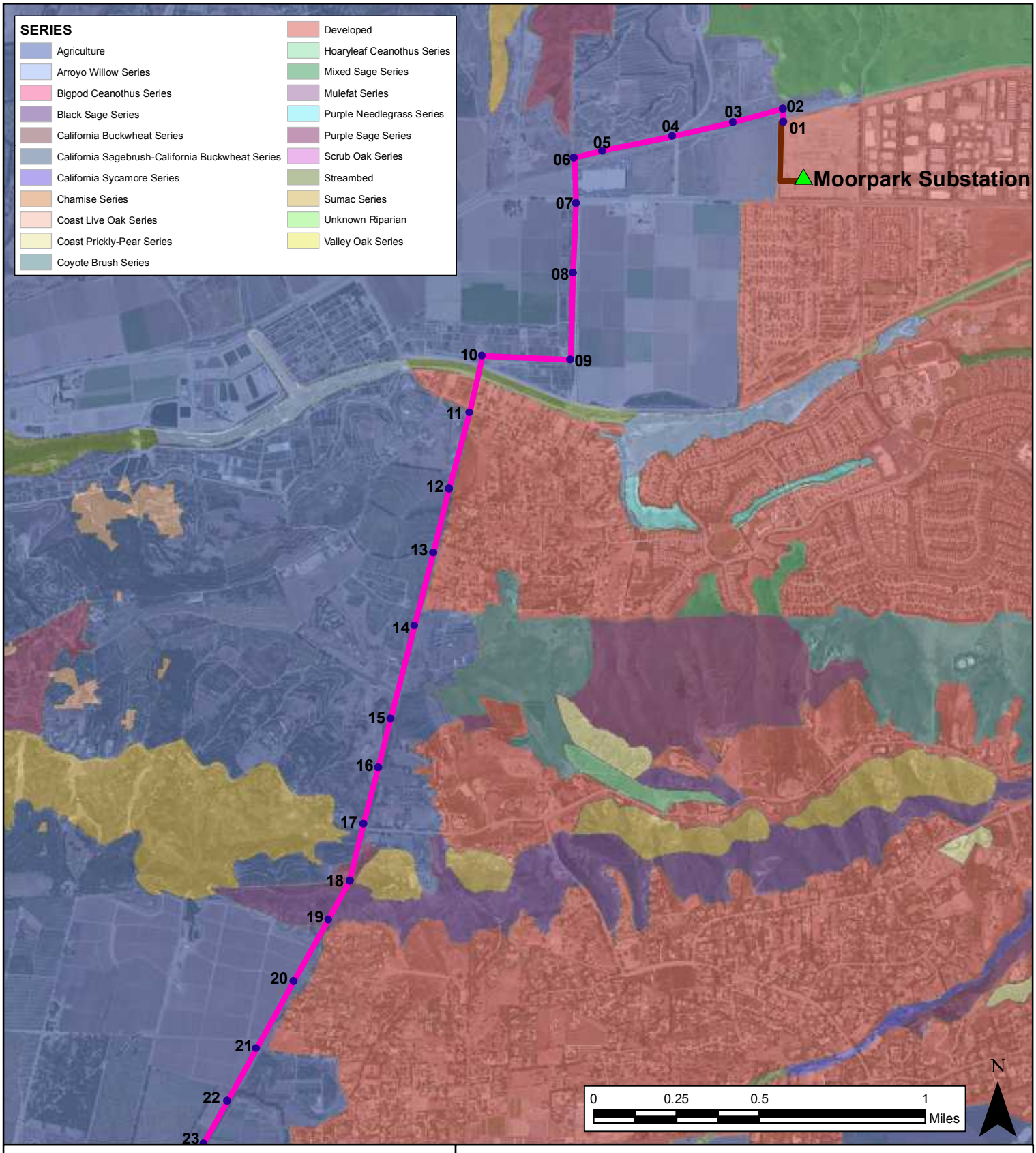
Streambed/riparian areas are found in discrete areas in Project Sections 2 and 3 where streambeds cross the Project alignment. Agricultural areas are located primarily in the northern half of the Project alignment in Project Section 2, while developed areas are generally located at either end of the alignment. Rural residential areas found along the alignment are also categorized as developed (Figures 4.4-1a and 4.4-1b).

The following vegetation types are located along the Project alignment and within 500 feet of each side of the alignment: bigpod ceanothus series, black sage series, California buckwheat series, California sycamore series, coast prickly pear series, hoaryleaf ceanothus series, mixed sage series, purple needlegrass series, purple sage series, sumac series, streambed, agriculture, and developed. Vegetation types within the study area are listed below in Table 4.4-1 along with the total acreage of each vegetation type. Vegetation descriptions described below follow the classifications provided by the County and based upon field observations. Figures 4.4-1a and 4.4-1b present the vegetation types along the Project alignment.

Table 4.4-1: Summary and Extent of Vegetation Types Along Project Alignment

Vegetation Types	Existing (Acres)
Bigpod ceanothus shrubland alliance (chaparral)	39.2
Black sage shrubland alliance (sage scrub)	14.0
California buckwheat shrubland alliance (sage scrub)	10.2
California sycamore woodland alliance (riparian)	13.3
Coast prickly-pear shrubland alliance (sage scrub)	97.1
Hoaryleaf ceanothus shrubland alliance (chaparral)	1.7
Black sage - purple sage shrubland association (sage scrub)	108.7
Purple needlegrass herbaceous alliance (native grassland)	27.5
Purple sage shrubland alliance (sage scrub)	57.7
Sumac shrubland alliance (riparian)	44.5
Streambed (riparian)	4.5
Agriculture	420.7
Developed	106.0
Total	**945.1**

Source: Ventura County GIS Department 2006



Substation

Pole Locations

Project Sections

Project Section 1

Project Section 2

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

VEGETATION TYPES IN THE PROJECT AREA (NORTH)

SOUTHERN CALIFORNIA EDISON®
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ARCADIS
Infrastructure · Water · Environment · Buildings

Figure
4.4-1a

ARCADIS: SCEMN_052, 03/21/13, R03

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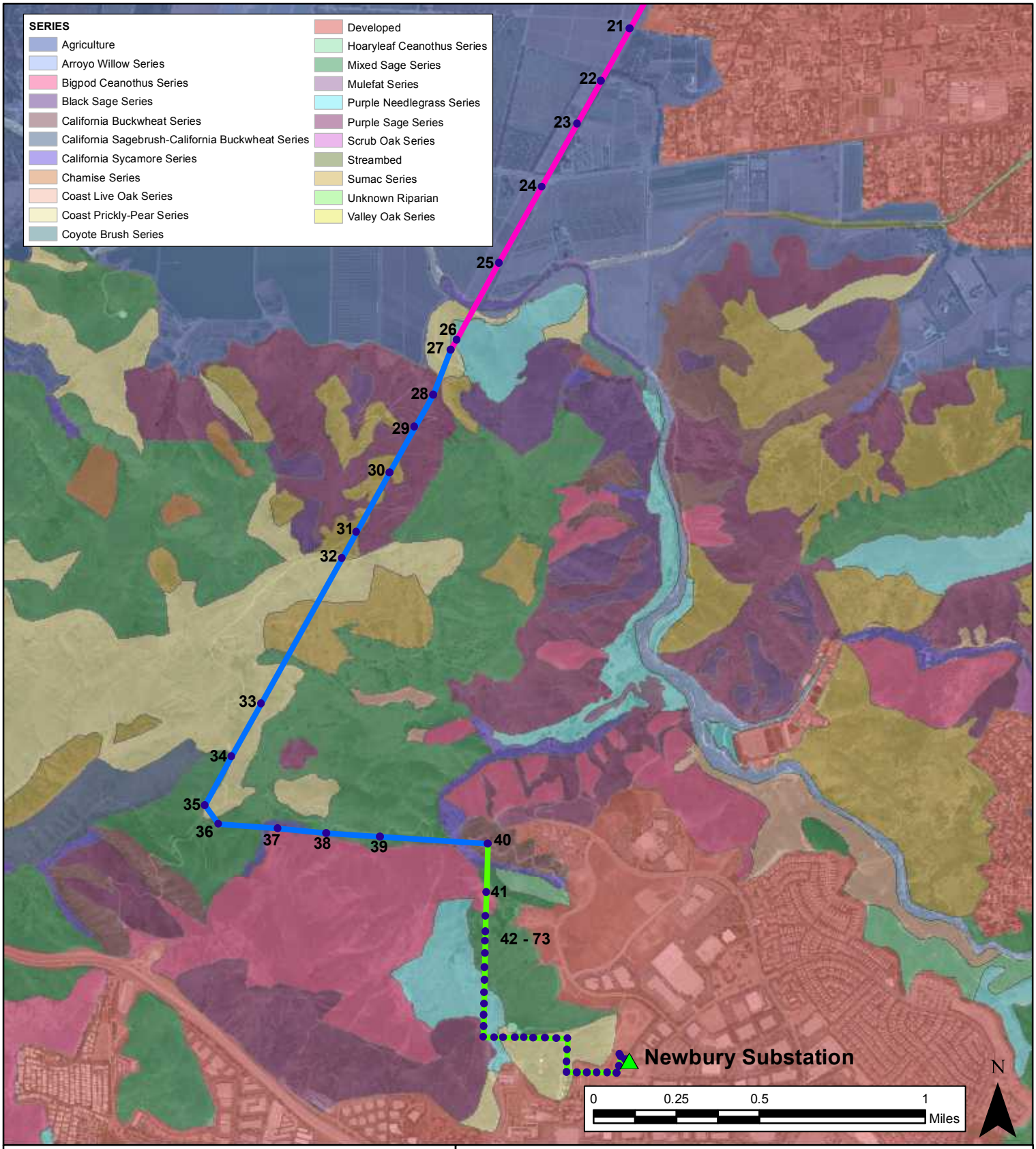

Substation

Pole Locations

Project Sections

Project Section 2

Project Section 3

Project Section 4

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

VEGETATION TYPES IN THE PROJECT AREA (SOUTH)

SOUTHERN CALIFORNIA EDISON®
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ARCADIS
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Figure
4.4-1b

ARCADIS: SCEMN_054, 03/21/13, R04

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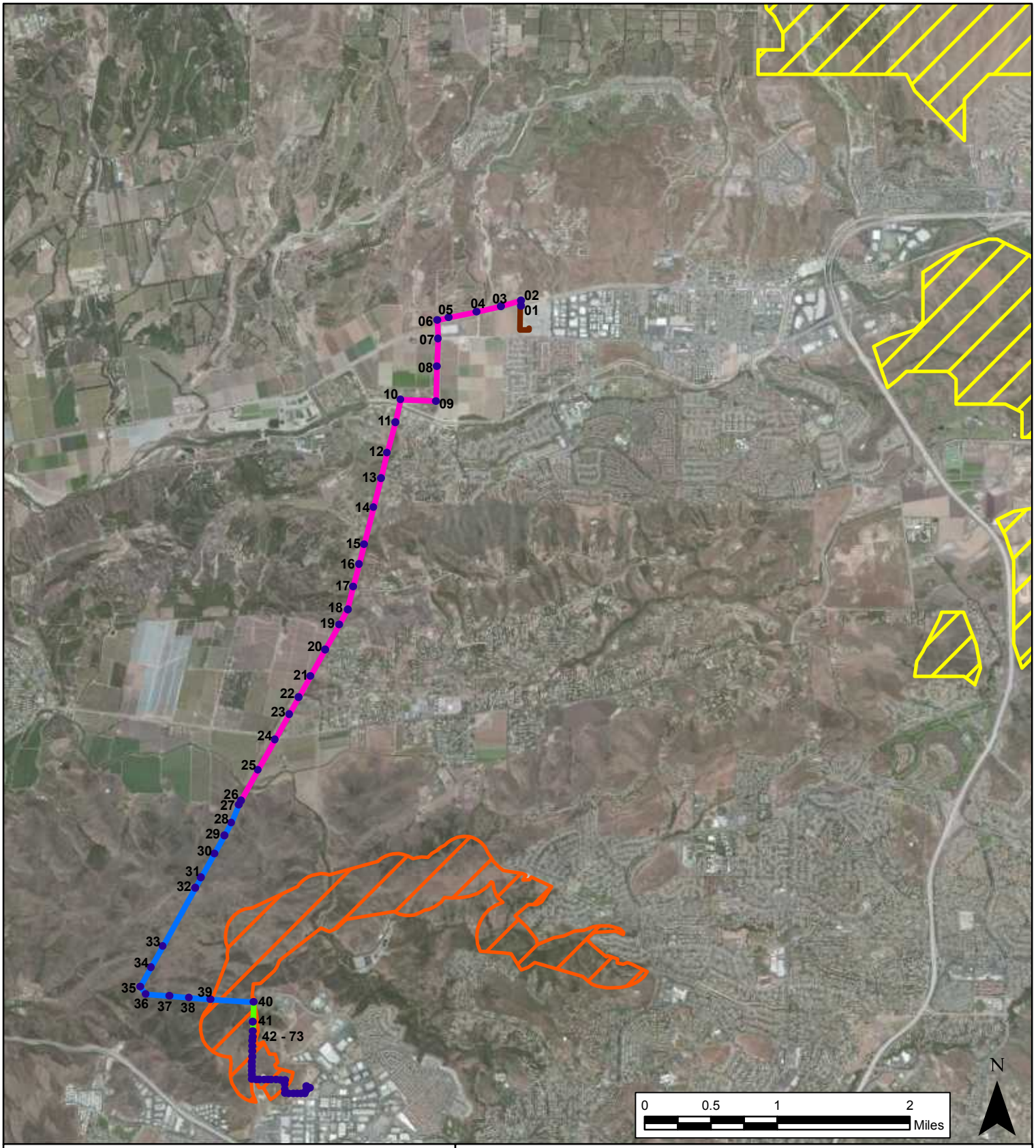

Substation
Pole Locations

Critical Habitat Area
Lyon's pentachaeta
Coastal California Gnatcatcher

Project Sections
Project Section 1
Project Section 2
Project Section 3
Project Section 4

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

CRITICAL HABITAT AREAS

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Figure
4.4-2

ARCADIS: SCEMN_053, 03/19/13, R04

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The following sections describe the plant community characteristics for each general plant community type.

Sage Scrub

Sage scrub vegetation covers approximately 288 acres within the study area; it is found predominantly within Project Sections 2, 3 and 4. Sage scrub along the Project alignment includes the following vegetation series listed in Table 4.4-1: (1) black sage series; (2) California buckwheat series; (3) coast prickly pear series; (4) mixed sage series; and (5) purple sage series. Each of these vegetation series contains the following species that are characteristic of sage scrub: California sagebrush (*Artemisia californica*), rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Other common species include coastal prickly pear (*Opuntia littoralis*), purple sage (*Salvia leucophylla*), bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Diplacus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*). The series listed above indicate that within the sage scrub group, different species are dominant. For example, black sage series is sage scrub dominated by black sage, California buckwheat series is dominated by rosemary flat-topped buckwheat, and mixed sage series is co-dominated by two or more of the species listed above.

Chaparral

Chaparral vegetation covers approximately 85 acres within the study area. Chaparral vegetation is generally located along the southern half of the Project alignment in Project Sections 3 and 4, south of Santa Rosa Road in the open space portion of the Project alignment. Chaparral generally comprises the following vegetation series listed in Table 4.4-1: (1) bigpod ceanothus series; (2) hoaryleaf ceanothus series; and (3) sumac series. Each of these vegetation types contained species characteristic of chaparral vegetation consisting of the following species; chamise (*Adenostoma fasciculatum*), bigpod ceanothus (*Ceanothus megacarpus*), laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). The vegetation series listed above indicate that within the chaparral group, different species dominate. For example bigpod ceanothus dominates within the bigpod ceanothus series, though the other species mentioned above exist as well.

Native Grassland

Native grassland covers approximately 28 acres in the study area; it is found in pockets within the southern portions of Project Sections 2 and 4 in the open space areas south of Santa Rosa Road. County of Ventura vegetation mapping data list these areas as purple needlegrass grassland; focused botanical surveys noted the presence of foothill needlegrass (*Nassella lepida*) and nodding needlegrass (*Nassella cernua*), but not purple needlegrass. As a result, this vegetation type is described herein as native grassland. This vegetation type is dominated by needlegrass (*Nassella* spp.), though sage scrub species listed above are present as well.

Riparian/Streambed

Riparian vegetation accounts for approximately 18 acres within the study area. A total of four streambed features are located along the Project alignment. Two perennial streams are located along the Project alignment: Arroyo Simi (located in Project Section 2, approximately one-half mile south of Los Angeles Avenue [SR-118]) and Arroyo Santa Rosa (located in Project Section 2, approximately one-half mile south of Santa Rosa Road). At the point it crosses the Project alignment, Arroyo Simi is an engineered channel, subject to regular maintenance for flood control purposes and containing minimal woody vegetation. Arroyo Santa Rosa is mapped as California sycamore series by the County of Ventura, though willow trees (*Salix* spp.), mule fat (*Baccharis salicifolia*), and giant reed (*Arundo donax*) co-dominate.

In the extreme northern portion of Project Section 2, a drainage ditch containing mostly upland native species such as coyote bush (*Baccharis pilularis*) is located immediately to the west of pole location 6, just north of Los Angeles Avenue. This ditch eventually flows into Arroyo Simi.

Within the southern portion of the alignment, adjacent to Project Section 3, an unnamed tributary to Conejo Creek runs parallel to the alignment. This drainage feature is mapped as California sycamore series and bigpod ceanothus series at different locations. Limited riparian habitat, including willows, occurs adjacent to a culvert that crosses underneath the existing access road, and provides hydrological connectivity to the unnamed tributary to Conejo Creek.

Agriculture

Agricultural areas dominate much of the northern portion of the Project alignment (Section 2) between Los Angeles Avenue (SR-118) and Santa Rosa Road. Agricultural activities within these areas generally consist of citrus and avocado orchards as well as plant nurseries. Agricultural areas are found on approximately 421 acres within the study area.

Developed

Developed areas cover a total of approximately 106 acres within the study area; these are found in or adjacent to Project Sections 2 and 4. Developed areas consist of Moorpark Substation, Newbury Substation, and rural residential areas. Included in the developed category are previously graded/disturbed areas along the existing rail line adjacent to Moorpark Substation that contain sparse ruderal vegetation such as black mustard (*Brassica nigra*), ripgut grass (*Bromus diandrus*), and slender wild oat (*Avena barbata*).

4.4.2.2 Wildlife

Wildlife species observed or expected to occur along the Project alignment are discussed below. Any special status species mentioned below is discussed in greater detail in the "Special Status Wildlife" section.

4.4.2.2.1 Fish

Most creeks and waterways in southern California are subject to periods of high water flow in winter and spring and little to no flow during late summer and fall. Arroyo Simi and Arroyo Santa Rosa experience perennial flows and the presence of fish in these streams is possible. Unnamed tributaries to Arroyo Simi and Conejo Creek that exist in the extreme northern and southern portions of the Project alignment are dry for most of the year and no fish species are expected to occur in these ephemeral drainages.

4.4.2.2.2 Amphibians

Amphibians require moisture for at least a portion of their lifecycle and many require standing or flowing water for reproduction. Terrestrial species may or may not require standing water for reproduction; they survive in dry areas by aestivating (i.e., remaining beneath the soil in burrows or under logs and leaf litter, and emerging only when temperatures are low and humidity is high). Many of these species' habitats are associated with water and they emerge to breed once the rainy season begins. Soil moisture conditions can remain high throughout the year in some habitat types depending on factors such as amount of vegetation cover, elevation, and slope aspect.

No amphibian species were observed during the general or focused biological surveys, as these surveys focused on upland habitats. However, the presence of amphibian species is likely in Arroyo Simi and Arroyo Santa Rosa due to perennial flows.

4.4.2.2.3 Reptiles

Reptilian diversity and abundance typically varies with vegetation type and character. Many species prefer only one or two vegetation types; however, most species will forage in a variety of habitats. Most reptile species that occur in open areas use rodent burrows for cover, protection from predators, and refuge during extreme weather conditions.

Reptile species observed along the Project alignment include coastal western whiptail (*Aspidoscelis* [*Cnemidophorus*] *tigris stejnegeri*), western rattlesnake (*Crotalus viridis*), gopher snake (*Pituophis catenife*), western fence lizard (*Sceloporus occidentali*), and side-blotched lizard (*Uta stansburiana*).

4.4.2.2.4 Birds

A variety of bird species are expected to be residents along the Project alignment and to use the area throughout the year. Other species are present only seasonally.

Although the same individuals may not be present year-round on the Project site, the following bird species were observed during the surveys and can be considered resident: killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), Allen's hummingbird (*Selasphorus sasin*), Nuttall's woodpecker (*Picoides nuttallii*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), northern mockingbird (*Mimus polyglottos*),

European starling (*Sturnus vulgaris*), orange-crowned warbler (*Oreothlypis celata*), spotted towhee (*Pipilo maculatus*), California towhee (*Melozone crissalis*), song sparrow (*Melospiza melodia*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Spinus psaltria*), and American goldfinch (*Spinus tristis*).

Summer-only residents in the region that nest or were suspected of nesting on the Project site during the surveys include ash-throated flycatcher (*Myiarchus cinerascens*), black-headed grosbeak (*Pheuticus melanocephalus*), blue grosbeak (*Passerina caerulea*), hooded oriole (*Icterus* cucullatus), and Bullock's oriole (*Icterus bullockii*).

Wintering species observed during the surveys include ruby-crowned kinglet (*Regulus calendula*).

The turkey vulture (*Cathartes aura*), a scavenger, was observed in the Project Area. Other raptors observed include northern harrier (*Circus cyaneus*), Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), barn owl (*Tyto alba*), and great horned owl (*Bubo virginianus*).

4.4.2.2.5 Mammals

Small, ground-dwelling mammals observed in the Project Area include California ground squirrel (*Spermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*).

Bats occur throughout most of southern California and may use any portion of the Project Area as foraging habitat. Most of the bats that could potentially occur in the Project Area are inactive during the winter and either hibernate or migrate, depending on the species. Several bat species may occur in the Project Area, including pallid bat (*Antrozous pallidus*), big brown bat (*Eptesicus fuscus*), California myotis (*Myotis californicus*), and western pipistrelle (*Pipistrellus hesperus*).

Medium- to large-sized mammals observed in the Project Area include desert cottontail (*Sylvilagus audubonii*), coyote (*Canis latrans*), common raccoon (*Procyon lotor*), gray fox (*Urocyon cinereoargenteus*), mule deer (*Odocoileus hemionus*), and striped skunk (*Mephitis mephitis*).

4.4.2.3 General Description of Wildlife Movement

Wildlife corridors link together areas of suitable wildlife habitat. The fragmentation of open space areas by urbanization or natural features (e.g., extreme topography, water bodies, etc.) creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining suitable areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because these areas prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallagher 1989; Bennett 1990). Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes

from fire, predators and human disturbances, thus reducing the risk that catastrophic events, such as fire or disease, will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources (Noss 1983; Farhig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories:

1. Dispersal (e.g., juvenile animals from natal areas or individuals extending range distributions)
2. Seasonal migration
3. Movements related to home range activities, including foraging for food or water; defending territories; or searching for mates, breeding areas, or cover.

A number of terms such as "wildlife corridor," "travel route," "habitat linkage," and "wildlife crossing" have been used in various wildlife movement studies to refer to areas where wildlife moves from one area to another. To clarify the meaning of these terms and to facilitate the discussion on wildlife movement in this analysis, these terms are defined as follows:

- **Travel route**: A landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and to provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food, water, and/or cover while animals move among habitat areas, and provides a relatively direct link between target habitat areas.
- **Wildlife corridor**: A piece of habitat, usually linear in nature, which connects two or more habitat patches that are otherwise fragmented or isolated from one another. Wildlife corridors are usually bound by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and to facilitate movement while in the corridor. Larger, landscape-level corridors, often referred to as "habitat linkages" or "landscape linkages," can provide both transitory and resident habitat for a variety of species.
- **Wildlife crossing**: A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are man-made and include culverts, underpasses, drainage pipes, and tunnels. They provide access across or under roads, highways, pipelines, or other physical obstacles, which often represent "choke points" along a movement corridor and may impede wildlife movement and increase the risk of predation.

In a large open space area where there are few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors (as defined above) may not yet exist. Given an open space area that is both large enough to maintain viable populations of species and to provide a variety of travel routes (e.g., canyons, ridgelines, trails, riverbeds, and others), wildlife will use these "local" routes while searching for food, water, shelter, and mates and will not need to cross into other large open space areas. Based on their size, location, vegetative composition and availability of food, some of these movement areas (e.g., large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water, and cover, particularly for small and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles (e.g., roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food, and water and do not contain obstacles or distractions (e.g., man-made noise or lighting) that would generally hinder wildlife movement.

The Project alignment is located within an area that is moderately constrained by urban development. The City of Moorpark is located at the northern end of the alignment and the City of Thousand Oaks is located at the southern end. Agricultural areas dominate the northern two-thirds of the alignment and open space areas dominate the southern one-third. The open space areas, consisting of Conejo Canyons Open Space Park (approximately 1,600 acres) and the contiguous Wildwood Regional Park (approximately 1,700 acres) provide an important regional resource area for wildlife.

Additional open space areas in the region include the SMMNRA and Point Mugu State Park, which are located approximately 3 miles south of the southern end of the Project alignment. The LPNF is located approximately 10 miles north of Moorpark Substation. The Santa Clara River, which provides an important east-west corridor for wildlife movement, is located approximately 5 miles north of Moorpark Substation. Overall, the Project alignment is located in an area that is expected to facilitate north-south movement between these large open space areas. Urbanization located to the west (City of Camarillo) and the east (City of Thousand Oaks and SR-23) is expected to encourage wildlife to utilize these areas. Land use along the Project alignment is not expected to seriously impede wildlife movement as it largely consists of open space, agriculture in the form of orchards, and rural residential areas. Impediments to wildlife movement include the following east-west roadways: (1) U.S. Highway 101 that runs between the Project alignment and SMMNRA; (2) Santa Rosa Road, which bisects the Project alignment; and (3) Los Angeles Avenue (SR-118) which crosses the Project alignment near its northern terminus.

4.4.2.4 Special Status Biological Resources

The following section addresses special status biological resources observed, reported, or that have the potential to occur in or near the Project Area. These resources include plant and wildlife species that have been afforded special status and/or are recognized by Federal and State resource agencies, as well as private conservation organizations. In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution, which results, in most cases, from habitat loss. Tables 4.4-2 and 4.4-3 provide a summary of special status plant and wildlife species known to occur in the Project Area, including information on the status, likelihood for occurrence, and definitions for the various status designations. In addition, special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by Federal, State, and local government conservation programs.

As discussed previously in Section 4.4.1.1, the sources used to determine the special status of biological resources include:

- **Plants –** Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2012); the CNDDB (CDFG 2012a); various USFWS Federal Register notices regarding listing status of plant species; and the CDFW's Special Vascular Plants, Bryophytes, and Lichens List (CDFG 2012b).
- **Wildlife –** California Wildlife Habitat Relationships Database System (CDFW BDB 2012); the CNDDB (CDFG 2012a); various USFWS Federal Register notices regarding listing status of wildlife species; and the CDFW's Special Animals List (CDFG 2012c).
- **Habitats –** CNDDB (CDFG 2012a).

4.4.2.4.1 Special Status Vegetation Types

In addition to providing an inventory of special status plant and wildlife species, the CNDDB also provides an inventory of vegetation types (plant communities) that are considered special status by State and Federal resource agencies, academic institutions, and various conservation groups. Determination of the sensitivity level is based on the Nature Conservancy Heritage Program Status Ranks, which ranks vegetation types on a global and statewide basis according to the number and size of remaining occurrences and recognized threats. Special status vegetation types that occur in the Project Area are discussed below.

Sage Scrub

Sage scrub, which includes several forms/alliances in the CNDDB, has undergone a historical loss from land use changes in southern California basins and foothills. Loss in sage scrub habitat has led to the listing of several plant and wildlife species as Threatened and Endangered. The determination of whether the on-site habitats are considered special status is based on the CNDDB Global/State rankings and/or the potential of the habitat to provide high wildlife value (significantly disturbed types were generally not considered sensitive).

It is inferred from vegetation data provided by the County of Ventura that the following vegetation series would be considered part of the sage scrub vegetation type: (1) black sage series; (2) California buckwheat series; (3) coast prickly pear series; (4) mixed sage series; and (5) purple sage series. Collectively, these areas are found on approximately 288 acres of the study area (within 500 feet of the Project alignment).

Native Grasslands

Similar to sage scrub, native grasslands have experienced a historical loss from land use changes in southern California basins and foothills. Native grasslands are dominated by species in the genus *Nassella*, and along the Project alignment these areas intermix with sage scrub habitats. Topography, soil type and depth, and aspect are all factors that will favor dominance of needlegrass species over shrub species, though typical sage scrub species will occur within native grasslands. The County of Ventura vegetation mapping data list these areas as purple needlegrass grassland, though focused botanical surveys noted the presence of foothill needlegrass (*Nassella lepida*) and nodding needlegrass (*Nassella cernua*), but not purple needlegrass. As a result, this vegetation type is described herein as native grassland. Native grasslands cover approximately 28 acres of the study area.

Riparian/Streambed

Several riparian vegetation types are ranked as special status by the CNDDB. Most natural riparian vegetation in southern California has been lost to or degraded by land use conversions to agricultural, urban, and recreational uses; channelization for flood control; sand and gravel mining; groundwater pumping; water impoundments; and various other changes. Riparian vegetation is critical to the quality of in-stream habitat and aids significantly in maintaining aquatic life by providing shade, food, and nutrients that form the basis of the food chain. Riparian habitats are biologically productive as well as diverse, and are the exclusive habitat of several special status species. Riparian vegetation types mapped by the County of Ventura in the Project Area that are identified as special status by the CNDDB Global/State rankings include California sycamore series (comparable to southern sycamore alder riparian woodland on the CNDDB). However, the presence of willow trees in Arroyo Santa Rosa and the presence of coast live oak (*Quercus agrifolia*) in unnamed tributaries near the southern terminus of the Project alignment may make southern willow scrub and/or southern coast live oak riparian forest more appropriate descriptions than California sycamore series. California sycamore series accounts for approximately 13 acres of the study area. Streambed (a portion of Arroyo Simi that is managed for flood control purposes and does not appear to contain woody vegetation) accounts for approximately 4 acres of the study area.

4.4.2.4.2 Special Status Plant Species

Special status plant species that are known to occur in the vicinity of the Project alignment are listed in Table 4.4-2. This table also summarizes the status, likelihood for occurrence, and definitions for the various status designations. Several special status plant species are known to potentially occur in the Project Area, primarily in Project Section 3.

Conejo dudleya

Conejo dudleya (Federally Threatened, CRPR 1B.2) typically blooms between May and June (CNPS 2010). This perennial herb occurs at elevations around 1,000 feet amsl on bare rocky slopes in chaparral and coastal sage scrub (Munz 1974). It is only known to occur in Ventura County (CNPS 2010). Conejo dudleya was not detected during the 2008 survey, but a total of 25 flowering individuals were observed during the 2010 survey within and immediately adjacent to the study area. The population is located on rock outcrops adjacent to pole location 44 within sage scrub and non-native grassland vegetation on a moderate northwest-facing slope. Associated species include common goldenstar (*Bloomeria crocea*), rosemary flat-topped buckwheat, wand buckwheat (*Eriogonum elongatum*), foxtail chess (*Bromus madritensis* ssp. *rubens*), and slender wild oat (*Avena barbata*).

Lyon's pentachaeta

Lyon's pentachaeta (Federally Endangered, State Endangered, CRPR 1B.1) typically blooms between March and August (CNPS 2010). This low slender annual herb occurs at elevations between approximately 100 and 2,100 feet amsl; it prefers coastal habitats, including chaparral, coastal scrub, and rocky clay grasslands, and is known to occur in Ventura County (CNPS 2010). This species was not observed during the 2008 focused plant survey but approximately 4,000 individuals were observed during the 2010 survey along an unpaved access road in the vicinity of pole locations 50 through 54. Additionally, one flowering individual was observed within 50 feet of pole location 51. The principal population of the species on the established access road is located in open, disturbed areas with sage scrub and non-native grassland vegetation. Associated species include fascicled tarweed (*Hemizonia fasciculata*), California goldfields (*Lasthenia californica*), California sagebrush, rosemary flat-topped buckwheat, foxtail chess, slender wild oat, and tocalote (*Centaurea melitensis*).

Critical habitat for Lyon's pentachaeta (Unit 2: Montclef Ridge Unit, Subunit 2A as designated by the USFWS) is located in the southern portion of the Project alignment (Figure 4.4-2). Pole locations 40 through 61 are located within critical habitat, while pole locations 39 and 62 are located immediately adjacent to critical habitat. The Lyon's pentachaeta population described above is located within the critical habitat area.

Catalina mariposa lily

Catalina mariposa lily (CRPR 4.2) typically blooms between March and June (CNPS 2010). This bulbiferous perennial herb occurs in heavy soils on open grassy slopes and openings in brush at elevations below about 2,000 feet amsl and in valley grassland and chaparral habitats (Munz 1974). It is known to be found in Ventura County (CNPS 2010). Hundreds of Catalina mariposa lilies were observed scattered along sides of the dirt access roads in the

southern portion of the Project Area within open space areas. A few flowering individuals were observed within 50 feet of various tower locations.

CRPR List 4 species often occur in large numbers and are considered relatively common within their range; therefore, the observation of a List 4 species is noted during focused surveys but not quantified or mapped in the survey results.

4.4.2.4.3 Special Status Wildlife Species

Special status wildlife species that are known to occur in the vicinity of the Project Area are listed in Table 4.4-3. Several special status wildlife species are reported to potentially occur along the Project alignment.

Coastal California Gnatcatcher

The coastal California gnatcatcher is a Federally Threatened species and a California Species of Special Concern. This species occurs in most of Baja California's arid regions, but is extremely localized in the United States where it predominantly occurs in coastal regions of highly urbanized Los Angeles, Orange, Riverside, and San Diego counties (Atwood 1992). In California, this species is an obligate resident of several distinct subassociations of the coastal sage scrub vegetation type. Sage scrub often occurs in a patchy distribution pattern throughout the range of the gnatcatcher. Coastal California gnatcatchers also use chaparral, grassland, and riparian habitats that are near sage scrub. These non-sage scrub habitats are used for dispersal and foraging (Atwood et al. 1998; Campbell et al. 1998; USFWS 2003). Availability of these non-sage scrub areas is essential during certain times of the year, particularly during drought conditions, or for dispersal, foraging, or nesting (USFWS 2003).

No coastal California gnatcatchers were detected during the 2008 survey. However, during the 2010 surveys, a total of three California gnatcatchers territories consisting of two breeding pairs and one solitary juvenile were present along the Project alignment. Both gnatcatcher pairs observed during the surveys exhibited behavior consistent with breeding; this was confirmed by observing adults feeding fledglings or adults building nests. One juvenile gnatcatcher was also observed in Project Section 3.

In addition, during the 2011 surveys, a total of two coastal California gnatcatcher territories were observed in the survey area, consisting of two breeding pairs. Both territories were located in the southern portion of the Project alignment in the vicinity of pole locations 46 through 60. Both gnatcatcher pairs observed during the surveys exhibited behavior consistent with breeding; this was confirmed by observing adults building nests, incubating eggs, and/or feeding nestlings and/or fledglings.

There is no designated critical habitat for coastal California gnatcatcher along the Project alignment. The closest designated critical habitat area for this species is approximately 3 miles east of Moorpark Substation (Figure 4.4-2).

Table 4.4-2: Special-Status Plant Species Known to Occur or with the Potential to Occur in the Project Area

Species	Status			Habitat Suitability Within the Survey Area
	USFWS	CDFW	CRPR	
Astragalus brauntonii Braunton's milk—vetch	FE	—	1B.1	Limited suitable habitat present.* Not observed; however, this disturbance-following plant has potential to appear after soil disturbance, wildfire, or other disturbing event.
California macrophylla Round-leaved filaree	—	—	1B.1	No suitable habitat present.
Calochortus catalinae Catalina mariposa lily	—	—	4.2	Suitable habitat present. Observed within the survey area.
Calochortus plummerae Plummer's mariposa lily	—	—	1B.2	Suitable habitat present. Not observed during focused plant surveys.
Centromadia parryi ssp. *australis* southern tarplant	—	—	1B.1	No suitable habitat present.
Deinandra minthornii Santa Susana tarplant	—	SR	1B.2	No suitable habitat present.
Delphinium parryi ssp. *blochmaniae* dune larkspur	—	—	1B.2	No suitable habitat present.
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya	—	—	1B.1	Limited suitable habitat present. Not observed during focused plant surveys.*
Dudleya cymosa ssp. *agourensis* Agoura Hills dudleya	FT	—	1B.2	Limited suitable habitat present. Not observed during focused plant surveys.*
Dudleya cymosa ssp. *marcescens* marcescent dudleya	FT	SR	1B.2	Limited suitable habitat present. Not observed during focused plant surveys.*
Dudleya parva Conejo dudleya	FT	—	1B.2	Suitable habitat present. Observed within the survey area.**
Dudleya verityi Verity's dudleya	FT	—	1B.2	Limited suitable habitat present. Not observed during focused plant surveys.*
Eriogonum crocatum Conejo buckwheat	—	SR	1B.2	Limited suitable habitat present. Not observed during focused plant surveys.*
Hordeum intercedens vernal barley	—	—	3.2	No suitable habitat present.
Horkelia cuneata ssp. *puberula* mesa horkelia	—	—	1B.1	Suitable habitat present. Not observed during focused plant surveys.*

Table 4.4-2: Special-Status Plant Species Known to Occur or with the Potential to Occur in the Project Area

Species	Status			Habitat Suitability Within the Survey Area
	USFWS	CDFW	CRPR	
Juglans californica var. *californica* Southern California black walnut	—	—	4.2	Suitable habitat present. Not observed during focused plant surveys.*
Nolina cismontana chaparral nolina	—	—	1B.2	Suitable habitat present. Not observed during focused plant surveys.*
Orcuttia californica California Orcutt grass	FE	SE	1B.1	No suitable habitat present.
Pentachaeta lyonii Lyon's pentachaeta	FE	SE	1B.1	Suitable habitat present. Observed within the survey area.**
Pseudognaphalium leucocephalum white rabbit-tobacco	—	—	2.2	Suitable habitat present. Not observed during focused plant surveys.
Senecio aphanactis chaparral ragwort	—	—	2.2	Suitable habitat present. Not observed during focused plant surveys.

* If present within the survey area, this perennial species would have been observed during focused plant surveys.
** Focused plant surveys were conducted only for Lyon's pentachaeta and Conejo dudleya.

LEGEND:

Federal (USFWS)		State (CDFW)	
FE	Endangered	SE	Endangered
FT	Threatened	ST	Threatened
FC	Candidate	SR	Rare
		SC	Candidate

California Rare Plant Ranks (CRPR) List Categories
Rank 1A (Plants Presumed Extinct in California)
Rank 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere)
Rank 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere)
Rank 3 (Plants About Which We Need More Information—A Review List)
Rank 4 (Plants of Limited Distribution—A Watch List)
California Rare Plant Ranks (CRPR) Threat Rank Extensions
0.1 "seriously threatened" in California
0.2 "fairly threatened" in California
0.3 "not very threatened" in California

Table 4.4-3: Special Status Wildlife Species Known to Occur in the Project Area

Species	Status		Likelihood for Occurrence
	USFWS	CDFW	
Fish			
Catostomus santaanae Santa Ana sucker	FT	CSSC	No suitable habitat present.
Gasterosteus aculeatus williamsonii unarmored threespine stickleback	FSC	CSSC	No suitable habitat present.
Gila orcuttii arroyo chub	FSC	CSSC	No suitable habitat present.
Amphibians			
Spea hammondii western spadefoot	—	CSSC	No suitable habitat present.
Reptiles			
Anniella pulchra pulchra silvery legless lizard	—	CSSC	Potentially suitable habitat present. Not observed during field surveys in 2010 and 2011.
Aspidoscelis tigris stejnegeri coastal whiptail	—	SA	Potentially suitable habitat present. Not observed during field surveys in 2010 and 2011.
Emys marmorata western pond turtle	FSC	CSSC	No suitable habitat present.
Phrynosoma blainvillii coast horned lizard	FSC	CSSC	Potentially suitable habitat present. Not observed during field surveys in 2010 and 2011.
hamnophis hammondii two-striped garter snake	FSC	CSSC	Potentially suitable habitat present. Not observed during field surveys in 2010 and 2011.
Birds			
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	—	WL	Suitable habitat present. Observed during field surveys in 2010 and 2011.
Aquila chrysaetos golden eagle	—	FP	Suitable foraging habitat present. No suitable nesting habitat present. Not observed during field surveys in 2010 and 2011.
Athene cunicularia burrowing owl	—	CSSC	Limited potentially suitable habitat present in the northern portion of the project site. Not observed during field surveys in 2010 and 2011.

Table 4.4-3: Special Status Wildlife Species Known to Occur in the Project Area

Species	Status		Likelihood for Occurrence
	USFWS	CDFW	
Empidonax traillii extimus southwestern willow flycatcher	FE	SE	Limited potentially suitable habitat present. Not observed during field surveys in 2010 and 2011.
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren		CSSC	Suitable habitat is present. Observed during field surveys in 2008, 2010 and 2011.
Dendroica petechia brewsteri yellow warbler		CSSC	Suitable habitat is present. Observed during field surveys in 2010.
Polioptila californica californica coastal California gnatcatcher	FT	CSSC	Suitable habitat present. Observed during field surveys in 2010 and 2011.
Riparia riparia bank swallow	—	ST	The project site is outside the known breeding range for this species. No suitable breeding habitat present. Not observed during field surveys in 2010 and 2011.
Vireo bellii pusillus least Bell's vireo	FE	SE	Potentially suitable habitat present. Not observed during focused surveys in 2010.
Mammals			
Antrozous pallidus pallid bat	—	CSSC	Potentially suitable roosting and foraging habitat is present. Not observed during field surveys in 2010 and 2011.
Eumops perotis californicus western mastiff bat	—	CSSC	Potentially suitable roosting and foraging habitat present. Not observed during field surveys in 2010 and 2011.
Neotoma lepida intermedia San Diego desert woodrat	—	CSSC	Potentially suitable habitat present. Not observed during field surveys in 2010 and 2011.
Invertebrates			
Streptocephalus woottoni Riverside fairy shrimp	FE	—	No suitable habitat present.

Legend:

FEDERALSTATUS:
- FE Federally Listed Endangered
- FT Federally Listed Threatened
- FC Federal Candidate
- FSC Federal Species of Concern

STATE STATUS:
- SA Special Animal
- SE State listed as endangered
- ST State listed as threatened
- SR State listed as rare
- CSSC California Department of Fish and Game Species of Special Concern
- CFP California Fully Protected
- SCD California (State) Candidate for Delisting
- WL Watch List

Note: Scientific and common names for wildlife species follow the most current list of Special Animals (July 2009) available from the California Department of Fish and Game (http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp).

Least Bell's Vireo

The least Bell's vireo was formerly more common and widespread, but is now a rare, local summer resident of southern California's lowland riparian woodlands (Grinnell and Miller 1986; Garrett and Dunn 1981). The substantial population declines of this avian species over the latter half of the twentieth century is attributable to the loss and degradation of riparian habitats and brood parasitism by the brown-headed cowbird (*Molothrus ater*). The breeding habitat of the least Bell's vireo is primarily riparian areas dominated by willows with dense understory vegetation; shrubs such as mule fat and California rose (*Rosa californica*) are often a component of the understory (Goldwasser 1981). The least Bell's vireo is often found in areas that include trees such as willow (*Salix* sp.), western sycamore or cottonwood (*Populus* sp.), particularly where the canopy is within or immediately adjacent to an understory layer of vegetation (Salata 1983).

No least Bell's vireo were detected during focused surveys conducted in 2008 or 2010.

Coastal Cactus Wren

Coastal cactus wren is a California Species of Special Concern. Some authorities consider the taxonomic status of cactus wrens in the southwestern U.S. to be uncertain (Proudfoot et al. 2000). Coastal populations of the cactus wren are found in southern California from San Diego County north to Ventura County (Garrett and Dunn 1981) and are declining due to loss of habitat. Except for the Banning Pass area west of Palm Springs, the coastal populations of cactus wren appear to be isolated from interior populations. On the coastal slope of southern California, cactus wrens inhabit coastal sage scrub and alluvial sage scrub habitats that have sufficient amounts of prickly pear cactus and/or cholla. Cactus wrens were identified during several general nesting bird surveys and during focused coastal California gnatcatcher surveys in 2008 and 2011.

Yellow Warbler

Yellow warbler is a California Species of Special Concern. It is the subspecies that breeds in Southern California (Dunn and Garrett 1997); most yellow warblers are migrants. This subspecies occurs in coastal areas from northwestern Washington south to western Baja California, Mexico (Dunn and Garrett 1997). In southern California, yellow warblers breed locally in riparian woodlands but during migration they can forage in a variety of vegetation types. This species is threatened by loss of habitat and nest parasitism by brown-headed cowbirds (Remsen 1978). Suitable foraging and nesting habitat for the yellow warbler is present within the survey area in the willow and mule fat scrub vegetation. The yellow warbler was observed and/or detected within the survey area during surveys in 2010.

Southern California Rufous-Crowned Sparrow

Southern California rufous-crowned sparrow is a CDFW Watch List species. In coastal southern California, rufous-crowned sparrows are considered fairly common in scrub vegetation types and other habitats with grasses and widely spaced, low shrubs. They also prefer slopes with rock outcroppings. This subspecies is present throughout the year in southern California, but is threatened by loss of habitat due to development. Potentially suitable habitat for this subspecies is present along the Project alignment. In 2010, this

subspecies was observed and/or detected through vocalization in Project Sections 2, 3, and 4.

4.4.2.5 Potentially Regulated Streambeds and Waterways

Based on previous field and monitoring visits, four streambed resources within the Project Area were identified (Figures 4.4-3a though -4c). These include:

- An unnamed north-south flowing drainage located north of Los Angeles Avenue (SR-118) in Project Section 2. The drainage is approximately 30 feet wide in the vicinity of pole location 6. This unnamed drainage appears to be a man-made ditch that is dominated by upland native and non-native vegetation including coyote bush, tree tobacco (*Nicotiana glauca*) and castor bean (*Ricinus communis*). Though this appears to be a man-made feature, it could be considered jurisdictional by CDFW if it follows a natural conveyance and/or by USACE if it has a significant biological, chemical, or physical impact on the nearest traditional navigable water (TNW; in this case, the Pacific Ocean). A jurisdictional determination was conducted for this feature (see Appendix F).
- Arroyo Simi, an east-west flowing stream that crosses the project alignment approximately one-half mile south of Los Angeles Avenue in Project Section 2. Arroyo Simi is approximately 150 feet wide where it crosses the Project alignment between pole location 10 and pole location 11. Arroyo Simi would be considered a jurisdictional resource by the resource agencies due to its perennial flows and connection to the Pacific Ocean. The limits of jurisdiction by the USACE and the RWQCB would be based on the identification and delineation of an ordinary high water mark (OHWM) as defined by the USACE, while CDFW jurisdiction would extend to the top of the bank or the outer dripline of associated riparian vegetation. The Project will span Arroyo Simi, and therefore no jurisdiction determination was conducted.
- Arroyo Santa Rosa, an east-west flowing stream, crosses the Project alignment approximately one-half mile south of Santa Rosa Road between pole location 25 and pole location 26 in Project Section 2. It is approximately 50 feet wide in this area. Arroyo Santa Rosa would be considered a jurisdictional resource by the resource agencies due to its perennial or relatively permanent flow regime and connection to waterways that eventually flow into the Pacific Ocean. The limits of USACE/RWQCB jurisdiction would be based on a delineation of the OHWM, while CDFW jurisdiction would extend to the top of the bank or the outer dripline of riparian vegetation. The Project will span Arroyo Santa Rosa, and therefore no jurisdiction determination was conducted.
- An unnamed tributary to Conejo Creek is located in the vicinity of pole locations 36 through 40 in Project Section 3. This drainage is not accessible to determine width and depth. This unnamed tributary to Conejo Creek is an ephemeral drainage that appears to only contain water during the seasonal rainy period. This feature may be considered Federally jurisdictional if it has a significant biological, chemical, or physical impact on the nearest TNW (the Pacific Ocean). The feature is considered

State jurisdictional by CDFW. The limits of USACE/RWQCB jurisdiction would be delineated by the OHWM while CDFW jurisdiction extends to the top of the bank or the outer dripline of associated riparian vegetation. A jurisdictional determination was conducted for this feature (see Appendix F).

Based on field and monitoring visits, the four drainages along the Project Alignment are expected to be under the jurisdiction of the CDFW pursuant to Section 1600 of the California Fish and Game Code (Lake and Streambed Alteration Program). Arroyo Simi and Arroyo Santa Rosa are anticipated to also fall under Federal jurisdiction pursuant to the Clean Water Act (Section 404). The other two seasonal drainages may or may not be subject to Federal jurisdiction depending on whether or not the USACE determines that they meet the 'Significant Nexus' test pursuant to the most recent guidelines promulgated by the U.S. Environmental Protection Agency (USEPA) and the USACE.

A formal jurisdictional delineation (JD) is not required for the entire Project as Project infrastructure will span or not be located within jurisdictional waters or wetlands. However, during past construction, SCE conducted specific jurisdictional waters assessments for a drainage ditch located adjacent to pole location 6 and a depressional feature near pole location 38.

The assessment for pole location 6 was conducted because SCE wanted to remove all vegetation within 100 feet of pole location 6 during past construction. The assessment indicated that the upland drainage ditch was associated with agricultural land and was not under USACE jurisdiction, but the presence of hydrophytic vegetation in the streambed may require a vegetation removal permit from the California Department of Fish and Wildlife (CDFW) as described in Section 1600 of the Fish and Game Code. Therefore, prior to clearing the vegetation, SCE will consult with the CDFW.

For pole location 38, the assessment was conducted because during grading, some work created unintended areas where fill was deposited within a depressional feature downslope of pole location 38. The fill consisted of boulders, gravel, sands and other materials that were placed within coastal sage scrub habitat. The assessment concluded that the depressional feature was dominated by upland plant species and did not contain evidence of the presence of resources under the jurisdiction of CDFW and/or USACE, such as a bed, bank or stream course and/or OHWM. Informal consultation with the USACE and CDFW indicated that the unnamed tributary was not jurisidctional to the USACE; however the CDFW determined that the fill impacted the banks of an unnamed tributary to Conejo Creek. As such, the CDFW directed SCE to obtain a Streambed Alteration Agreement (SAA).

4.4.3 Regulatory Setting

This section contains a discussion of potentially applicable laws, ordinances, regulations, and standards that govern biological resources occurring or potentially occurring in the Project Area.

4.4.3.1 Federal Regulatory Setting

4.4.3.1.1 Endangered Species Act (16 U.S.C. § 1531 et seq.)

The Endangered Species Act of 1973 (ESA) provides for the protection of plant and animal species listed by the Federal government as "Endangered" or "Threatened", and "the ecosystems upon which they depend." An "Endangered" species is one that is "in danger of extinction" throughout all or a significant portion of its range. A "Threatened" species is one that is "likely to become endangered" within the foreseeable future. Pursuant to Section 9 of the ESA, it is unlawful for any person to "take" a Federally-listed species. "Take," as defined by the ESA, "means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." This can also include the modification of a species' habitat. For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on Federal land and removing, cutting, digging up, damaging, or destroying any listed plant on non-Federal land in knowing violation of State law (16 U.S.C. § 1538(c)).

When non-Federal entities, such as States, counties, local governments, and private landowners, wish to conduct an otherwise lawful activity that might incidentally, but not intentionally, "take" a listed species, an incidental take permit (ESA § 10(a)(1)(B)) must first be obtained following formal consultation with the USFWS, through the development of a habitat conservation plan (HCP).

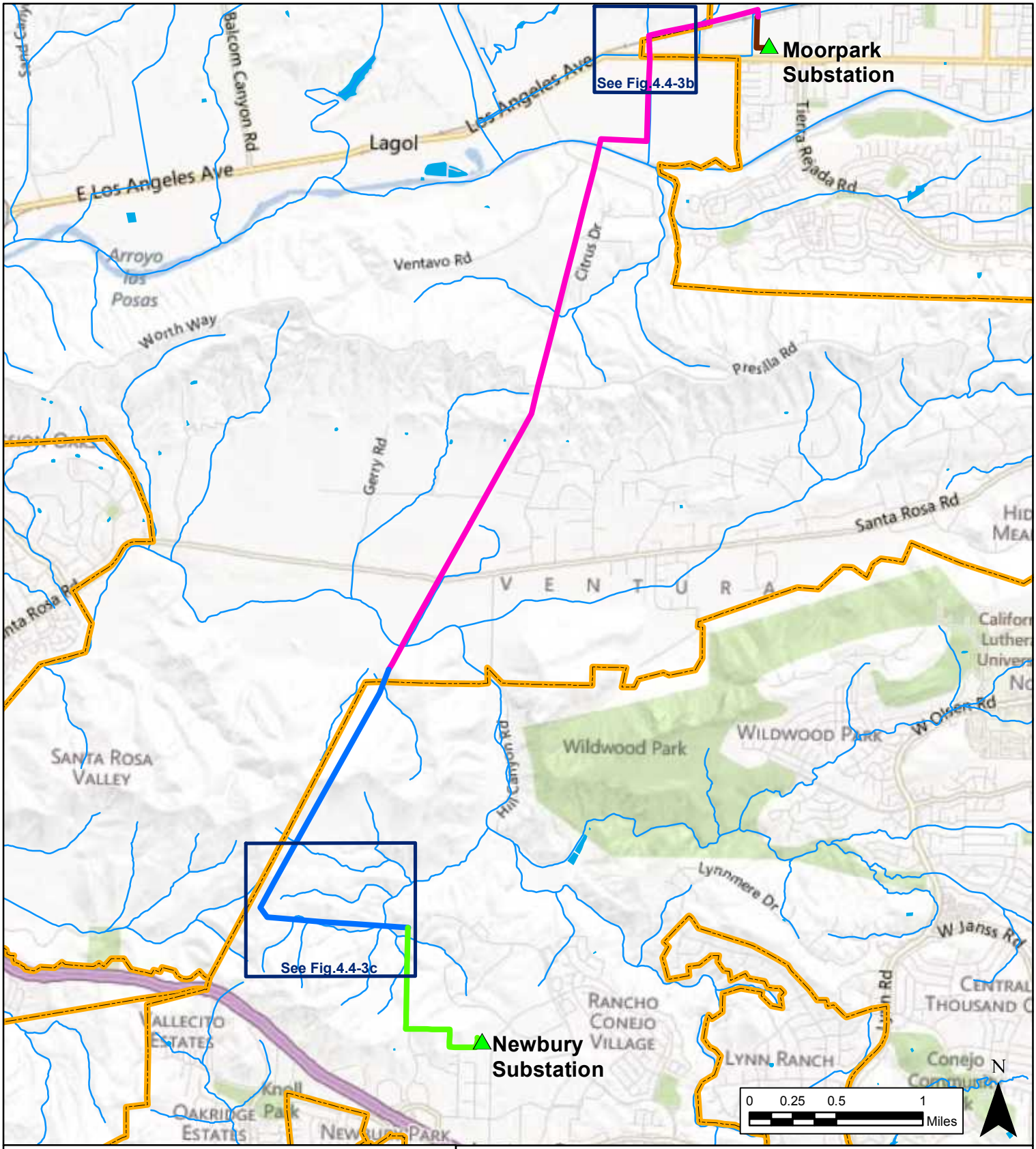
4.4.3.1.2 Migratory Bird Treaty Act (16 U.S.C. §§ 703 – 712)

The Migratory Bird Treaty Act of 1918 (MBTA) protects species of native, non-game, migratory birds. Specific provisions in the statute include a Federal prohibition, except as allowed under specific conditions, to:

> "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention ... for the protection of migratory birds ... or any part, nest, or egg of any such bird." (16 U.S.C. § 703)

4.4.3.1.3 Bald and Golden Eagle Protection Act (16 U.S.C. § 668-668d)

The Bald and Golden Eagle Protection Act of 1940 (BGEPA) provides for the protection of bald and golden eagles. The BGEPA establishes criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The BGEPA defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."



SCE Substations
City Boundaries

Project Sections
Project Section 1
Project Section 2
Project Section 3
Project Section 4

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

STREAMBED RESOURCES IN PROJECT AREA

SOUTHERN CALIFORNIA EDISON®
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ARCADIS
Infrastructure · Water · Environment · Buildings

Figure
4.4-3a

ARCADIS: SCEMN_061, 09/27/13, R02

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Proposed Pole
SCE Substations
City Boundaries

Project Sections
Project Section 2

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

STREAMBED RESOURCES IN PROJECT AREA

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Figure
4.4-3b

ARCADIS: SCEMN_062, 09/27/13, R02

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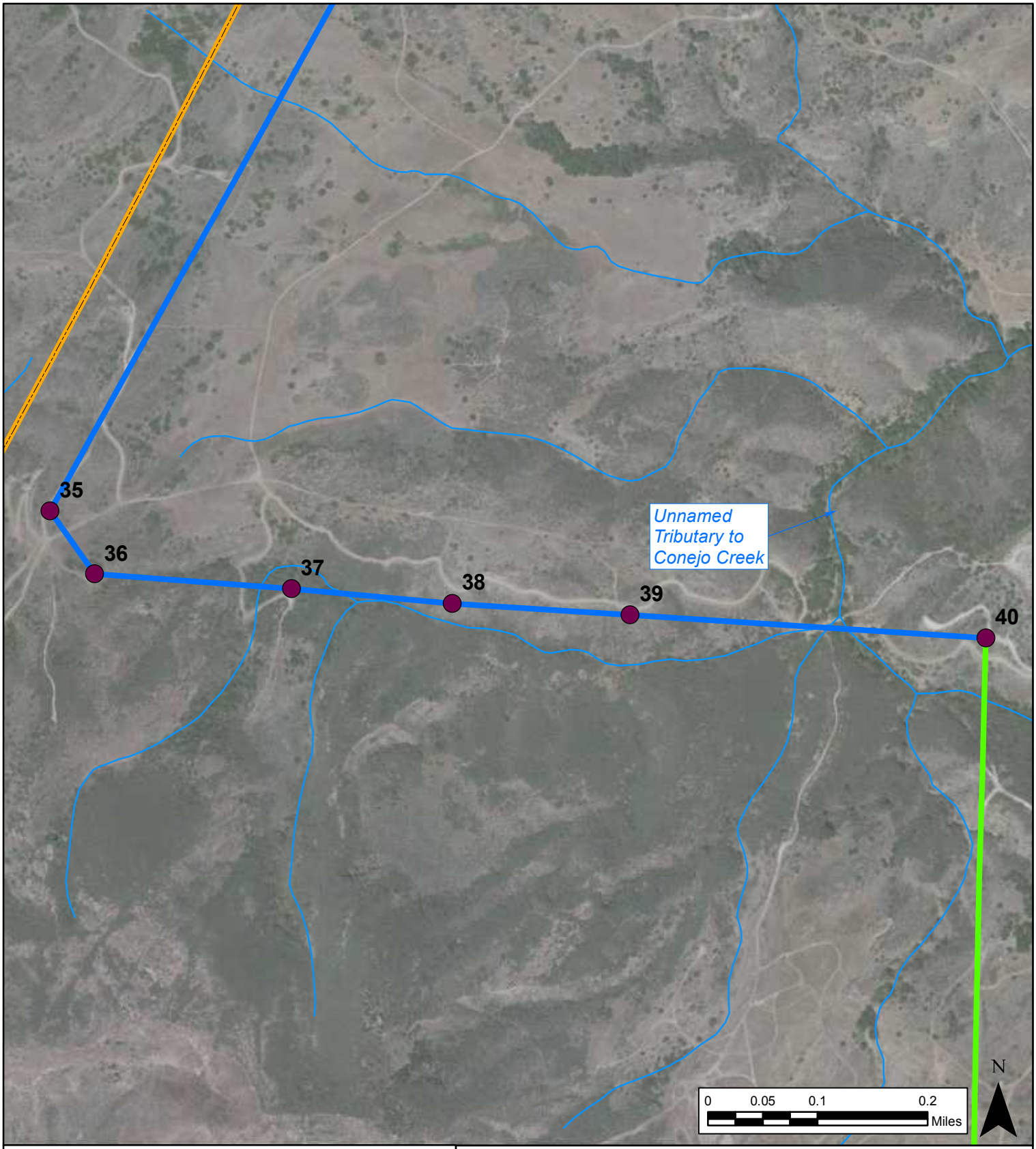

Proposed Pole
SCE Substations
City Boundaries

Project Sections
Project Section 3
Project Section 4

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
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Figure
4.4-3c

ARCADIS: SCEMN_063, 09/27/13, R02

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4.4.3.1.4 Clean Water Act of 1972 (33 U.S.C. § 1251 et seq.)

Enacted in 1972, the Federal Clean Water Act of 1972 (CWA) and subsequent amendments outline the basic protocol for regulating discharges of pollutants to waters of the U.S. It is the primary Federal law applicable to water quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. Enforced by the USEPA, it was enacted "… to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA authorizes States to adopt water quality standards and includes programs addressing both point and non-point pollution sources. The CWA also established the established the National Pollutant Discharge Elimination System (NPDES), and provides the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry and water quality standards for surface waters (see below for a discussion of the NPDES program).

In California, programs and regulatory authority under the CWA have been delegated by USEPA to the State Water Resources Control Board (SWRCB) and its nine RWQCBs. Under Section 402 of the CWA, a discharge of pollutants to navigable waters is prohibited unless the discharge complies with an NPDES permit.

The SWRCB and RWQCBs have also developed numeric and narrative water quality criteria to protect beneficial uses of State waters and waterways. Beneficial uses in the Project Area include water supply, groundwater recharge, aquatic habitat, wildlife habitat, and recreation.

4.4.3.1.5 CWA Section 401 – Water Quality Certification

Section 401 of the CWA specifies that, for any activity that may result in a discharge into waters of the U.S., the SWRCB or applicable RWQCB must certify that the discharge will comply with State water quality standards, including beneficial uses (Tit. 23 Cal. Code Regs. § 3830 et seq.). Under California's policy of no net loss of wetlands, the SWRCB and RWQCBs require mitigation for dredge and fill impacts to wetlands and waterways. Dredge and fill activities in wetlands and waterways that impact waters of the U.S. will require a Federal Section 404 permit from the USACE. These permits trigger the requirement to obtain a Section 401 certification, which must be obtained prior to issuance of a Section 404 permit.

4.4.3.1.6 CWA Section 404 – Permitting for Dredge and Fill Activities in Wetlands and Waters of the U.S.

The USACE is responsible for issuing permits under CWA Section 404 for placement of fill or dredged material in waters of the U.S. and jurisdictional wetlands. Waters of the U.S. refers to oceans, bays, rivers, streams (including non-perennial streams with a defined bed and bank), lakes, ponds, and seasonal and perennial wetlands.

Project proponents must obtain a permit from the USACE for all discharges of fill or dredged material before proceeding with a proposed activity. The USACE may issue either an individual permit or a general permit. General permits are preauthorized at the regional or national level and are issued to cover activities expected to result in only minimal adverse

environmental effects (e.g., LA District Regional General Permit No. 63 for Repair and Protection Activities in Emergency Situations). Nationwide Permits (NWPs) are a type of general permit issued to cover activities that the USACE has determined to have minimal adverse effects, such as routine maintenance (e.g., Nationwide Permit 3) or utility line activities (e.g., Nationwide Permit 12). Each NWP specifies particular conditions that must implemented by the permittee.

4.4.3.2 State Regulatory Setting

4.4.3.2.1 Title 14 California Code of Regulations §§ 670.2 and 670.5

These Sections list animals designated as Threatened or Endangered in California. The CDFW designates species considered to be indicators of regional habitat changes, or candidate species for future State listing, such as California Species of Special Concern.

4.4.3.2.2 California Endangered Species Act (Fish and Game Code § 2050 et seq.)

The California Endangered Species Act (CESA) generally parallels the provisions of the Federal ESA, and states that "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved." The CDFW administers the CESA, and has committed itself to work with all interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats.

Under the CESA, "Endangered" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range;" and "Threatened" is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts." "Take" is defined as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" an individual of a species, but the definition does not include "harm" or "harass," as the ESA does. As a result, the threshold for a take under the CESA is higher than that under the Federal ESA.

Consistent with the CESA, CDFW has established lists of endangered, threatened, and candidate species that may or may not also be included on a Federal ESA list. Pursuant to Fish and Game Code Section 2081, CESA allows CDFW to issue incidental take permits for otherwise lawful development projects that could result in the take of a State-listed Threatened or Endangered species. The application for an incidental take permit under Section 2081(b) has a number of requirements including the preparation of a conservation plan, generally referred to as a Habitat Conservation Plan. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species.

4.4.3.2.3 Regulations Implementing the California Environmental Quality Act (Title 14 California Code of Regulations § 15386; California Fish and Game Code § 1802)

The CDFW may play various roles during the CEQA process. As a trustee agency, the CDFW has jurisdiction over certain resources held in trust for the people of California. Trustee agencies are generally required to be notified of CEQA documents relevant to their jurisdiction, whether or not these agencies have actual permitting authority or approval power over aspects of the underlying project (Tit. 14 Cal. Code Regs. § 15386). The CDFW, as a trustee agency, must be notified of CEQA documents regarding projects involving fish and wildlife of the State, as well as Rare and Endangered native plants, wildlife areas, and ecological reserves. Although as a trustee agency the CDFW cannot approve or disapprove a project, lead and responsible agencies are required to consult with the CDFW. The CDFW, as the trustee agency for fish and wildlife resources, shall provide the requisite biological expertise to review and comment upon environmental documents and impacts arising from project activities and shall make recommendations regarding those resources held in trust for the people of California (California Fish and Game Code §1802).

4.4.3.2.4 California Fish and Game Code §§ 1600-1616, Lake and Streambed Alteration Program

If a project includes alteration of the bed, banks, or channel of a stream, or the adjacent riparian vegetation, then an SAA may be required from CDFW. California Fish and Game (CFG) Code Sections 1600-1616 regulate activities that could alter the flow, bed, banks, channel, or associated riparian areas of a river, stream, or lake—all considered "waters of the State." The law requires any person, State, or local governmental agency or public utility to notify CDFW before beginning an activity that will substantially modify a river, stream, or lake.

4.4.3.2.5 California Fish and Game Code §§ 3500-3516, and 3800

California Fish and Game Code Section 3513 furthers the intent of the MBTA by prohibiting any take or possession of birds in California designated by the MBTA as migratory nongame birds, except as allowed by Federal rules and regulations promulgated pursuant to the MBTA. In addition, CFG Code Sections 3503, 3503.5, 3511, and 3800 further protect nesting birds and their parts, including passerine birds, raptors, and State "fully protected" birds. These regulations protect almost all native nesting birds, not just sensitive status birds.

4.4.3.2.6 California Fish and Game Code §§ 3511, 4700, 5050, and 5515

California Fish and Game Code Sections 3511, 4700, 5050, and 5515 govern the protection of bird, mammal, reptile, amphibian, and fish species identified as "fully protected." Fully protected animals may not be harmed, taken, or possessed. The classification of "Fully Protected" was the state's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under the State and/or Federal endangered species acts; white-tailed kite, golden eagle,

trumpeter swan, northern elephant seal, and ring-tailed cat are the exceptions. The white-tailed kite and the golden eagle are tracked in the CNDDB; the trumpeter swan, northern elephant seal, and ring-tailed cat are not.

4.4.3.2.7 California Public Resources Code §§ 4292 and 4293

California Public Resources Code Section 4292 directs the owner, controller, operator, or maintainer of electrical transmission lines in mountainous land, forest-covered land, brush-covered land, or grass-covered land to maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole; a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or tower; and Section 4293 requires the same to maintain a clearance of 4 feet from any line which is operating at 2,400 or more volts, but less than 72,000 volts.

4.4.3.2.8 Native Plant Protection Act (California Fish and Game Code §§ 1900-1913, 2062 and 2067)

The Native Plant Protection Act (NPPA) identifies the types of plant species eligible for State listing. Eligible species include those identified on CRPR Ranks 1A, 1B, and 2 meet the definitions of Sections 1901, Chapter 10 (NPPA) or Sections 2062 and 2067 (CESA) of the CFG Code. Rank definitions are as follows:

> 1A: Plants presumed to be extinct because they have not been seen or collected in the wild in California for many years. This rank includes plants that are both presumed extinct in California and those that are presumed extirpated in California. A plant is extinct in California if it no longer occurs in or outside of California. A plant that is extirpated from California has been eliminated from California, but may still occur elsewhere in its range.
>
> 1B: Plants that are rare throughout their range, with the majority of them endemic to California. Most of the plants of Rank 1B have declined significantly over the last century.
>
> 2: Plants that are rare throughout their range in California, but are common beyond the boundaries of California. Rank 2 recognizes the importance of protecting the geographic range of widespread species (CNPS 2010).

4.4.3.2.9 California Public Utilities Commission, General Order 95, Rule 35, Vegetation Management

General Order 95, Rule 35 mandates that certain vegetation management activities be performed in order to establish necessary and reasonable clearances, and establishes minimum clearances between line conductors and vegetation that under normal conditions shall be maintained. These requirements apply to all overhead electrical supply and communication facilities covered by this General Order, including facilities on lands owned and maintained by California State and local agencies.

4.4.3.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.4.3.3.1 Ventura County Tree Protection Regulations (Ventura County Non-Coastal Zoning Ordinance §§ 8107-25)

Under Ventura County regulations, protected trees include all oaks and sycamores 9.5 inches in circumference or larger (measured 4.5 feet above ground), trees of any species with a historical designation, trees of any species 90 inches in circumference or larger, and most native trees in the Scenic Resources Protection Zone with a circumference greater than 9.5 inches.

The Ventura County Tree Protection Ordinance includes permit exemptions for tree pruning and trimming by public utilities for purposes of protecting the public and maintaining adequate clearance from public utility conduits and facilities. In addition, the ordinance provides for ministerial permits for tree removal or alteration when a tree interferes with public utilities facilities.

4.4.3.3.2 City of Moorpark Tree Ordinance (Municipal Code Chapter 12.12)

The City of Moorpark requires the maintenance and protection of native oak trees, historic trees, and mature trees to the greatest extent possible. No person shall remove, injure, or encroach within the dripline of any native oak trees (*Quercus agrifolia*, *Q. lobata*, *Q. dumosa* and hybrids thereof), mature tree (at least 72 square inches in trunk area), or historic tree (as designated by resolution of the city council) without a valid permit issued by the City.

4.4.3.3.3 City of Thousand Oaks Tree Ordinance (Municipal Code Chapter 14 §§ 5-14)

The City of Thousand Oaks requires the preservation of all healthy oak trees unless reasonable and conforming use of the property justifies the removal, cutting, pruning, and/or encroachment into the protected zone of an oak tree. No person shall cut, remove, encroach into the protected zone, or relocate any oak tree within the City unless a valid oak tree permit has been issued by the City. A permit is not required for trees with a diameter of two (2) inches or less measured at four and one-half inches above the natural grade.

4.4.3.3.4 Conejo Open Space Conservation Agency

COSCA is a joint powers agency that was formed between the City of Thousand Oaks (City) and the Conejo Recreation and Park District (CRPD) in 1977 in order to implement the adopted goals of the Open Space and Conservation Elements of the City's General Plan.

The Project traverses lands managed by COSCA; these lands are managed according to the Conejo Canyons Open Space Management Plan. The purpose of the Management Plan is to "provide a comprehensive guide for the long-term management of the Conejo Canyons'

unique natural, cultural and scenic resources while providing for compatible passive multi-use, trail-based recreational activities."

Among the eight Goals listed in the Management Plan are the following:

- "Protect, preserve and restore native plant communities"
- "Protect special status plants, including rare and endangered species"
- "Maintain an environment that is conducive to and protects a healthy, diverse native wildlife population"

4.4.4 Significance Criteria

The significance criteria for assessing the impacts to biological resources come from the CEQA Environmental Checklist. According to the checklist, a project causes a potentially significant impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan

4.4.5 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS?

Assessment Summary: Less Than Significant Impact

Construction Impacts, Plant Species

Two listed plant species were documented to occur in the Project Area: Conejo dudleya and Lyon's pentachaeta. One CRPR watch list species—the Catalina mariposa lily (CRPR 4.2)—has been observed in the study area.

Impacts to special status plant species individuals did not occur during past construction activities. Impacts to special status plant species and individuals were avoided and minimized by implementing, among others, those measures contained in the August 30, 2010 letter from SCE to Ms. Diane K. Noda, Field Supervisor, Ventura Fish and Wildlife Office in Appendix F. During past construction activities, implemented the following:

- Focused surveys for Lyon's pentachaeta and Conejo dudleya were conducted no more than 30 days prior to start of construction in areas with potentially suitable habitat.
- Areas supporting Lyon's pentachaeta were flagged prior to project activities by a qualified biologist and avoided during construction. In addition, a biological monitor was present during project activities occurring within the vicinity of these resources to ensure that no sensitive species were impacted.
- Areas supporting Conejo dudleya were flagged prior to project activities by a qualified biologist and avoided during construction. In addition, a biological monitor was present during project activities occurring within the vicinity of these resources to ensure that no sensitive species were impacted.
- When digging holes for pole replacements within Lyon's pentachaeta critical habitat the upper six (6) inches of topsoil were salvaged/stockpiled within Lyon's pentachaeta critical habitat in order to maintain the native seed bank. The topsoil was stored on a protective surface (such as a tarp), piled no more than three feet high, and was replaced (within two weeks) as the top layer when ground disturbing work was completed.
- Where applicable, disturbed areas within Lyon's pentachaeta habitat were restored in accordance with the CDFW Streambed Alteration Agreement (SAA) requirements.
- Project Worker Environmental Awareness Training, which included:
    - Instruction to keep vehicles on existing roads and pads
    - Instruction to avoid impacts to drainages
    - Instruction to minimize clearing of vegetation
    - Information regarding protected plant species that may be found in the Project Area, where they have been identified during past surveys, and protection measures that may be implemented.

Past construction activities included ground disturbing activities in an area designated by USFWS as critical habitat for Lyon's pentachaeta (Unit 2: Montclef Ridge Unit, Subunit 2A; Figure 4.4-2); these activities included the grading of construction work sites adjacent to structure replacement/installation locations and the rehabilitation of already existing access and spur roads. As presented in Chapter 3: Project Description, during past Project related grading activities, native soils were deposited by SCE on a sloped surface adjacent to pole locations 39 and 40. This resulted in a disturbance of approximately 0.16 acre of coastal sage scrub; although this disturbance occurred within an area designated by USFWS as critical habitat for Lyon's pentachaeta, no Lyon's pentachaeta individuals were detected in the disturbed area during focused surveys, pre-construction surveys, or during construction monitoring, and therefore were not likely impacted by this activity. As described in Section 3.5, Post-Construction Activities, the 0.16 acre of disturbance was restored at the direction of CDFW (at that time CDFG).

Focused surveys for Conejo dudleya were conducted prior to ground disturbing activities. Areas supporting Conejo dudleya were flagged for avoidance and a monitor was present to ensure avoidance during construction activities; therefore, Conejo dudleya were not likely impacted during construction activities.

In addition, the replacement of 21 wood subtransmission poles with 21 LWS poles permanently disturbed approximately 0.15 acre within the area designated as critical habitat.[45] Rehabilitation of existing dirt access roads resulted in a permanent disturbance of approximately 1.35 acres within the area designated as critical habitat. The development of stringing sites temporarily disturbed approximately 0.414 acre within the area designated as critical habitat. The permanent disturbance area associated with these activities (1.5 acres) is small in comparison to the 862 acres of critical habitat contained within Subunit 2A, and thus would not be substantial.

Catalina mariposa lily, a CNPS List 4 species, occurs along the dirt access roads in Segments 2 and 3. Catalina mariposa lily often occur in large numbers on project sites and are considered relatively common within their range. Although it is considered a special status species, impacts to Catalina mariposa lily may be considered adverse but do not meet the significance criteria under CEQA to require mitigation. No other special status species are known to occur or were observed in the Project Area.

Given the implementation of the Project features presented above and in Chapter 3: Project Description, the small area temporarily disturbed, and the large areas in the vicinity of the Project where special status plant species are found, impacts under this criterion were less than significant.

[45] Note: The LWS pole at pole location 42 was installed using a helicopter, and only a footpath was created for access to this pole location. No grading occurred at this location.

Construction Impacts, Wildlife Species

Past construction activities resulted in minor habitat loss and disturbance relative to the availability of habitat for the following species in the region. Additionally, past construction activities resulted in temporary noise and human presence, dust, and vibrations.

Special Status Reptiles

Five special status reptiles are known to occur in the vicinity of the Project: silvery legless lizard, coastal whiptail, western pond turtle, coast horned lizard, and two-striped garter snake. Potentially suitable habitat exists for each of these species except western pond turtle. None of these species were observed during biological surveys. If individuals were present but unobserved in the Project Area, past construction activities would have resulted in limited indirect impacts such as noise and human presence, temporary dust, and periodic vibrations. No direct or indirect impacts to these species are known to have occurred. Impacts to these species are considered to be less than significant.

Special Status Birds

One Federally-listed Threatened bird species, the coastal California gnatcatcher, is known to occur along the Project alignment.

The following avoidance and minimization measures (as contained in the August 30, 2010 letter from SCE to Ms. Diane K. Noda, Field Supervisor, Ventura Fish and Wildlife Office, and found in Appendix F), among others, were implemented to avoid or minimize direct and indirect impacts to the coastal California gnatcatcher:

- During the breeding season (February 15 through August 30), a protocol preconstruction survey for the coastal California gnatcatcher was conducted by a wildlife biologist possessing a valid recovery permit from the USFWS for the coastal California gnatcatcher.
- When project activities occurred during the breeding season (February 15 through August 30), a 500-foot buffer was established around the coastal California gnatcatcher nest site, and this area was avoided until the young fledged or until the birds abandoned the nest.
- No grading of habitat occupied by nesting coastal California gnatcatchers (including a 500-foot buffer area in all direction from the nest) occurred during the breeding season (February 15 through August 30).
- Project activities that occurred within 500 feet of a mapped coastal California gnatcatcher territory were monitored by a qualified biologist who possessed a valid recovery permit for the species.
- A qualified biologist was present during clearing and replacement activities to ensure that native habitat (coastal sage scrub) removal was minimized.

Approximately 0.5 acre of potentially suitable coastal California gnatcatcher habitat along the length of the Project was disturbed as a result of the Project within Project Section 3; this impact is considered less than significant.

Two other Federally-Listed species, the Federally- and State-Endangered southwestern willow flycatcher (*Empidonax traillii extimus)* and least Bell's vireo are known to occur in the Project Area, though neither was observed during focused surveys performed in 2010 or during construction. Because neither species was observed during pre-construction surveys or during construction, no direct or indirect impacts to these species occurred.

Three additional bird species that are considered special status, but not listed as Threatened or Endangered by State or Federal resources agencies, occur along the Project alignment: the coastal cactus wren, yellow warbler and the southern California rufous-crowned sparrow. Preconstruction surveys and surveys conducted during past construction activities did not identify these species in an active construction area; additionally, no individuals of these species were known to be harmed during past Project activities. Therefore no direct or indirect impacts to these species occurred, and impacts to these species are considered to be less than significant.

The Study Area provides potentially suitable foraging habitat for the golden eagle, a State Fully Protected Species; however, no golden eagles were observed prior to or during past construction activities. At the time of past construction activities, SCE's standard avian protection practices were employed. SCE's standard practices were developing based on available knowledge from available data and available equipment at that time. Although past construction activities could have discouraged golden eagles from foraging in the immediate vicinity of an active construction area, this disruption in foraging would have been extremely localized and temporary in nature; therefore, the impact on foraging for this species is considered to be less than significant.

Limited potentially suitable habitat for the burrowing owl occurs in the extreme northern portion of the Project alignment, near Moorpark Substation. No individuals were observed during field surveys in 2010 and 2011 or by biological monitors during construction, and thus no impact to this species occurred.

The Study Area provides potentially suitable foraging and nesting habitat for raptors, such as red-tailed hawks. Nesting bird surveys, including raptors, were conducted prior to Project activities to avoid impacts to active nests. Past construction activities could have discouraged raptors from foraging in the immediate vicinity of an active construction area; however, this disruption in foraging would have been extremely localized and temporary in nature. Therefore, impacts on foraging and nesting raptors are considered to be less than significant.

Special Status Mammals

The San Diego desert woodrat has the potential to occur in the Project Area. This species is not listed or proposed to be listed as Threatened or Endangered, but is a CDFW Species of Concern. This species was not observed during pre-construction field surveys or by biological monitors during construction in 2010 or 2011. If individuals were present but unobserved in the Project Area, past construction activities would have resulted in limited indirect impacts such as noise and human presence, temporary dust, and periodic vibrations. No direct or indirect impacts to this species are known to have occurred. Impacts to this species are considered to be less than significant.

The Project Area may include foraging habitat for two bat species: western mastiff bat and pallid bat. However, neither species was observed during pre-construction field surveys or by biological monitors during construction in 2010 or 2011. Past construction activities did not affect the overall availability of prey in the Project Area for bats. No direct impacts to these species occurred. Construction activities in the general area resulted in limited indirect impacts such as noise and human presence, periodic night lighting, temporary dust, and temporary vibrations. Impacts to these species are considered to be less than significant.

Did the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Native Grasslands and Sage Scrub

Native grassland and sage scrub communities are found in Project Sections 3 and 4. Impacts to sensitive plant communities were realized as a result of the ground disturbing activities described in Chapter 3: Project Description. Temporary impacts to sensitive plant communities occurred in locations where native vegetation was removed but that was subsequently restored following the cessation of past construction activities; this includes the locations adjacent to pole locations 38, 39, and 40 where certain soils were deposited by SCE on sloped surfaces. Permanent impacts, as a result of construction, also occurred where sensitive plant communities were located on or immediately adjacent to access and spur roads that were rehabilitated and where permanent equipment pads were established.

Impacts to sensitive plant communities were avoided and minimized by incorporating recommendations provided in biological survey reports prepared for the Project, among others. Impacts were avoided and minimized by:

- Conducting clearance surveys no more than 30 days prior to the start of construction in a particular area to identify potential plant and animal species that could have been impacted by construction activities. Clearance surveys included a field survey by a qualified botanist and were limited to areas that could have been directly impacted by construction activities.
- Implementing the Project Worker Environmental Awareness Training, which included:
  - Instruction to keep vehicles on existing roads and pads
  - Instruction to avoid impacts to drainages
  - Instruction to minimize clearing of vegetation
  - Information regarding protected plant species that may be found in the Project Area, where they have been identified during past surveys, and protection measures that may be implemented.
- A qualified biologist was present during clearing and restoration activities to ensure that native habitat (coastal sage scrub) removal was minimized.

Following the cessation of the past construction activities, the majority of disturbed areas were reclaimed, allowing for and encouraging the re-establishment of sensitive plant communities in these areas. Given the implementation of Project features presented in Chapter 3: Project Description, post-construction reclamation and restoration activities, and the small areas permanently impacted compared to the large areas occupied by these sensitive communities in the region, less than significant impacts were realized during past construction activities.

Riparian Habitat

Only limited Project activities occurred within riparian habitat. To facilitate equipment access and protect the integrity of the access road, one existing culvert underneath an existing access road in Project Section 3 was cleaned out; during this activity, a few small willow trees were removed or trimmed. This highly-localized impact in a previously-disturbed area is considered less than significant.

Did the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means?

Assessment Summary: No Impact

Construction Impacts

No Federally-protected wetlands were identified along the Project alignment, and thus the Project did not have any adverse effect on Federally-protected wetlands as defined by Section 404 of the Clean Water Act. Therefore, no impacts occurred under this criterion.

Did the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past construction activities were temporary and affected only small, geographically-dispersed areas at any one time; there is no evidence that past construction activities interfered substantially with the movement of any wildlife species, although past construction activities may have interfered with the movement of individual animals. No past construction activities occurred in any location that could have interfered with the movement of a fish species. Past construction activities did not substantially alter the physical characteristics of the Project Area, and did not introduce any new permanent uses that could interfere with an established wildlife corridor.

There are no known native wildlife nursery sites in the Project Area, and thus the past construction activities associated with the Project did not impede the use of such a site or sites. Therefore, less than significant impacts occurred under this criterion.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

Protected Trees

Protected trees, per the above Section 4.4.3.3.1, were trimmed and removed during the past construction activities. SCE retained a certified arborist to conduct surveys to identify trees that met regulatory protection standards. For their trimming and removal, SCE obtained two ministerial tree permits from the County of Ventura: 1) for the removal of two Eucalyptus trees and the trimming of 18 Eucalyptus trees in Segment 2, and 2) for the removal of 35 cottonwood trees in Segment 2. Because the appropriate ministerial tree permits were acquired from the County prior to removal or trimming and permit conditions were followed, any impacts were less than significant.

Did the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Assessment Summary: No Impact

Construction Impacts

No Habitat Conservation Plans or Natural Community Conservation Plans exist along the Project alignment.

Project Sections 3 and 4 traverse lands managed by COSCA; the management of these lands are guided by the Conejo Canyons Open Space Management Plan. Although the Management Plan is neither a defined Habitat Conservation Plan nor a defined Natural Community Conservation Plan, the Management Plan was prepared by COSCA in order to inventory the resources in the plan area, identify challenges and opportunities in managing these resources, and suggest actions to be taken for the long-term management and environmental sustainability of the land and resources within the Conejo Canyons.

SCE has an easement through this area that allows construction and maintenance activities associated with the existing utility corridor. The Management Plan acknowledges the presence of the utility corridor. SCE, as the easement-holder, coordinated with COSCA regarding past construction activities.

Because there are no Habitat Conservation Plans or Natural Community Conservation Plans applicable to lands traversed by the Project, and because SCE's physical infrastructure and activities are included in the Conejo Canyons Open Space Management Plan, no impacts occurred under this criterion.

4.4.6 Impact Analysis, Future Activities

Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Assessment Summary: Less Than Significant Impact

Construction Impacts, Plant Species

Two listed plant species are documented to occur in the Project Area: Conejo dudleya and Lyon's pentachaeta. One CRPR watch list species (CRPR 4.2), the Catalina mariposa lily, has been observed in the study area.

Impacts to special status plant species individuals will not occur during future construction activities. Impacts to special status plant species and individuals will be avoided and minimized by implementing, among others, those measures contained in the August 30, 2010 letter from SCE to Ms. Diane K. Noda, Field Supervisor, Ventura Fish and Wildlife Office in Appendix F:

- Focused surveys would be conducted in areas of known locations and within potentially suitable habitat no more than 30 days prior to start of construction for the following special status species: Lyon's pentachaeta and Conejo dudleya. Areas supporting Lyon's pentachaeta would be flagged prior to project activities by a qualified biologist and avoided during construction. In addition, a biological monitor shall be present during project activities occurring within the vicinity of these resources to ensure that no sensitive species are impacted.
- Areas supporting Conejo dudleya would be flagged prior to project activities by a qualified biologist and avoided during construction. In addition, a biological monitor shall be present during project activities occurring within the vicinity of these resources to ensure that no sensitive species are impacted.
- In order to maintain the native seed bank when digging holes for pole replacements within Lyon's pentachaeta critical habitat, the upper six (6) inches of topsoil would be salvaged/stockpiled at each pole location within Lyon's pentachaeta critical habitat. The topsoil would be stored on a protective surface (such as a tarp), piled no more than three feet high, and would be replaced (within two weeks) as the top layer when ground disturbing work is completed.
- Implementing the Project Worker Environmental Awareness Training, which would provide:
  - Instruction to keep vehicles on existing roads and pads
  - Instruction to avoid impacts to drainages
  - Instruction to minimize clearing of vegetation
  - Information regarding protected plant species that may be found in the Project Area, where they have been identified during past surveys, and protection measures that may be implemented.
- Restoring disturbed areas following completion of construction in accordance with the SWPPP or erosion and sediment control plan, as applicable, and other permit requirements.

Given the implementation of the Project features presented above and in Chapter 3: Project Description, the fact that future ground disturbing activities would occur in areas previously disturbed, the small area permanently disturbed as a part of future construction activities, and the large areas in the vicinity of the Project where special status plant species are found, impacts under this criterion would be less than significant.

Construction Impacts, Wildlife Species

Future construction activities would result in minor habitat loss and disturbance relative to the availability of habitat for the following species in the region. Additionally, future construction activities could result in indirect impacts, including temporary noise and human presence, dust, and vibrations, to all species discussed below.

Special Status Reptiles

Five special status reptiles are known to occur in the vicinity of the Project: silvery legless lizard, coastal whiptail, western pond turtle, coast horned lizard, and two-striped garter snake. Potentially suitable habitat exists for each of these species (except western pond turtle) in the Project Area, though none have been observed during past biological surveys. Soil disturbance may impact individual fossorial reptiles or those not observed by biological monitors in small isolated areas. Impacts on these species during future construction activities would be less than significant.

Special Status Birds

One Federally-listed Threatened bird species, the coastal California gnatcatcher, is known to occur along the Project alignment. The following avoidance and minimization measures (as contained in the August 30, 2010 letter from SCE to Ms. Diane K. Noda, Field Supervisor, Ventura Fish and Wildlife Office, and found in Appendix F) would be implemented to avoid or minimize direct and indirect impacts to the coastal California gnatcatcher:

- Focused surveys for the coastal California gnatcatcher would be conducted no more than 30 days prior to start of construction in areas with potentially suitable habitat:
- During the breeding season (February 15 through August 30), a preconstruction survey for the coastal California gnatcatcher would be conducted by a wildlife biologist possessing a valid recovery permit from the USFWS for the coastal California gnatcatcher.
- When project activities occur during the breeding season (February 15 through August 30), a 500-foot buffer will be established around the nest site, and this area will be avoided until the young fledged or until the birds abandoned the nest.
- No grading of habitat occupied by nesting coastal California gnatcatchers (including a 500-foot buffer area in all direction from the nest) will occur during the breeding season (February 15 through August 30).
- Project activities occurring within 500 feet of a mapped coastal California gnatcatcher territory will be monitored by a qualified biologist who possesses a valid recovery permit for the species. A qualified biologist would be present during clearing and pole replacement activities to ensure that native habitat (coastal sage scrub) removal is minimized.

Two other Federally-Listed species, the southwestern willow flycatcher and least Bell's vireo are known to occur in the Project vicinity. Neither species was observed during focused surveys performed in 2010 or during past construction activities. As presented in Chapter 3: Project Description, a clearance survey would be conducted for these and other special status avian species, as necessary, no more than 30 days prior to the start of construction in a particular area to identify potential wildlife species that may be impacted by construction activities. If these species continue to be absent from the Project Area, no impacts to these species are expected during future construction activities. If these species are not absent from the Project Area during future construction activities, no direct impacts to these species are

expected, and indirect impacts would not be substantial. Therefore, impacts to these species would be less than significant.

Three additional bird species that are considered special status, but that are not listed as Threatened or Endangered by State or Federal resource agencies, may occur along the Project alignment: the coastal cactus wren, yellow warbler, and the Southern California rufous-crowned sparrow. No direct impacts to these species are expected, and indirect impacts would not be substantial. Therefore, impacts to these species would be less than significant.

The Study Area provides potentially suitable nesting and foraging habitat for golden eagles and other raptors. The following avoidance and minimization measure would be implemented to avoid or minimize direct and indirect impacts to golden eagles and other raptors:

- Clearance surveys will be conducted no more than 30 days prior to the start of construction in a particular area to identify potential plant and animal species that could be present during construction activities. Clearance surveys shall be conducted by a qualified wildlife biologist in areas directly impacted by construction activities.
- SCE will develop and implement a project specific nesting bird management plan (the plan) addressing nesting birds in collaboration with the CDFW and USFWS as needed. The plan would be an adaptive management plan that may be updated as needed improvements are identified or conditions in the field change. Conditions typically implemented in this plan would include: nest management and avoidance, field approach (survey methodology, reporting, and monitoring), and the Project avian biologist qualifications. The avian biologist would be responsible for oversight of the avian protection activities including the biological monitors. In order to minimize impacts to nesting birds (common or special status), ongoing preconstruction surveys and daily sweep surveys of active construction areas by a qualified biologist would focus on breeding behavior and a search for active nests, as defined by CDFW and USFWS, within 500 feet of the Project. At a minimum, the plan would include the following:
    - For vegetation clearing that needs to occur during the typical nesting bird season (February 1 to August 31; as early as January 1 for raptors) qualified biologists would conduct nesting bird surveys. If an active nest were located, the appropriate avoidance and minimization measures from the management plan would be implemented. If active nest removal is required, SCE would consult with CDFW and USFWS.
    - During the typical nesting bird season, SCE would conduct preconstruction clearance surveys no more than 14 days prior to construction and in accordance with the adaptive management plan, to determine the location of nesting birds and territories. Preconstruction sweeps would be conducted within 3 days before construction begins at a given project location.
    - Nest monitoring would be conducted by Project biological monitors with knowledge of bird behavior under the direction of a CDFW approved avian biologist.

- Nesting deterrents (e.g., mooring balls, netting, etc.) would be used for inactive nests at the direction of the Project avian biologist.
- A Project avian biologist would determine the appropriate buffer area around active nest(s) and provisions for buffer exclusion areas (e.g., highways, public access roads, etc.) along with construction activity limits. Unless restricted by the Project avian biologist, construction vehicles would be allowed to move through a buffer area with no stopping or idling. The Project avian biologist would determine, evaluate, and modify buffers as appropriate based on species tolerance and behavior, the potential disruptiveness of construction activities, and surrounding conditions.
- The Project biological monitor would ensure implementation of appropriate buffer areas around active nest(s) during project activities. The active nest site and applicable buffer would remain in place until nesting activity concluded. Nesting bird status reports would be submitted according to the management plan.

Where wood subtransmission poles have been replaced with LWS poles during past construction activities, the previously-installed poles would be retrofitted to be avian-safe with newly available equipment and consistent with the Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006 (Avian Power Line Interaction Committee 2006). During future construction activities, newly-installed LWS poles would be designed to be avian-safe with newly available equipment and consistent with the Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006 (Avian Power Line Interaction Committee 2006).

Future construction activities could discourage raptors from foraging in the immediate vicinity of an active construction area; however, this disruption in foraging would be extremely localized and temporary in nature. Therefore, impacts on foraging and nesting raptors would be less than significant.

Limited potentially suitable habitat for the burrowing owl occurs in the extreme northern portion of the Project alignment, near Moorpark Substation. No burrowing owls were observed during field surveys in 2010 and 2011. As presented in Chapter 3: Project Description, a clearance survey would be conducted no more than 30 days prior to the start of construction in a particular area to identify potential animal species that may be impacted by construction activities. Clearance surveys include a field survey by a qualified wildlife biologist and would be limited to areas directly impacted by construction activities. Only conductor stringing related activities remain to be conducted in this area; no direct impacts to these species, if present, are expected, and indirect impacts would not be substantial. Therefore, impacts to these species would be less than significant.

Special Status Mammals

The San Diego desert woodrat has the potential to occur in the Project Area. This species is not listed or proposed to be listed as Threatened or Endangered, but is a CDFW Species of Concern. This species was not observed during field surveys in 2010 or 2011. As presented in Chapter 3: Project Description, a clearance survey would be conducted no more than 30 days prior to the start of construction in a particular area to identify potential animal species

that may be impacted by construction activities. Clearance surveys include a field survey by a qualified wildlife biologist and would be limited to areas directly impacted by construction activities. If individuals are present but unobserved during the clearance surveys, future construction activities could result in limited indirect impacts such as noise and human presence, dust, and periodic vibrations. No direct impacts to this species, if present, are expected to occur, and indirect impacts would not be substantial. Therefore, impacts to this species would be less than significant.

The Project Area may include foraging habitat for two bat species: western mastiff bat and pallid bat. Neither species was observed during field studies conducted in 2010 and 2011. As presented in Chapter 3: Project Description, a clearance survey would be conducted no more than 30 days prior to the start of construction in a particular area to identify potential animal species that may be impacted by construction activities. Clearance surveys include a field survey by a qualified wildlife biologist and would be limited to areas directly impacted by construction activities. Future construction activities would not affect the overall availability of prey in the Project Area for bats. No direct impacts to these species would likely occur, and indirect impacts would not be substantial, and thus impacts to these species are considered to be less than significant.

Operation Impacts

Operation and maintenance activities as described in Chapter 3: Project Description would be conducted along the length of the Project.

As presented in Chapter 3: Project Description, SCE will develop and implement a project specific nesting bird management plan and the subtransmission poles (both LWS poles and TSPs) will be designed consistent with the Suggested Practices for Raptor Protection on Power Lines: the State of the Art in 2006 (APLIC Guidelines); this would reduce direct impacts to raptors. In addition, installation and operation of subtransmission infrastructure is not expected to provide important roosting habitat for bat species.

Therefore, impacts would be less than significant.

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Native Grasslands and Sage Scrub

Native grassland and sage scrub communities are found in Project Sections 3 and 4. The majority of impacts to these sensitive communities were realized during the past construction activities, only minor impacts to sensitive plant communities would be realized as a result of the limited future ground disturbing activities described in Chapter 3: Project Description. Temporary impacts to sensitive plant communities may occur in locations where native vegetation would be removed but that would be subsequently restored at the conclusion of

construction activities; permanent impacts to sensitive plant communities would be realized in those locations where sensitive plant communities are located in areas at or adjacent to pole removal/replacement locations. Permanent impacts would also occur where sensitive plant communities are located on or immediately adjacent to access and spur roads that may be rehabilitated.

Impacts to sensitive plant communities would be avoided or minimized by incorporating recommendations provided in biological survey reports prepared for the Project, among others. Impacts would be avoided or minimized by:

- Conducting clearance surveys no more than 30 days prior to the start of construction in a particular area to identify potential plant and animal species that may be impacted by construction activities. Clearance surveys would include a field survey by a qualified botanist and would be limited to areas directly impacted by construction activities.
- Implementing the Project Worker Environmental Awareness Training, which will, among other things, provide:
  - Instruction to keep vehicles on existing roads and pads
  - Instruction to avoid impacts to drainages
  - Instruction to minimize clearing of vegetation.
- A qualified biologist will be present during clearing and restoration activities to ensure that native habitat (coastal sage scrub) removal is minimized.

Following construction activities, the majority of newly-disturbed areas would be reclaimed and revegetated, allowing for and encouraging the re-establishment of sensitive plant communities in these areas. Given the implementation of Project features presented in Chapter 3: Project Description, post-construction reclamation activities, and the small areas permanently impacted compared to the large areas occupied by these sensitive communities in the region, less than significant impacts would be realized during future construction activities.

Riparian Habitat

No future construction activities would occur within riparian habitat; conductor would be strung above riparian habitat. As a result, no impacts to riparian habitat are expected from future construction activities.

Operation Impacts

Project related operation activities would be similar in scope and type to operation activities currently conducted along the existing SCE ROWs in which the Project would be operated. These activities would generally include routine inspection using a light-duty pickup truck, occasional routine cleaning or maintenance of insulators and other subtransmission infrastructure, and vegetation management. Operations activities would utilize the existing, disturbed access roads and existing pads. Minor impacts to small areas of habitat may occur during maintenance activities (e.g., during culvert cleanout to protect existing roads). Impacts would be less than significant.

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means?

Assessment Summary: No Impact

Construction Impacts

No Federally-protected wetlands are identified along the Project alignment, and thus the Project would not have any adverse effect on Federally-protected wetlands as defined by Section 404 of the Clean Water Act. Therefore, no impacts would occur under this criterion.

Operation Impacts

No future Project operation related activities would occur within Federally-protected wetlands as defined by Section 404 of the Clean Water Act. Therefore, no impacts would occur under this criterion.

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Future construction activities would be temporary and would affect only small, geographically-dispersed areas at any one time; these construction activities would not interfere substantially with the movement of any wildlife species, although construction activities may interfere with the movement of individual animals. No future construction activities would occur in any location that could interfere with the movement of a fish species. Future construction activities would not substantially alter the physical characteristics of the Project Area, and would not introduce any new permanent uses that could interfere with an established wildlife corridor.

There are no known native wildlife nursery sites in the Project Area, and thus the future construction activities associated with the Project would not impede the use of such a site or sites. Therefore, less than significant impacts would occur under this criterion.

Operation Impacts

Operation and maintenance activities as described in Chapter 3: Project Description would be conducted along the length of the Project. Given the periodic but infrequent nature of these operations related activities, less than significant impacts would occur under this criterion.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

SCE would comply with applicable local policies and ordinances protecting biological resources. SCE will retain a certified arborist to survey for protected trees to identify trees meeting regulatory protection standards. When applicable, the proper permit shall be obtained for trimming and/or removal of protected trees. Therefore, less than significant impacts would occur under this criterion.

Operation Impacts

SCE would comply with applicable local policies and ordinances protecting biological resources. SCE would apply for and obtain a ministerial tree permit for the trimming and/or removal of tree(s), as necessary. Therefore, less than significant impacts would occur under this criterion.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Assessment Summary: No Impact

Construction Impacts

No Habitat Conservation Plans or Natural Community Conservation Plans exist along the Project alignment.

Project Sections 3 and 4 traverse lands managed by COSCA; the management of these lands are guided by the Conejo Canyons Open Space Management Plan. Although the Management Plan is neither a defined Habitat Conservation Plan nor a defined Natural Community Conservation Plan, the Management Plan was prepared by COSCA in order to inventory the resources in the plan area, identify challenges and opportunities in managing these resources and suggest actions to be taken for the long-term management and environmental sustainability of the land and resources within the Conejo Canyons.

SCE has an easement through this area that allows construction and maintenance activities associated with the existing utility corridor. The Management Plan acknowledges the presence of the utility corridor. SCE, as the easement-holder, would coordinate with COSCA regarding future construction activities.

Because there are no Habitat Conservation Plans or Natural Community Conservation Plans applicable to lands traversed by the Project, and because SCE's physical infrastructure and activities are included in the Conejo Canyons Open Space Management Plan, no impacts would occur under this criterion.

Operation Impacts

Operation and maintenance activities as described in Chapter 3: Project Description would be conducted along the length of the Project. As presented above for Construction Impacts, there are no Habitat Conservation Plans or Natural Community Conservation Plans applicable to lands traversed by the Project, and SCE's physical infrastructure and activities are included in the Conejo Canyons Open Space Management Plan. Therefore, operations activities would not conflict with the provisions of an approved plan, and there would be no impact under this criterion.

4.4.7 References

Avian Power Line Interaction Committee (APLIC). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington D.C. and Sacramento, CA.

Atwood, J.L. 1992. A maximum estimate of the California Gnatcatcher's population size in the United States. W. Birds 23:1-9.

Atwood, J.L., S.H. Tsai, C.H. Reynolds, J.C. Luttrell and M.R. Fugagli. 1998. Factors affecting estimates of California Gnatcatcher territory size. Western Birds 29: 269-279

Bennett, A.F. 1990. Habitat Corridors: Their role in wildlife management and conservation. Melbourne: Department of Conservation and Environment, Victoria, Arthur Rylah Institute for Environmental Research.

CalFlora. 2012. The CalFlora Database: information on California plants for education, research and conservation. The CalFlora Database, Berkeley, California. [Web Page]. Located at http://www.calflora.org/.

California Department of Fish and Game (CDFG). 2005. CWHR version 8.1 personal computer program. California Interagency Task Group, California Department of Fish and Game, Sacramento, CA.

CDFG. 2010. Rarefind: California Department of Fish and Game Natural Diversity Database. Version 3.1.0. Commercial version, dated September 3, 2011. California Department of Fish and Game, Sacramento, CA.

CDFG. 2012. Life History Accounts and Range Maps – California Wildlife Habitat Relationships System. [Web Page]. Located at http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx.

California Herps. 2012. A Guide to the Amphibians and Reptiles of California. [Web Page]. Located at http://www.californiaherps.com.

California Native Plant Society (CNPS). 2012. Inventory of Rare, Threatened, and Endangered Plants of California (eighth edition). California Native Plant Society, Sacramento, CA. [Web Page]. Located at http://www.rareplants.cnps.org/.

CNPS. 2010. Inventory of Rare and Endangered Plants of California (seventh edition, online version 7-010d). California Native Plant Society, Sacramento, CA. [Web Page]. Located at http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi.

Campbell, K.F., R.A. Erickson, W.E. Haas and M.A. Patten. 1998. California Gnatcatcher use of habitats other than coastal sage scrub: conservation and management implications. Western Birds 29: 421-433

Fahrig, L. and G. Merriam. 1985. Habitat patch connectivity and population survival. Ecology 66: 1762-1768.

Garrett, K. and J. Dunn. 1981. Birds of southern California: status and distribution. Los Angeles Audubon Society, Los Angeles, California.

Goldwasser, S. 1981. Habitat requirements of the least Bell's vireo. Calif. Dept. of Fish and Game Final Report., Job IV-38.1.

Harris, L.D. and P.B. Gallagher. 1989. New initiatives for wildlife conservation: the need for movement corridors. In: G. Mackintosh (ed.), Preserving Communities and Corridors. Defenders of Wildlife, Washington, DC, pp. 11-34

Hickman, James C. 1993. The Jepson Manual. Higher Plants of California. Univ. of California Press Berkeley

MacArthur, Robert H. and Edward O. Wilson. 1967. The Theory of Island Biogeography. Princeton University Press

Munz, Philip A. 1974. A Flora of Southern California. Univ. of California Press Berkeley

Noss, R.F. 1983. A regional landscape approach to maintain diversity. BioScience 33:700-706.

National Resource Conservation Services (NRCS). 2008. Soil Survey Geographic (SSURGO) database for Ventura Area, California. NRCS Soil Survey CA674. Published January 3, 2008. [Web Page]. Located at http://SoilDataMart.nrcs.usda.gov.

Proudfoot, G.A., D.A. Sherry and S. Johnson. 2000. Cactus Wren (Campylorhynchus brunneicapillus). In the Birds of North America, No. 558 (A. Poole and G. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Ritter, Michael E. 2006. The Physical Environment: an Introduction to Physical Geography.

Salata, L. 1983. Status of the least Bell's vireo on Camp Pendleton, California: report on research done in 1983. Unpubl. Rept., U. S. Fish and Wildlife Service, Laguna Niguel, CA.

Simberloff, D. and J. Cox. 1987. Consequences and Costs of Conservation Corridors. Conservation Biology, 1: 63-71

Soule, M.E. 1987. Where do we go from here? *In* M. E. Soule (editor), Viable populations for conservation, p. 175-183. Cambridge Univ. Press, Cambridge

U.S. Fish and Wildlife Service (USFWS). 1994. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Least Bell's Vireo. Federal Register. Vol. 59, No. 22. Wednesday, February 2, 1994. Rules and Regulations, pg. 4845 et seq.

USFWS. 2003. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Coastal California Gnatcatcher (Polioptila californica californica) and Determination of Distinct Vertebrate Population Segment for the California Gnatcatcher (Polioptila californica): Proposed Rule. Published in Federal Register, Vol. 68, No. 79, Thursday, April 24, 2003

USFWS. 2006. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Astragalus brauntonii and Pentachaeta lyonii: Final Rule. Published in Federal Register, Vol. 71, No. 219, Tuesday, November 14, 2006.

USFWS. 2007. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher. Federal Register. Vol. 72, No. 2243. Wednesday, December 19, 2007. Rules and Regulations, pg. 72010 et seq.

USFWS. 2010. Coastal California gnatcatcher (Polioptila californica californica) 5-year Review: Summary and Evaluation. Carlsbad Fish and Wildlife Office, Carlsbad, California.

Ventura County. 2006. Vegetation Mapping for the Moorpark-Newbury 66 kV Subtransmission Line Project. Acquired in 2012.

4.5 Cultural Resources

This section describes the cultural resources in the area of the Project. Past and potential future impacts to cultural resources (i.e., archaeological and historical resources) are discussed first, followed by a discussion of past and potential future impacts to paleontological resources. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3: Project Description would be performed.

4.5.1 Cultural Resources Environmental Setting

The Project is located in the City of Moorpark, the City of Thousand Oaks, and portions of unincorporated Ventura County. The project alignment passes through parts of the Little Simi Valley, the Las Posas Hills, the Santa Rosa Valley, and the Conejo Canyons area. Moving south from its starting point at Moorpark Substation across the Santa Rosa Valley, the alignment crosses landforms that have been stripped of native vegetation and developed by mixed residential and/or agricultural use. Throughout this area, mechanical disturbance as a result of access roads, residential lots, and orchard terraces, is common (Romani 2007).

Along its southern portion, the alignment crosses over a series of rugged ridgelines and along the course of an unnamed ephemeral drainage, to its terminus at Newbury Substation. Mechanical disturbance in this area generally consists of graded primary and subsidiary access corridors, and some communication and transmission facility locations along ridge tops. Soils in these Project Sections are light brown decomposing sandstone with an admixture of volcanic rocks and cobbles. In areas of native vegetation, species commonly associated with southern coastal sage scrub and chaparral communities are found.

4.5.1.1 Cultural Context

This section summarizes the prehistoric regional and cultural history of the Project Area. The discussion has been limited to the Native American group (the Chumash) described as occupying the Project Area at the time of European contact and the historically documented activities following European contact. A more detailed description of timeframes and theories surrounding the formation, establishment, organization, and cultural or physical affinities of earlier populations can be found in Moratto (1984) and Wallace (1978).

At the time of European contact, Chumash occupied a large area that extended south along the California coast from San Luis Obispo County into Los Angeles County, and east to Kern County, and also included the Santa Barbara Channel Islands of San Miguel, Santa Rosa, Santa Cruz and Anacapa (Glassow 1980; Grant 1978a). The Project Area lies within the territory occupied at that time by native peoples speaking one of six major dialects of the Chumash language.

Known as the Ventureño Chumash, this group was subdivided from their culturally similar neighbors to the north and west, the Ynezeño and Barbareño Chumash, on the basis of linguistic deviations noted by early Spanish missionaries in the area, rather than on any apparent difference in social or economic organization. The Ventureño, so named because of their association with Mission San Buenaventura, were the southernmost of the Chumash

peoples and spoke one of four dialects considered as forming a core group of more closely related forms (Grant 1978a; Kroeber 1953).

Chumash society developed over the course of approximately 9,000 years and has been described as having achieved a level of social, political, and economic complexity not ordinarily associated with hunting and gathering groups (Greenwood 1972). Ethnographic information on Chumash culture is most extensive for the coastal populations and the culture and society have been well documented for groups such as the Barbareño and Ventureño Chumash.

Much of what is known of the Ventureño has been provided by the journals of early Spanish expeditions and by accounts from the Chumash themselves. The Ventureño, like their neighbors, exploited a wide variety of marine and terrestrial resources within an ecosystem similar to that of their western neighbors the Barbareño. The Barbareño Chumash occupied a narrow coastal plain bounded on the north by the Santa Ynez Mountains, with a productive fishery found in adjacent near-shore waters. The Barbareño Chumash established substantial permanent villages which provided a centralized location from which the inhabitants ventured to exploit available resources, and for the dispersal of surplus or manufactured goods through inter-village exchange networks (Glassow and Wilcoxon 1979).

European incursions into the area began with the arrival by sea of Juan Rodriguez Cabrillo on October 10, 1542, at the coastal Chumash village of *Shisholop*. Here, at the present site of the City of Ventura, the Spaniards were met by "many very good canoes, each of which held 12 or 13 indians," which prompted the visitors to name the settlement the Pueblo de las Canoas. Cabrillo and his men remained in the area until the 13th of the month, trading glass beads for items of local produce (Engelhardt 1930; Grant 1978b). This first encounter was followed, again by sea, in December, 1602, by a visitation of three ships under the command of Sebastian Vizcaino and in August, 1769, by the land expedition commanded by Gaspar de Portola. On Easter Sunday, March 31, 1782, Junipero Serra established the new "Mission of the Seraphic Doctor, San Buenaventura", and left as its first residents Father Pedro Cambon and a small company of guards (Engelhardt 1930).

The introduction of the Spanish mission system into Ventureño territory brought about dramatic changes in the aboriginal way of life. Between the time of the establishment of the Mission San Buenaventura (1782) and the secularization of mission lands (1834), ancient lifeway gradually began to disappear. Villages were abandoned, and hunting and gathering activities were disrupted as newly introduced agricultural practices altered the landscape, and large portions of the native population were decimated by European diseases.

4.5.2 Summary of Findings from Research Conducted for the Project

4.5.2.1 Cultural Resources Records Search

4.5.2.1.1 Methods

Records searches were conducted through the South Central Coastal Information Center (SCCIC) in 2007; the purpose of the records search was to determine the extent of previous investigations within 0.25 miles of the Project Sections, and to determine whether previously-documented prehistoric or historic archaeological sites, isolated findings, architectural resources, cultural landscapes, or ethnic resources exist within the Project Area. The reviewed documentation included survey and evaluation reports, archaeological site records, historic maps, the California Points of Historical Interest (CPHI), the California Historical Landmarks (CHL), the California Register of Historical Resources (CRHR), the National Register of Historic Places (NRHP), and the California State Historic Resources Inventory listings (HRI).

4.5.2.1.2 Results

The SCCIC records searches identified 28 previously-conducted cultural resources studies within the Project Area and a 0.25-mile search radius. Seventeen of the studies that encompassed a portion of the Project Area reported no prior evidence of prehistoric or historic era cultural resources.

4.5.2.2 Native American Notification

At the request of SCE, the Native American Heritage Commission (NAHC) conducted a search in late 2007 of the Sacred Lands File to identify cultural resources or areas of concern to Native Americans within the vicinity of the Project Area. The NAHC's search "failed to indicate the presence of Native American cultural resources in the immediate project area", and provided a list of 11 Native American individuals/organizations that may have knowledge of cultural resources in the Project Area (see Appendix C).

SCE sent letters to all recommended contacts on December 11, 2007. To date, a response noting interest has been received from the Owl Clan, Qun-tan Shup. Mrs. A-lul'Koy Lotah expressed concern for Chumash cultural sites "located in the New Source Line proposed project site and up to a 5 mile radius around the proposed project areas".

A second NAHC inquiry was made in November 2012; NAHC provided a list of 22 Native American individuals/organizations that may have knowledge of cultural resources in the Project Area. Ten of these individuals/organizations were on the list received in 2007, and 12 are new. SCE has sent letters to all 22 individuals/organizations; one response has been received to date. Ms. Isabella Ayala, the Ventura County Regional Representative, Coastal Band of the Chumash Nation, requested that she be contacted if the Project will impact Native American cultural resources.

4.5.2.3 Cultural Resources Pedestrian Survey

4.5.2.3.1 Methods

In 2007, the Project Area was assessed for cultural resources (Romani 2007). This included assessments in three sections:

- Cultural Resources Assessment Section 1, located entirely with Project Section 2, contained two construction lay down areas, three access road segments, and a 34 meter (~100 ft.) diameter area for each of 32 steel pole locations
- Cultural Resources Assessment Section 2, including portions of Project Sections 2 and 3 from pole location 18 to pole location 32, contained 14 tower locations and two lay down areas, and a 34 m (~100 ft.) diameter area for each pole location
- Cultural Resources Assessment Section 3, including portions of Project Sections 3 and 4 from pole location 33 to pole location 67, contained 36 pole locations (8 TSP installation locations, 1 LST removal location, and 27 LWS pole installation locations, and a 34 m (~100 ft.) diameter area for each pole location

Moorpark Substation and Newbury Substation were not surveyed, as these areas were, and remain, disturbed.

The cultural resources survey used parallel pedestrian transects spaced at no greater than 15 m to visually inspect the ground surface for indications of cultural resources. In some locations, the survey was hampered by extreme terrain, but generally included all landforms within a 15-20 m radius of existing/proposed tower locations, access roads and lay down areas. The survey included a 34 m (~100 ft.) wide corridor along the Santa Rosa Valley floor.

4.5.2.3.2 Results

The pedestrian survey of the Project Sections conducted in 2007 identified three previously-unidentified cultural resources. The three previously-unidentified cultural resources include: P56-100196 (MN-1, a sparse flake scatter with a few fragments of marine shell); P56-001797 (MN-2, CA-VEN-1797, a sparse flake scatter with a variety of material types and fire altered rock in midden [ashey] soil); and P56-100197 (MN-3, a sparse lithic scatter with a variety of material types). All three cultural resources are located within previously-disturbed areas.

Based on the identification of previously-unidentified cultural resources, additional studies were conducted. Extended Phase I (EXPI) limited subsurface investigations were undertaken at each of the three cultural resource areas. These investigations included surface scrapes, excavations of shovel test pits, one 1x1 m controlled excavation unit at P56-001797, and mapping of each of the resource areas (Schmidt et al 2008). A Native American archaeological observer was present during these archaeological investigations.

EXPI excavations resulted in the following observation and determinations regarding each of the three resources:

P56-100196, a sparse flake scatter, was found to be mechanically-disturbed with an absence of a subsurface component. As such, the site was recommended not eligible for inclusion in the CRHR or local registers.

P56-001797 contained a subsurface component between 0 and 80 centimeters (cm) below the surface. Previous observations regarding the diversity of material type were confirmed. Subsurface excavations expanded the previously-identified flake scatter to include a biface tool, cores, fragments of non-human bone and carbonized plant remains. Excavation revealed a prehistoric feature consisting of a dense concentration of fire-affected rocks within a matrix of ash and charcoal laden soils. The feature covered an area approximately 12 meters in diameter and was 50-60 cm thick. Based on the radiocarbon analysis of two charcoal samples recovered from the feature, deposition occurred between approximately 950 and 1,250 years before present (B.P.).

Based on analysis of data from the EXPI it was determined site P56-001797 may be eligible for the CRHR under Criterion D (i.e., the site has yielded, or may be likely to yield, information important to prehistory or history).

P56-100197 was primarily a surface scatter of lithic artifacts in an area of mechanically disturbed soils. No midden soils or features were encountered. Artifacts from the site are thought to be from a nearby, but unidentified subsurface deposit. P56-100197 lacks integrity. As such, the site was recommended not eligible for inclusion in the CRHR or local registers.

4.5.3 Cultural Resources Regulatory Setting

4.5.3.1 Federal Regulatory Setting

No Federal regulations are applicable to the Project because it does not traverse any Federal lands and does not require any Federal authorizations.

4.5.3.2 State Regulatory Setting

When evaluating projects under its jurisdiction, the CPUC is required to comply with, among other things, all provisions in the California Environmental Quality Act (Pub. Resources Code § 21000 et seq., CEQA) and the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.) that concern cultural resources (including CEQA Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5), as explained below.

Cultural resources, as defined in CEQA, include prehistoric and historic-era archaeological sites, districts, and objects; historic buildings, structures, objects, and districts; and traditional/cultural sites or the locations of important historic events. CEQA Guidelines Section 15064.5 states that a project may have a significant environmental effect if it causes a substantial adverse change in the significance of a historical resource. Additionally, the Lead

Agency must consider properties eligible for listing on the CRHR or that are defined as a unique archaeological resource in Public Resources Code Section 21083.2.

Impacts to "unique archaeological resources" also must be evaluated under CEQA, as described under Public Resources Code Section 21083.2. As defined by this Section, a unique archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that in addition to adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type
- Is directly associated with a scientifically recognized important prehistoric or historic event or person

A non-unique resource is one that does not fit any of the above criteria.

4.5.3.2.1 California Register of Historical Resources

Cultural resources that meet the criteria of eligibility to the CRHR are termed "historic resources." Archaeological resources that do not meet CRHR criteria also may be evaluated as "unique;" impacts to such resources could be considered significant, as described below.

A site meets the criteria for inclusion on the CRHR if:

A. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
B. It is associated with the life or lives of a person or people important to California's past
C. It 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
D. It has yielded, or may be likely to yield, information important to prehistory or history

A resource eligible for the CRHR must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the NRHP, but it may still be eligible for listing in the CRHR.

The CRHR automatically includes the following:

- California properties listed on the NRHP and those formally Determined Eligible for the NRHP
- California Registered Historical Landmarks from No. 770 onward

- Those CPHIs that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Commission for inclusion on the CRHR

Other resources that may be nominated to the CRHR include:

- Historical resources identified under State Historic Resource Codes 3 through 5
- Individual historical resources
- Historical resources contributing to historic districts
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone

4.5.3.2.2 California Native American Graves Protection and Repatriation Act

This legislation, codified at California Health and Safety Code, Division 7, Part 2, Chapter 5 (Sections 8010-8030), sets forth broad provisions for the protection of Native American cultural resources and implements the State's policy of ensuring that all California Native American human remains and cultural items are treated with due respect and dignity. These Sections also provide a mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. Likewise, these Sections also outline the mechanism with which California Native American tribes not recognized by the Federal government may file claims to human remains and cultural items held in agencies or museums.

4.5.3.2.3 California Public Resources Code § 5020

Legislation enacting Public Resources Code Section 5020 resulted in the creation of the California Historic Landmarks Committee in 1939, and authorized the Department of Parks and Recreation to designate Registered Historical Landmarks and Registered Points of Historical Interest.

4.5.3.2.4 California Public Resources Code § 5097.9

California Public Resources Code Section 5097.9 sets forth the actions to be taken whenever Native American remains are discovered. Under that Section, no public agency and no private party using or occupying public property, or operating on public property, under a public license, permit, grant, lease, or contract made on or after July 1, 1977, may in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the United States Constitution and the California Constitution; nor may any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.

4.5.3.2.5 California Public Resources Code § 5097.98

Section 5097.98 sets forth the procedures to be followed upon discovery of Native American human remains. These procedures include notification of those persons most likely descended from the deceased; inspection of the discovery site by the descendants; recommendations for treatment or disposition of the remains; and the measures to prevent further damage or disturbance to the discovery site.

4.5.3.2.6 California Public Resources Code § 7050.5

Section 7050.5 states, in part, that every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in Section 5097.99 of the Public Resources Code. The Section also notes that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined. If the coroner determines that the remains are not subject to his or her authority, and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

4.5.3.2.7 California Public Resources Code § 7051

Section 7051 notes, in part, that every person who removes any part of any human remains from any place where it has been interred, or from any place where it is deposited while awaiting interment or cremation, with intent to sell it or to dissect it, without authority of law, or written permission of the person or persons having the right to control the remains under Section 7100, or with malice or wantonness, has committed a public offense that is punishable by imprisonment in the State prison.

4.5.3.2.8 Title 14 California Code of Regulations § 4307

Under this State preservation regulation, no person shall remove, injure, deface, or destroy any object of paleontological, archaeological, or historical interest or value.

4.5.3.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.5.3.3.1 Ventura County General Plan

The Ventura County General Plan contains a number of goals and policies related to paleontological and cultural resources. The goals contained in the General Plan are as follows:

Goal 1. Identify, inventory, preserve, and protect the paleontological and cultural resources of Ventura County (including archaeological, historical, and Native American resources) for their scientific, educational, and cultural value.

Goal 2. Enhance cooperation with cities, special districts, other appropriate organizations, and private landowners in acknowledging and preserving the County's paleontological and cultural resources.

The policies contained in the Ventura County General Plan which may apply to non-discretionary developments are as follows:

Policy 3. Mitigation of significant impacts on cultural or paleontological resources shall follow the Guidelines of the State Office of Historic Preservation, the State NAHC, and shall be performed in consultation with professionals in their respective areas of expertise

Policy 4. Confidentiality regarding locations of archaeological sites throughout the County shall be maintained in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

Policy 6. The Building and Safety Division shall employ the State Historic Building Code for preserving historic sites in the county.

4.5.3.3.2 City of Moorpark, General Plan

The City of Moorpark's General Plan contains no policies or goals related to cultural resources.

4.5.3.3.3 City of Thousand Oaks General Plan, Conservation Element

The City of Thousand Oaks General Plan Conservation Element contains the following policies:

Policy CO-33. Management of cultural resources such as archaeological sites, historic structures or places shall emphasize resource protection and preservation.

Policy CO-34. The preferred method for preserving any previously recorded archeological site shall be by deed restriction as permanent "open space", in order to prevent any future development or use that might otherwise adversely impact these resources.

Policy CO-35. Decisions pertaining to the disposition of archaeological, historical and cultural resources shall be made in concert with recognized public agencies, groups or individuals having jurisdiction, expertise or interest in these matters, including but not limited to the State Office of Historic Preservation, Thousand Oaks Cultural Heritage Board and local Native American Indian Council, including other designated representatives and affected property owners.

4.5.4 Cultural Resources Significance Criteria

The significance criteria for assessing the impacts to cultural resources come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5
- Disturb any human remains, including those interred outside of formal cemeteries

4.5.5 Cultural Resources Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Assessment Summary: No Impact

Construction Impacts

No impacts to potential historical (CRHR eligible) resources occurred during past construction activities. Records searches and pedestrian survey results indicate that no historical resources are located within the area of potential impact, and therefore no impact to historical resources occurred, and no adverse change in the significance of a historical resource was realized.

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

Assessment Summary: Less than Significant Impact

Construction Impacts

Three archaeological resources were identified in locations where they could have potentially been impacted by past construction activities; one of these (P56-001797) was determined to be a potentially important archaeological resource that could meet the criteria for CRHR eligibility.

Prior to the start of past construction activities, P56-001797 was physically isolated within an SCE-established Environmentally Sensitive Area (ESA) in which construction activities were prohibited, and from which construction workers were excluded.

In addition to the protection provided by avoidance, the following were implemented:

- An archaeological monitor was on site during ground disturbing activity in the vicinity of the three archaeological resources.
- A preconstruction meeting to orient construction crews to sensitive areas was held prior to any ground disturbing activity within the vicinity of the three sites.
- Had cultural material that may have yielded sensitive information been uncovered during construction, then all work within a 15-meter radius of the discovery would have been halted until the find could have been evaluated by a qualified archaeologist. Had human remains been unearthed during excavation, no further disturbance would have occurred until the County Coroner had made the necessary findings as to origin and distribution pursuant to Public Resources Code Section 5097.98. However, no cultural material or human remains were uncovered during past construction activities.
- If construction was halted because of an archaeological discovery, no work would have begun within that area until written notification from a qualified archaeologist was given to the project manager or construction foreman.

In addition, SCE implemented its Project Worker Environmental Awareness Plan (WEAP), as described in Chapter 3: Project Description, which included a discussion of cultural resources and established procedures for protecting known resources and treating previously unidentified cultural resources. With establishment of the ESA, on-site monitoring, and implementation of the WEAP, past construction activities did not cause a substantial adverse change in the significance of an archaeological resource. In addition no unanticipated discoveries were found.

Did the project disturb any human remains, including those interred outside of formal cemeteries?

Assessment Summary: No Impact

Construction Impacts

The Project Area does not contain any known cemeteries or burial features. The potential for encountering Native American human remains exists throughout California, and it is not always possible to predict where Native American human remains might occur outside of formal cemeteries. Therefore, ground disturbing activities always have the potential to disturb human remains, including those interred outside of formal cemeteries. However, no human remains were identified or disturbed during the past construction activities, and thus no impacts occurred under this criterion.

4.5.6 Cultural Resources Impact Analysis, Future Activities

Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Records searches and pedestrian survey results indicate that no historical resources are located within the area of potential impact. A cultural resources survey of areas that could not be previously accessed would be conducted prior to the resumption of construction. The WEAP, as described in Chapter 3: Project Description, would provide training for SCE and Contractor crews regarding historic preservation laws, SCE policies, the identification of historical resources, and procedures to be followed in the event of an unanticipated discovery as described in Chapter 3: Project Description. Impacts to historical resources would be less than significant with implementation of the WEAP.

Operation Impacts

There are no known historical resources as defined in Section 15064.5 in the Project Area. Given the small scope of work associated with operations and maintenance activities, as well as the fact that work would be conducted on previously disturbed areas, there is little likelihood of encountering any unanticipated historical resources during Project operation. Therefore, impacts to historical resources from operation of the Project would be less than significant.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

Three archaeological resources were identified in locations where they could potentially be impacted by future construction activities; one of these (P56-001797) was determined to be a potentially important archaeological resource that could meet the criteria for CRHR eligibility.

At P56-001797, SCE will avoid impacts by physically isolating it within an SCE-established ESA in which construction activities will be prohibited, and from which construction workers will be excluded.

In addition, a Project WEAP, which will include a discussion of cultural resources and will establish procedures for protecting known resources, would be implemented. As was the case for the past work already performed, this WEAP would also inform workers of procedures for identifying and reporting cultural resources discovered during construction. The physical protection provided by the ESA, and implementation of a WEAP and the

techniques and procedures presented above, would prevent substantial adverse change in the significance of a known archaeological resource.

In the event of a cultural resources discovery, continued implementation of an unanticipated discovery plan, further described in Chapter 3: Project Description, would guide the protection of potentially eligible archaeological resources during construction. Implementation of these measures would prevent substantial adverse change in the significance of an unknown archaeological resource. Therefore, impacts under this criterion would be less than significant.

Operation Impacts

Operations related activities, as described in Chapter 3: Project Description, would be conducted on the same land and at the same sites as construction activities. These activities have a low potential to impact archaeological resources. In addition, locations of potential and known archaeological resources are maintained by SCE staff, and work approval procedures are in place to protect these resources. Given these procedures, less than significant impacts under this criterion are projected.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

The Project Area does not contain any known cemeteries or burial features. The potential for encountering Native American human remains exists throughout California, and it is not always possible to predict where Native American human remains might occur outside of formal cemeteries. Therefore, ground-disturbing activities could disturb human remains, including those interred outside of formal cemeteries.

Human remains were not identified during the past construction activities. Any unanticipated impacts to human remains during future construction activities along any portions of the Project not previously identified as having evidence of human remains would be less than significant given WEAP training of all workers. Further, implementation of the WEAP and procedures outlined in Chapter 3: Project Description would ensure that the remains would be treated in accordance with CEQA Guidelines Section 15064.5(d) and (e). Therefore, any impacts to human remains resulting from construction of the Project would be less than significant.

Operation Impacts

Operations related activities, as described in Chapter 3: Project Description, would be conducted on the same land and at the same sites as construction activities. If human remains are discovered during Project operations, work would stop, and the procedures similar to those outlined in the WEAP and in Chapter 3: Project Description would be implemented. The remains would be treated in accordance with CEQA Guidelines Section 15064.5(d) and (e). Therefore, any impacts would be less than significant.

4.5.7 Paleontological Resources Environmental Setting

A locality search was conducted through the online database of the University of California Museum of Paleontology (UCMP) (UCMP 2012). This locality search included a review of area geology and known paleontological resources recovered from the surrounding area, as well as the geologic units in the Project Area. According to the locality and archival research conducted for this study, some of the mapped formations have produced fossils and have a low to high paleontological sensitivity (Table 4.5-1) (see Figures 4.6-1a and 1b in Section 4.6 for the locations of various soil types).

Table 4.5-1: Geologic Units and Paleontological Sensitivity within Project Area

Geologic Unit	Age	Typical Fossil Types	Paleontological Resource Potential	Project Section
Quaternary Alluvium	Quaternary	Vertebrates; Invertebrates	Low to High (Increases with Depth)	1, 2
Saugus Formation	Pleistocene	Terrestrial Vertebrates	Moderate	2
San Pedro Formation/ Las Posas Sand	Pleistocene	Marine Invertebrates, Rare Vertebrates	Moderate	2
Conejo Volcanics	Miocene	None	Very Low	3, 4

Geologic mapping by Dibblee (1992) indicates that the Project Area contains exposures of the Conejo Volcanics, San Pedro Formation/Las Posas Sand, Saugus Formation, and Quaternary (late Pleistocene to Holocene) alluvium.

4.5.7.1.1 Quaternary Alluvium

Holocene (less than 11,000 years before present [B.P.]) and Late Pleistocene (1.8 million years to 11,000 years B.P.) alluvium is present the Little Simi Valley and Holocene alluvium is present in the Santa Rosa Valley. Undifferentiated Quaternary alluvial deposits are present on the lower flanks of the Calleguas Hills and in Conejo Valley. These poorly consolidated silt, sand, and gravel deposits were deposited along modern drainages and piedmont alluvial fans and floodplains. Because this unit spans both the Holocene and Pleistocene Epochs, the paleontological sensitivity of the unit varies by depth. Where Quaternary alluvium was deposited during the Holocene (from 10,000 years ago to the present), there is no sensitivity for fossils because fossils, by definition, are more than 10,000 years old. By contrast, fossils from Pleistocene alluvial sediments are well represented throughout the Transverse Ranges. For example, the Simi Mammoth on display at the Los Angeles County Museum of Natural History was excavated from Pleistocene alluvium of Ventura County. According to UCMP records, other Quaternary fossils from Ventura County include birds, horses, and bison. Alluvial deposits are present along portions of Project Sections 1 and 2.

4.5.7.1.2 Saugus Formation

The Saugus Formation is composed of loosely consolidated nonmarine sandstone, conglomerate, and siltstone. UCMP collections do not indicate any record of vertebrate fossils from the Saugus Formation. However fossils attributed to the San Pedro Formation may have actually been deposited in the Saugus Formation. The Saugus Formation is exposed in the Las Posas Hills along Project Section 2.

4.5.7.1.3 San Pedro Formation/Las Posas Sand

The San Pedro Formation and Las Posas Sand are mapped within the Project Area. Both units are Pleistocene in age (approximately 250,000 years old) and represent the weakly consolidated marine sandstones and gravelly sand units that underlie the Saugus Formation. According to Bramlette et al. (1946), the Las Posas Sand contains a shallow water invertebrate fauna, and a ray tooth has been found in these sediments. UCMP records indicate that two fossil horse specimens have been recovered from the San Pedro Formation in southern California – a specimen of *Equus occidentalis* in Ventura County and *Equus* sp. indet. from Los Angeles County. However, because the San Pedro Formation and Las Posas Sand are both marine deposits, it is likely that the fossils were actually recovered from the Saugus Formation. Within the Project Area, these units are present near the crest of the Las Posas Hills along Project Section 2.

4.5.7.1.4 Conejo Volcanics

The Conejo Volcanics are composed of middle Miocene (16.0 million to 11.6 million years B.P.) andesite and basalt flows, flow breccias, and agglomerate within the vicinity of the Project Area. Igneous and pyroclastic deposits have very low likelihood of containing paleontological resources. UCMP collections do not indicate any record of vertebrate fossils from the Conejo Volcanics in California. Deposits of the Conejo Volcanics are exposed along Project Sections 3 and 4.

4.5.8 Paleontological Resources Regulatory Setting

4.5.8.1 Federal Regulatory Setting

No Federal regulations are applicable to the Project because it does not traverse any Federal lands and does not require any Federal authorizations.

4.5.8.2 State Regulatory Setting

4.5.8.2.1 Public Resources Code § 5097.5

Public Resources Code Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor.

4.5.9 Paleontological Resources Significance Criterion

The significance criterion for assessing the impacts to paleontological resources comes from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

4.5.10 Paleontological Resources Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Assessment Summary: No Impact

Construction Impacts

Portions of the Project Area are underlain by geological formations that have low to high sensitivity for paleontological resources. The past ground-disturbing construction activities included blading/grading existing access and spur roads, blading and grading construction work sites adjacent to existing structures, and drilling widely-spaced holes for TSP foundations. No paleontological resources were encountered during the past construction activities, and therefore no impacts were realized under this criterion.

4.5.11 Paleontological Resources Impact Analysis, Future Activities

Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Portions of the Project Area that remain for future activities are underlain by geological formations that have very low sensitivity for paleontological resources. As part of the future construction activities, existing access roads, work pads, and other areas may be graded; this grading would occur within the weathered surface sediments of an area. While blading of a

dirt access road has the potential to encounter paleontological resources, these resources would typically already be partially disturbed by weathering.

In addition, a Project WEAP, which will include a discussion of paleontological resources and will establish procedures for protecting potential resources, would be implemented. In the event of a paleontological resources discovery, implementation of paleontological resources protection practices, further described in Chapter 3: Project Description, would guide the protection of potentially eligible paleontological resources during construction. Implementation of these measures would prevent substantial adverse change in the significance of an unknown paleontological resource. Therefore, impacts under this criterion would be less than significant.

Operation Impacts

Operations related activities, as described in Chapter 3: Project Description, would be conducted on the same land and at the same sites as construction activities. These activities have a low potential to impact paleontological resources. In addition, locations of potential and known paleontological resources are maintained by SCE staff, and work approval procedures are in place to protect these resources. Given these procedures, less than significant impacts under this criterion are projected.

4.5.12 References

City of Thousand Oaks. 1996. General Plan – Conservation Element. Located at http://www.toaks.org/civica/filebank/blobdload.asp?BlobID=2632.

Engelhardt, Z. 1930. Mission San Buenaventura. Schauer Printing Studios, Inc., Santa Barbara, California.

Glassow, M. 1980. Recent Developments in the Archaeology of the Channel Islands. In The California Islands, edited by D. Power, pp. 79-99. Santa Barbara Museum of Natural History, Santa Barbara, California.

Glassow, M. and L. Wilcoxon. 1979. Coastal Adaptations North and South of Point Concepcion, California, With Particular Regard to Shellfish Exploitation. Paper presented at the 44th Annual Meeting of the Society for American Archaeology, Vancouver. British Columbia, Canada.

Grant, C. 1978a. Chumash: Introduction. In California, pp. 505-508. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Grant, C. 1978b. Eastern Coastal Chumash. In California , pp. 509-519. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Greenwood, R. 1972. 9,000 Years of Prehistory at Diablo Canyon, San Luis Obispo County, California. San Luis Obispo County Archaeological Society Occasional Paper No. 7.

Holland, V. and D. Keil. 1989. California Vegetation. California Polytechnic State University, San Luis Obispo. El Corral Publications, San Luis Obispo Publications, San Luis Obispo.

Kroeber, A. 1953. Handbook of the Indians of California. Third edition facsimile reprint 1953. California Book Company, Berkeley. Originally published in 1925, as Bulletin 78 of the Bureau of American Ethnology, Smithsonian Institution.

McLeod, S. 2012. Paleontological Records Search: Southern California Edison Moorpark-Newbury 66 kV New Source Line Project (WO 4605-2104:JO 6042-0468). Report on file at Southern California Edison, Rosemead, California.

Moratto , M. 1984. California Archaeology. Academic Press Inc., Orlando, Florida.

Romani , J. 2007. Archaeological Survey Report: Southern California Edison Moorpark-Newbury 66 kV New Source Line Project (WO 4605-2104: JO 6042-0468). Report on file at Southern California Edison, Rosemead, California.

Romani, J. 2009. Archaeological Survey Report: Southern California Edison Moorpark-Newbury 66 kV Alternative Alignment (IO# 302072). Report on file at Southern California Edison, Rosemead, California.

SCCIC. 2007. Cultural Resources Records Search: Southern California Edison Moorpark-Newbury 66 kV New Source Line Project (WO 4605-2104: JO 6042-0468). Report on file at Southern California Edison, Rosemead, California.

SCCIC. 2009. Cultural Resources Records Search: Southern California Edison Moorpark-Newbury 66 kV Alternative Alignment (IO# 302072). Report on file at Southern California Edison, Rosemead, California.

Schmidt, J., J. Schmidt and G. Romani 2008. Results of Extended Phase I Investigations at Sites P56-100196 (SCE MN-1), P56-001797 (CA-VEN-1797; SCE MN-2), and P56-100197 (SCE MN-3), for the Southern California Edison Moorpark-Newbury 66 kV New Source Line Project (WO 4605-2104; JO 6042-0468), Ventura County, California

University of California Museum of Paleontology (UCMP). 2012. UCMP Specimen Search. [Web Page]. Located at http://ucmpdb.berkeley.edu/.

Ventura County. 2011. Ventura County General Plan – Goals, Policies, and Programs. Located at http://www.ventura.org/rma/planning/pdf/plans/Goals-Policies-and-Programs.pdf.

Wallace, W. 1978. Post-Pleistocene Archaeology, 9000 to 2000 B.C. in California, edited by Robert F. Heizer, pp. 535-537. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

4.6 Geology and Soils

This section describes the geology and soils in the vicinity of the Project. The potential impacts from construction and operation of the Project are also discussed. For purposes of this section, the Project Area is defined as the locations where work described in Chapter 3: Project Description, would be performed.

4.6.1 Environmental Setting

4.6.1.1 Topography

The Project is approximately 9 miles in length, and traverses portions of the City of Moorpark, unincorporated areas of Ventura County, and the City of Thousand Oaks. The Project is located within the foothills of the Transverse Ranges geomorphic province (CGS 2002a). The Transverse Ranges are characterized by west-east trending mountain ranges and ridges (e.g., Las Posas Hills, Calleguas Hills) separated by intervening valleys (e.g., Little Simi Valley and Santa Rosa Valley). Numerous smaller, steep-sided canyons are aligned perpendicular to the major ridges. Elevations across the Project range from approximately 420 feet above mean sea level (amsl) at Arroyo Las Posas, to approximately 1,150 feet amsl in the Calleguas Hills.

4.6.1.2 Regional Geologic Setting

The Transverse Ranges Geomorphic Province is characterized by the east-west trending Transverse Ranges and associated folds and faults that record a considerable amount of Late Tertiary (23 to 1.6 million years before present [B.P.]) and Quaternary (1.6 million years B.P. to present) deformation. The Transverse Ranges are a tectonically-active region with relatively high rates of uplift resulting in steep terrain and highly folded and faulted bedrock units. Basement rocks in the Transverse Ranges typically consist of Jurassic (200 to 146 million years B.P.) and Cretaceous (144 to 65 million years B.P.) metamorphic rocks, although these geologic units are not exposed within the Project Area. Eocene (56 to 34 million years B.P.) and younger sedimentary rocks are variously exposed throughout the Project Area as described below. The valleys of the Transverse Ranges province are generally filled with thick deposits of alluvium derived from the steep bedrock slopes along their margins.

4.6.1.3 Local Geologic Setting

The geology of the Project Area has been mapped by Dibblee (1992). Soil and bedrock units exposed in the Project Area are shown on Figures 4.6-1a and 4.6-1b, and are described below. The Project alignment traverses, from north to south, the alluvial plain of Little Simi Valley, crosses the Las Posas Hills and the Santa Rosa Valley, and ends in the rugged Calleguas Hills in the south. Little Simi Valley and Santa Rosa Valley are partially filled with alluvial sediments derived from adjacent hills.

These sediments consist of Holocene (less than 11,000 years B.P.) and Late Pleistocene (1.8 million to 11,000 years B.P.) alluvium in Little Simi Valley, and Holocene alluvium in the Santa Rosa Valley.

The Las Posas Hills are predominantly composed of folded and faulted deposits of the Pleistocene (2.8 million to 11,000 years B.P.) Saugus Formation. The Saugus Formation is composed of loosely consolidated, nonmarine sandstone, conglomerate, and siltstone. The upper Eocene to lower Miocene (37.2 to 16.0 million years B.P.) Sespe Formation is exposed along the crest of the Las Posas Hills adjacent to the Santa Rosa Fault.

The bedrock of the Calleguas Hills consists of the middle Miocene (16.0 to 11.6 million years B.P.) Conejo Volcanics. Within the Project Area, the Conejo Volcanics are composed of andesite and basalt flows, flow breccias, and agglomerate. Quaternary alluvium and undifferentiated deposits are present along the lower flanks of the Calleguas Hills and in Conejo Valley near the southern end of the Project alignment.

4.6.1.4 Soils

Soils data in the Project Area are provided in the United States Department of Agriculture (USDA) Soil Survey of the Ventura Area, California (NRCS 2008). Tabular and spatial data from the soil survey were downloaded from the USDA Natural Resources Conservation Service (NRCS) Soil Data Mart. NRCS also compiles soils data from multiple soil surveys into an online application and provides interpretations of soil management suitabilities and limitations based on soil properties (SSS 2012).

Soil map units within the Project Area and soil properties relevant to the impact analysis of the Project are summarized in Table 4.6-1, Project Area Soils. Soils on hills and hillsides within the Project Area are generally shallow and well drained. Soils in valley areas are well drained to somewhat excessively drained, but are considerably deeper. Project Area soils have formed on residuum (bedrock material that has weathered in-place) composed of sandstone, shale, and to a lesser extent igneous rocks, or on alluvium. Alluvial soils are primarily located in Little Simi Valley and Santa Rosa Valley (SSS 2012).

Erosion by water and wind present the greatest potential impact to soil resources within the Project Area. Erosion hazard ratings developed by USDA assume that vegetative cover has been removed, but soil horizons remain intact. The erosion hazard rating is influenced by slope, infiltration rate, and other factors. Increasing bare ground distribution at the expense of canopy, microbiotic, and litter covers decreases the effective saturated conductivity of soil which, in turn, decreases infiltration and increases runoff and soil loss (Jadczyszyn and Niedzwiecki 2005). Wind erosion is similarly most prevalent in silty and fine sandy soils with disturbed vegetation. Wind erosion susceptibility is summarized in Table 4.6-1.

Table 4.6-1: Project Area Soils

Soil Map Unit ID	Soil Map Unit Name	Shrink-Swell Potential[(a)]	Erosion Hazard[(b)]	Wind Erodibility Group[(c)]
AcC	Anacapa sandy loam, 2 to 9 percent slopes	Low	Moderate	3
AuC2	Azule loam, 2 to 9 percent slopes, eroded	Moderate	Moderate	6
BdG	Badland	NA	Severe	NA
CfG2	Castaic-Balcom complex, 50 to 65 percent slopes, eroded	Moderate	Severe	7
CoA	Corralitos loamy sand, 0 to 2 percent slopes	Low	Slight	2
DbD	Diablo clay, 9 to 15 percent slopes	High	Severe	7
GaC	Garretson loam, 2 to 9 percent slopes	Low	Moderate	5
GtD	Gilroy clay loam, 2 to 9 percent slopes	Moderate	Moderate	6
GtE	Gilroy clay loam, 15 to 30 percent slopes	Moderate	Severe	6
GvF	Gilroy very rocky clay loam, 15 to 50 percent slopes	Moderate	Severe	6
GxG	Gullied land	NA	Severe	NA
HaG	Hambright very rocky loam, 15 to 75 percent slopes	Low	Severe	6
HuE3	Huerhuero very fine sandy loam, 9 to 30 percent slopes, severely eroded	Moderate	Severe	3
IrG	Igneous rock land	NA	Severe	8
MeA	Metz loamy sand, 0 to 2 percent slopes	Low	Slight	2
MeC	Milpitas-Positas fine sandy loams, 2 to 9 percent slopes	Moderate	Moderate	3
MfA	Metz loamy sand, loamy substratum, 0 to 2 percent slopes	Low	Slight	2
MoA	Mocho loam, 0 to 2 percent slopes	Moderate	Slight	6
MoC	Mocho loam, 2 to 9 percent slopes	Moderate	Moderate	6
PcA	Pico sandy loam, 0 to 2 percent slopes	Low	Slight	3
PsA	Pico loam, sandy substratum, 0 to 2 percent slopes	Low	Slight	5
RcC	Rincon silty clay loam, 2 to 9 percent slopes	Moderate	Moderate	7

Table 4.6-1: Project Area Soils

Soil Map Unit ID	Soil Map Unit Name	Shrink-Swell Potential[(a)]	Erosion Hazard[(b)]	Wind Erodibility Group[(c)]
RcD2	Rincon silty clay loam, 9 to 15 percent slopes, eroded	Moderate	Severe	7
RcE2	Rincon silty clay loam, 15 to 30 percent slopes, eroded	Moderate	Severe	7
Rw	Riverwash	Low	Slight	1
SbF	San Andres sandy loam, 30 to 50 percent slopes	Low	Severe	3
ScE2	San Benito clay loam, 15 to 30 percent slopes, eroded	Moderate	Severe	6
ScG	San Benito clay loam, 50 to 75 percent slopes	Moderate	Severe	6
Sd	Sandy alluvial land	Low	Slight	2
SvF2	Soper gravelly loam, 30 to 50 percent slopes, eroded	Moderate	Severe	7
SwA	Sorrento loam, 0 to 2 percent slopes	Moderate	Slight	6
SwC	Sorrento loam, 2 to 9 percent slopes	Moderate	Moderate	6
SxA	Sorrento silty clay loam, 0 to 2 percent slopes	Moderate	Slight	6
VaC	Vina loam, 2 to 9 percent slopes	Low	Moderate	6
ZmC	Zamora loam, 2 to 9 percent slopes	Low	Moderate	8
ZmD2	Zamora loam, 9 to 15 percent slopes	Low	Severe	6

Notes:
NA = Not Assessed
(a) Linear extensibility of less than 3 percent = low shrink-swell potential; 3 to 6 percent = moderate potential; 6 to 9 percent = high potential; greater than 9 percent = very high potential.
(b) Erosion hazard interpreted by NRCS for unsurfaced roads and trails.
(c) Soils are assigned to wind erodibility groups based on their susceptibility to wind erosion. Soils assigned to Group 1 are the most susceptible; soils assigned to Group 8 are the least susceptible.

Sources: NRCS 2008; SSS 2012

Certain soils within the Project Area are susceptible to rainfall-triggered soil slip or debris flows. The susceptibilities of soils along the Project alignment illustrated in Figure 4.6-2 are based on variations in local precipitation, geologic units, slope, and aspect (Morton et al. 2003).

The presence of certain clay minerals may cause some soils to swell when moist and shrink as the soil dries. Soils subject to shrink-swell processes are termed "expansive soils." Expansive soils can disturb building foundations, walls, and roads and are found intermittently throughout the Project Area, but are primarily associated with the alluvial soils of the Little Simi Valley and Santa Rosa Valley (Figure 4.6-3) (City of Thousand Oaks 1996a; Ventura County 2011a; SSS 2012). Linear extensibility is a measurement of the shrink-swell process and can be used to classify the expansive hazard of soils (Table 4.6-1).

Soil settlement occurs when void space is reduced in underlying strata. Within the Project Area, this process is most likely to occur on alluvial soils (City of Thousand Oaks 1996a). Ground subsidence has been observed within the Oxnard Plain of Ventura County, west of the Project Area, and is typically related to the withdrawal of fluids such as water, oil, or gas from the subsurface. No other areas of subsidence are known in the vicinity or within the Project Area (City of Thousand Oaks 1996a; Ventura County 2011b).

4.6.1.5 Seismic Sources in the Vicinity of the Project Area

Active and potentially active faults in the region have the potential to cause ground shaking within the Project Area. The State of California considers a fault to be "active" if evidence exists of surface displacement within the past 11,000 years (Holocene Epoch). "Potentially active" faults have shown activity within the past 1.6 million years (Quaternary Period). Active and potentially active faults within 20 miles of the Project Area are summarized in Table 4.6-2. The distances shown in the table are measured from the closest point on the fault to the closest Project component. Figure 4.6-4 illustrates the locations of active and potentially active faults in the immediate vicinity of the Project Area (CGS 1999).

The Simi-Santa Rosa Fault in the immediate vicinity of the Project (Figure 4.6-4) has been classified by the State as an active fault and has the potential for surface fault rupture where Project Section 2 crosses the fault traces. In addition, the active and potentially active faults listed in Table 4.6.2 have the potential to cause secondary seismic hazards due to strong ground shaking during an earthquake event. Secondary seismic hazards include the potential for seismically induced liquefaction and landsliding, among others. Probabilistic seismic hazard assessments indicate that during the anticipated life of the Project, the faults with the largest anticipated contribution to peak ground accelerations in the Project Area are the Simi-Santa Rosa, San Cayetano, Oak Ridge, Santa Susana, and Northridge faults (USGS 2012a).

4.6.1.6 Potential Geologic Hazards in the Vicinity of the Project Area

Geologic conditions that present potential hazards to people and structures are identified on a county-wide basis in the Ventura County General Plan Hazards Appendix (Ventura County 2011a), and on a more local level in the Safety Elements of the City of Moorpark General Plan and City of Thousand Oaks General Plan (City of Thousand Oaks 1996a; City of

Moorpark 2001). Seismic Hazard Zones (areas of seismically induced liquefaction or landslides) have been mapped in the Project Area by the California Geological Survey (CGS 2000, 2002b).

4.6.1.6.1 Surface Fault Rupture Hazard

Surface rupture along a fault occurs when earth materials on opposite sides of a fault are displaced by fault movement during an earthquake event. Alquist-Priolo Earthquake Fault Zones (A-P Zones) are designated areas within 500 feet of a known active fault trace. The Project alignment crosses the Simi-Santa Rosa A-P Zone in two areas, along the northern margin of Santa Rosa Valley, and near the crest of the Las Posas Hills (Figure 4.6-4; CDMG 1999). The Project alignment also crosses a potentially-active segment of the Simi-Santa Rosa Fault Zone (Simi Fault) near the crest of the Las Posas Hills (USGS and CGS 2006).

Table 4.6-2: Active and Potentially Active Faults in the Project Vicinity

Fault Name	Miles from Nearest Project Component	Potential Earthquake Magnitude[(a)]
Simi-Santa Rosa	0	7.0
Oak Ridge (onshore)	6.4	7.0
Santa Susana	9.5	6.7
San Cayetano	10.4	7.0
Malibu Coast	10.5	6.7
Holser	13.9	6.5
Ventura-Pitas Point	14.4	6.9
Santa Monica	14.9	6.6
Anacapa-Dume	16.6	7.5

Notes:
(a) Maximum moment magnitude (Cao et al. 2003).
Source: USGS

4.6.1.6.2 Secondary Seismic Hazards

Earthquake-generated ground shaking is typically the greatest cause of damage during an earthquake. Probabilistic approaches to assessing seismic hazards use the statistics of earthquake occurrence in a region to estimate the level of ground motion for which the exceedance probability is acceptably low. The estimate can be made in terms of a variety of ground motion parameters, most commonly the peak ground acceleration (PGA), the peak ground velocity, or a spectral parameter such as peak spectral acceleration.

In 2008, USGS produced updated seismic hazard maps for the conterminous United States, including PGA and spectral accelerations for a range of return periods and exceedance probabilities (Peterson et al. 2008). Multiple seismogenic source zones and ground motion prediction equations were used to develop the maps and hazard values. PGA values for lands in the Project Area are based on the USGS deaggregation files are provided in Table 4.6-3 (USGS 2012a). PGA depends largely on the ability of the surficial geologic unit to transmit seismic energy. Dense, crystalline rocks such as the igneous rocks in the Calleguas Hills transmit energy more efficiently than unconsolidated alluvial deposits of the valleys, and therefore PGA values vary widely within the Project Area. Values presented in Table 4.6-3 were calculated using shear wave velocities representative of igneous rocks within the

Project Area. All values presented in Table 4.6-3 were calculated for a location near the center of the Project that is located in proximity to the Simi-Santa Maria A-P Zone.

The highest predicted PGA value in the Project Area for a seismic event with a return period of 144 years or less would be 0.25 g (acceleration due to gravity). The predicted PGA would be expected to create very strong shaking corresponding to a Modified Mercalli Intensity of VII (Wald et al. 1999). Values presented for the selected Project location are intended to give a general approximation for the maximum expected ground shaking for the entirety of the Project at different earthquake return intervals.

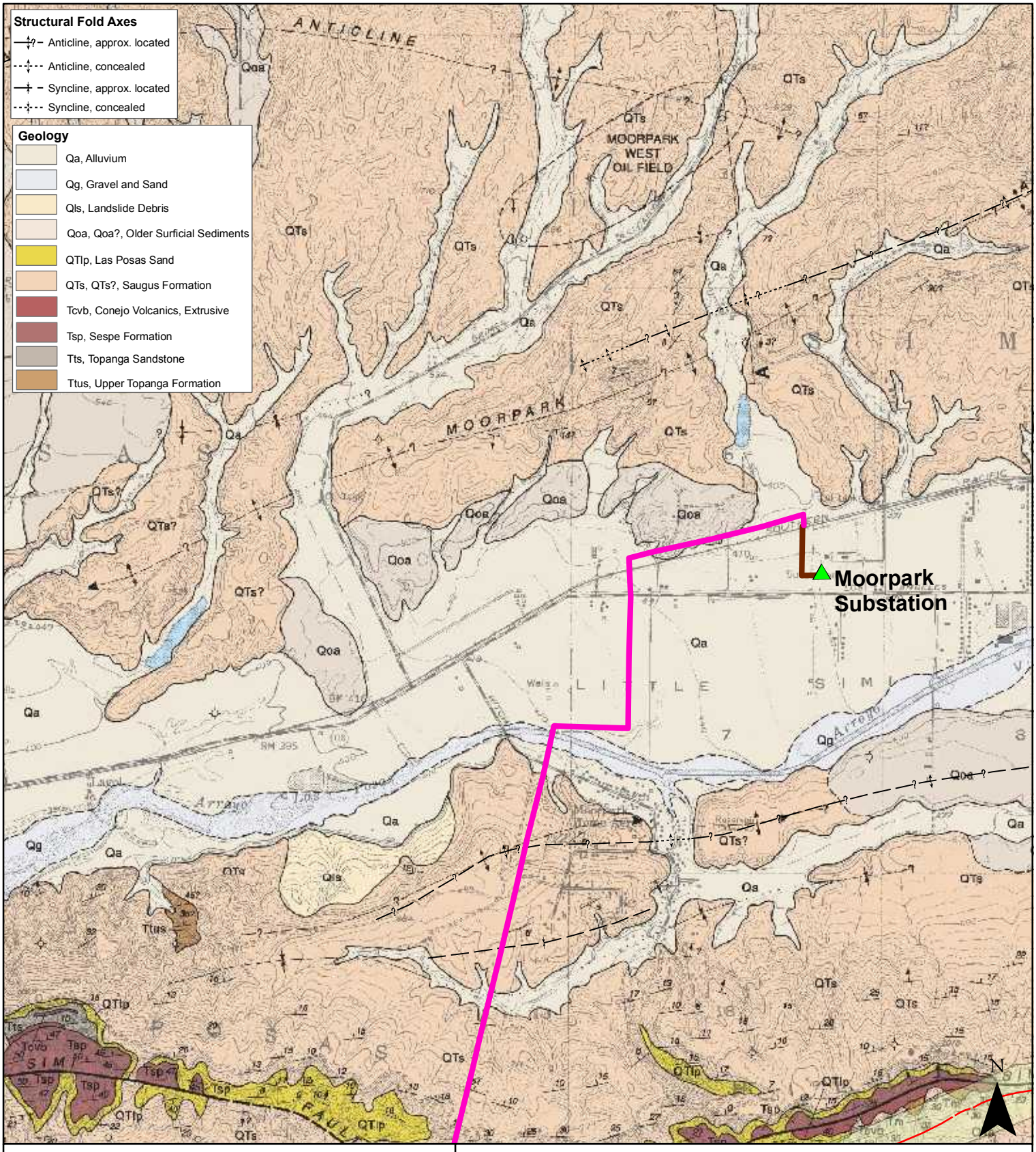
Liquefaction is a term used to describe a condition that occurs when saturated sandy soil loses strength and cohesion due to ground shaking during an earthquake. Lateral spreading occurs when liquefaction of a subsurface layer causes the mass to flow down slope, moving blocks of ground at the surface. Areas at risk of lateral spreading are generally considered to be coincident with potential liquefaction areas. As shown on Figure 4.6-4, portions of the Project within Little Simi Valley and Santa Rosa Valley are located in a State of California Liquefaction Seismic Hazard Zone (CGS 2000, 2002b).

Table 4.6-3: Project Peak Ground Acceleration Values

Return Period (Years)	PGA (g)	Mean Magnitude	Mean Distance (km)
30	0.08703	6.73	34.6
72	0.1640	6.78	23.8
144	0.2493	6.80	17.9
475	0.4620	6.82	11.0
1485	0.7410	6.84	7.7
2475	0.8951	6.85	6.8
4950	1.0964	6.85	5.9
9900	1.3106	6.86	5.1

Notes:
PGA values calculated for 34.248735, -118.927146.
Values calculated using USGS 2008 Interactive Deaggregations (Beta) Tool (USGS 2012a).
Average shear wave velocity in the upper 30 meters (V_{S30}) value of 760 meters per second used to calculate PGA values based on CDOC (2008) and Kalkan et al. (2010).

Landslides, including those caused by earthquake-caused ground shaking, are a potential hazard in a portion of the Project Area. Portions of the Project alignment in the Las Posas and Calleguas Hills are within areas classified as low- to moderate-susceptibility State of California Earthquake-Induced Landslide Hazard Zones (CGS 2000, 2002b). Portions of the Project within the flat bottomlands of the Little Simi Valley and Santa Rosa Valley would not be at risk of seismically-induced landslides, although areas along the margins of the valleys would be at risk.



Substation

Project Sections

Project Section 1

Project Section 2

Alquist-Priolo Fault Lines

Alquist-Priolo Fault Zones

0 0.125 0.25 0.5 Miles

Source: CDMG 1999a; Dibblee 1992

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PROPONENT'S ENVIRONMENTAL ASSESSMENT

GENERALIZED GEOLOGIC MAP

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Figure
4.6-1a

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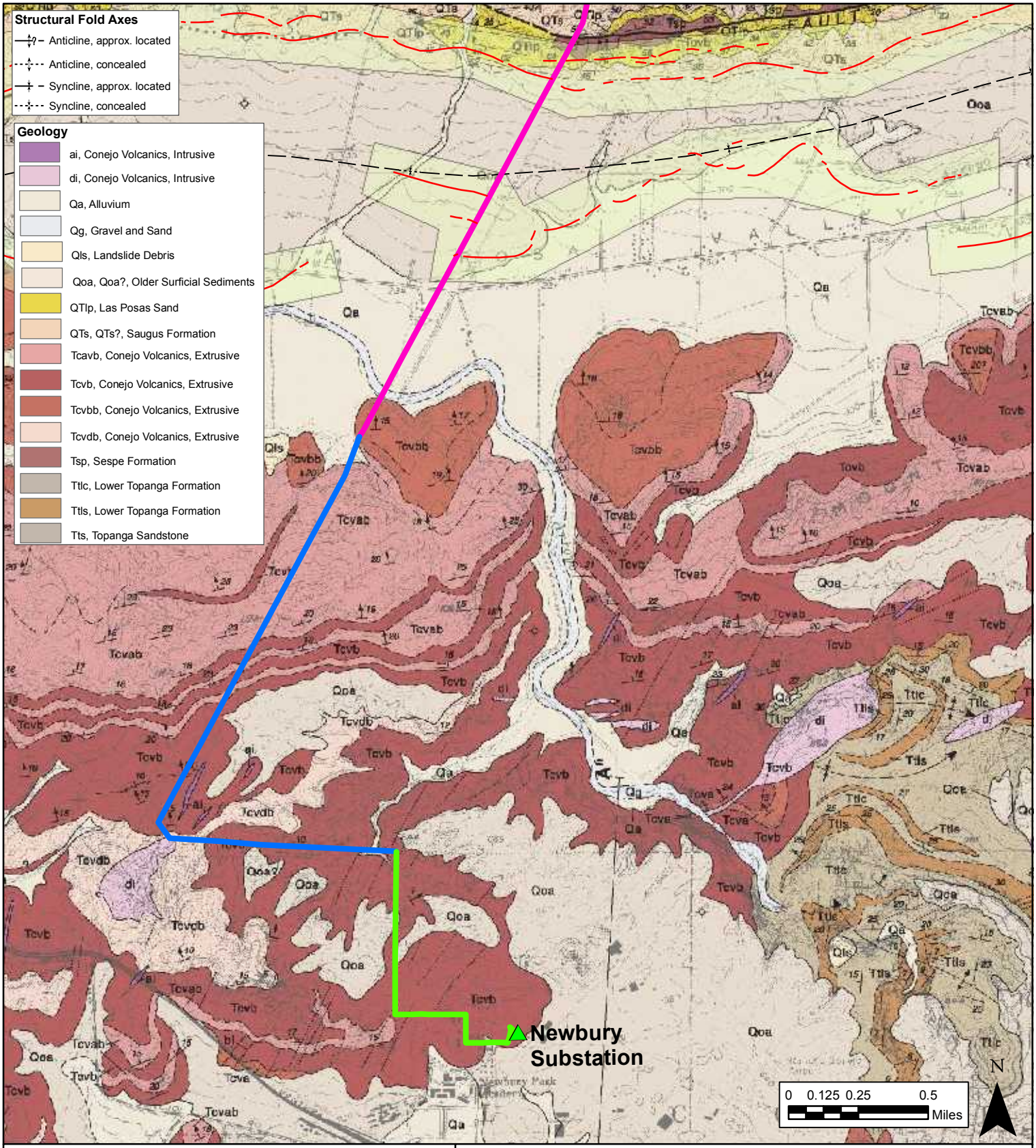

Substation

Project Sections

- Project Section 2
- Project Section 3
- Project Section 4
- Alquist-Priolo Fault Lines
- Alquist-Priolo Fault Zones

Source:
CDMG 1999b; Dibblee 1990

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Figure
4.6-1b

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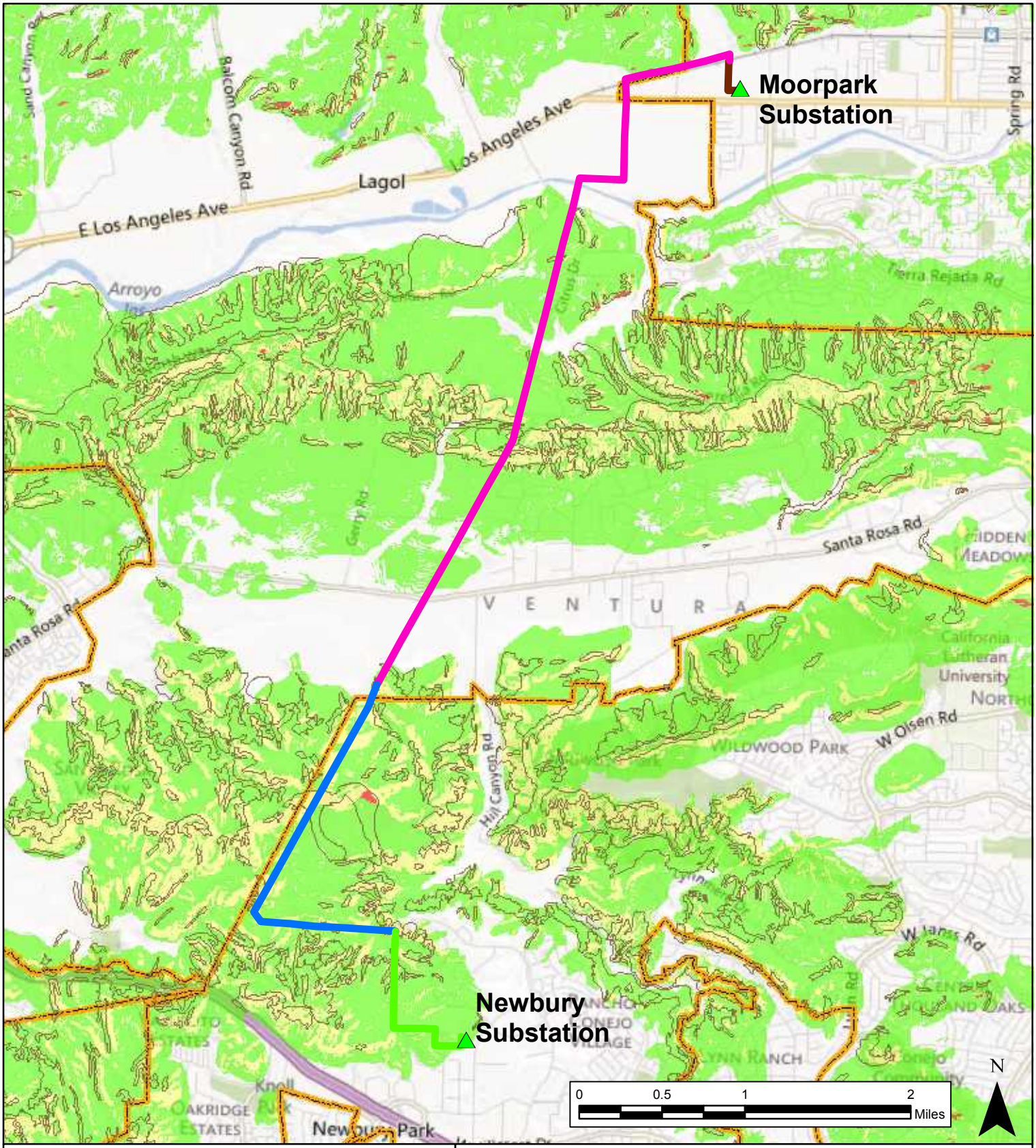

Substation
Project Section 1
Project Section 2
Project Section 3
Project Section 4
City Boundaries

Soil Slip Susceptibility

Zero Susceptibility
Low Susceptibility
Moderate Susceptibility
High Susceptibility
State Earthquake-Induced Landslide Seismic Hazard Zones

Source:
CGS 2000; CGS 2002b;
Morton et al. 2003

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LANDSLIDE HAZARDS MAP

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Figure
4.6-2

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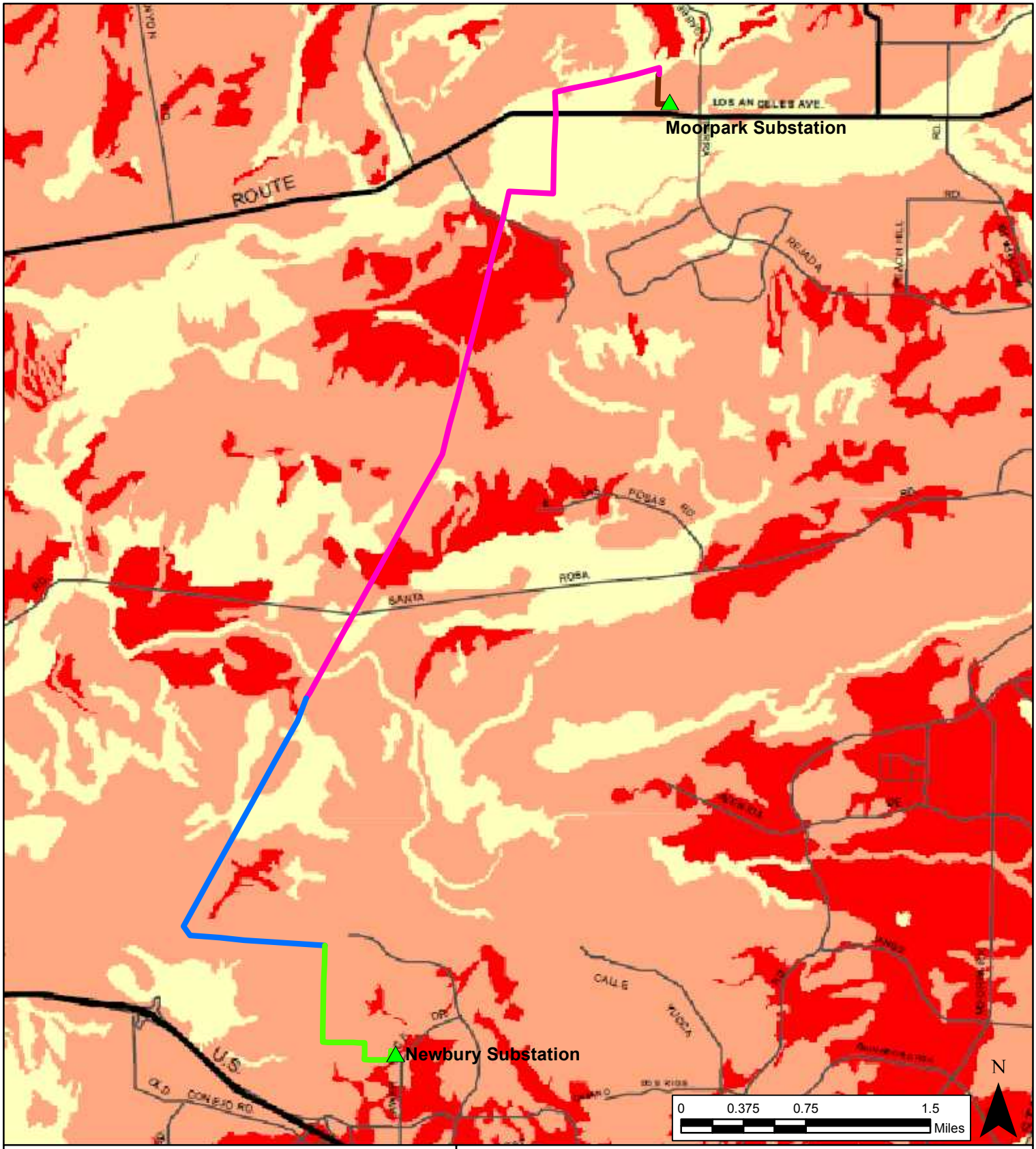

Substation

Project Sections

- Project Section 1
- Project Section 2
- Project Section 3
- Project Section 4

- High Expansive Soil
- Medium Expansive Soil
- Low Expansive Soil

Source:
U.S.D.A. Soil Conservation Service, 1969

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EXPANSIVE SOILS IN PROJECT AREA

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Figure
4.6-3

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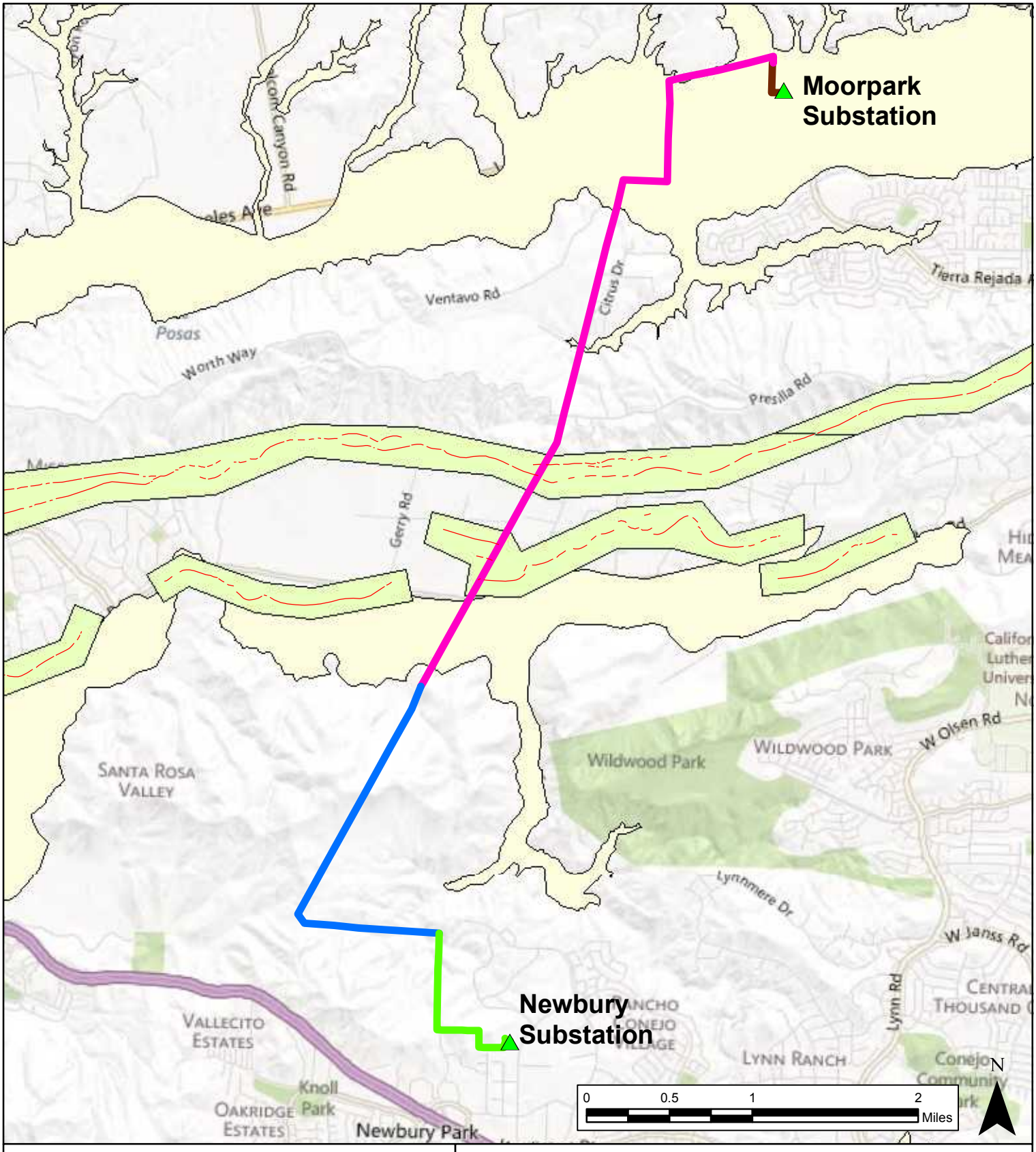

- Substation
- Project Section 1
- Project Section 2
- Project Section 3
- Project Section 4
- Alquist-Priolo Fault Lines
- Alquist-Priolo Fault Zones
- State Liquefaction Seismic Hazard Zones

Source:
CGS 2000; CGS 2002b

SOUTHERN CALIFORNIA EDISON
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VENTURA COUNTY, CALIFORNIA
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FAULTS AND LIQUEFACTION HAZARDS MAP

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Figure
4.6-4

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4.6.2 Regulatory Setting

4.6.2.1 State Regulatory Setting

4.6.2.1.1 Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Pub. Resources Code § 2621 et seq.) was enacted by the State of California in 1971 to mitigate the hazard of surface faulting to structures planned for human occupancy and to other critical structures. Other critical structures include those intended for human occupancy associated with industrial and commercial uses. Regulatory zones established by the State (known as Earthquake Fault Zones) are used by government agencies during planning and review processes for new construction.

4.6.2.1.2 Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (Pub. Resources Code § 2690 et seq.) was enacted by the State of California in 1990 to protect public safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes.

4.6.2.2 Local Regulatory Setting

As discussed in Section 4.0, the following are included for informational purposes only.

4.6.2.2.1 Ventura County

The County of Ventura's goals and policies regarding geologic and soil hazards and the methodologies required to determine significance levels of impacts are contained in the General Plan and summarized in the Initial Study Assessment Guidelines. The goals and policies contained in the General Plan are largely focused on traditional developments, and not the type of infrastructure associated with the Project, with the following exceptions:

> Goal 2.9.1: Minimize the risk of damage to structures, transportation corridors, and infrastructure from the effects of subsidence.
>
> Policy 2.9.2-2: Structural design of buildings and other structures shall recognize the potential for hydro-compaction subsidence and provide mitigation recommendations for structures that may be affected.

4.6.2.2.2 City of Moorpark

The City of Moorpark's goals and policies designed to reduce death, injuries, property damage, and the economic and social dislocation resulting from natural hazards are included in the General Plan Safety Element (City of Moorpark 2001). The goals and policies contained in the Safety Element are focused on traditional developments, and not the type of infrastructure associated with the Project.

4.6.2.2.3 City of Thousand Oaks

The City of Thousand Oaks' goals and policies designed to reduce death, injuries, property damage, and the economic and social dislocation resulting from natural hazards are included in the General Plan Safety Element (City of Thousand Oaks 1996a). City-wide objectives intended to protect the community from geologic and seismic hazards include goals, policies, and programs summarized in Section 2.0 of the Safety Element. The goals and policies contained in the Safety Element are focused on traditional developments, and not the type of infrastructure associated with the Project.

4.6.3 Significance Criteria

The significance criteria for assessing the impacts to geology and soils come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a Project causes a potentially significant impact if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, or injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42.); strong seismic ground shaking; seismic related ground failure, including liquefaction; and landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off site landslide, lateral spreading, subsidence, liquefaction, or collapse
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property
- 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

4.6.4 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the Project expose people or structures to potential substantial adverse effects, including the risk of loss, or injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42); strong seismic ground shaking; seismic related ground failure, including liquefaction; and landslides?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The Project crosses, and had potential to be directly impacted by, surface rupture of the Simi-Santa Rosa A-P Zone. Portions of the Project were constructed within the A-P Zone. However, the subtransmission infrastructure was placed at locations on opposite sides of the mapped fault traces. During the past construction activities, there was a risk of very strong seismic ground shaking due to nearby active fault zones; no earthquakes were felt in the Project Area during the past construction activities (Southern California Earthquake Data Center 2012). As a result, the Project could have experienced, but did not experience, strong seismic ground shaking.

Even though the Project is located in an area susceptible to earthquake forces, the subtransmission poles involved are not used for human occupancy and are designed consistent with CPUC GO 95, Rules for Overhead Line Construction, to withstand wind, temperature, and wire tension loads. Accounting for these factors results in a design that would be adequate to withstand expected seismic loading, and therefore impacts due to strong seismic ground shaking are less than significant.

Liquefaction hazards are considered to be low in all areas of the Project where past construction activities have occurred, with the exception of Project Sections 1 and 2 within Little Simi Valley and Project Section 2 within Santa Rosa Valley, which are located within mapped Liquefaction Hazard Zones as portrayed on Figure 4.6-4 (CGS 2000, 2002b). SCE designed Project components to minimize the potential for impacts associated with liquefaction: TSP structures located in potential liquefaction zones in the Little Simi and Santa Rosa valleys have been designed with large diameter, relatively deep, single (mono) foundations. Settlements induced by dynamic (earthquake) forces are anticipated to be uniform for mono foundations, and therefore use of these foundations reduces the potential for differential settlements and other adverse effects including loss of functionality, or risk of injury or loss of life. Therefore, impacts associated with liquefaction were reduced to less than significant for Project components within the mapped Liquefaction Hazard Zones.

The potential for seismically-induced landslides are a low to moderate potential hazard in portions of the Project Area due to steep slopes (Figure 4.6-2). SCE designed and sited Project components to minimize the potential effects from landslides: Project TSPs are not located on mapped landslides that could be subject to renewed movements during an earthquake event. Further, the hillside areas of the Project are rated primarily with low susceptibility to earthquake induced landslide instability, with a few areas with steep natural slopes rated with moderate susceptibility (see Figure 4.6-2). Due to siting and design

constraints, as well as access and constructability factors, TSPs are generally not located on steep slopes, and/or have deep foundations which reduce the effects of earthquake induced slope instability. Therefore, impacts due to landslides were less than significant.

Did the Project result in substantial soil erosion or the loss of topsoil?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past construction activities (creating construction work sites, rehabilitating access roads, establishing stringing sites and laydown areas) resulted in disturbance of approximately 14.5 acres of soils. Erosion control measures included in the Project construction SWPPP were implemented to minimize soil erosion. In addition, approximately 324 cubic yards of soil were transported off site. Therefore, impacts under this criterion would be less than significant.

Was the Project located on a geologic unit or soil that is unstable, or that become unstable as a result of the Project, and resulted in on- or off site landslide, lateral spreading, subsidence, liquefaction or collapse?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Project components that were previously constructed are located in areas subject to precipitation- or seismically-induced slope instability (Figure 4.6-2). Site-specific subsurface borings and laboratory analysis were conducted prior to construction. Portions of Project Sections 1 and 2 within Little Simi Valley, and Project Sections 2 within Santa Rosa Valley along Coyote Creek, are mapped as liquefaction hazard zones and are anticipated to have a similar risk of lateral spreading where slopes are present (CGS 2000, 2002b).

Impacts associated with the risk of landslides, liquefaction, and lateral spreading were reduced to less than significant through the design and siting of Project components:

- Project TSPs are not located on mapped landslides that could be subject to renewed movements during an earthquake event. Further, the hillside areas of the Project are rated primarily with low susceptibility to earthquake induced landslide instability, with a few areas with steep natural slopes rated with moderate susceptibility (see Figure 4.6-2). Due to siting and design constraints, as well as access and constructability factors, TSPs are generally not located on steep slopes, and/or have deep foundations which reduce the effects of earthquake induced slope instability.
- Project TSPs located in potential liquefaction zones in the Little Simi and Santa Rosa valleys have been designed with large diameter, relatively deep, single (mono) foundations. Settlements induced by dynamic (earthquake) forces are anticipated to be uniform for mono foundations, and therefore use of these foundations reduces the potential for differential settlements and other adverse effects including loss of functionality, or risk of injury or loss of life.

- Lateral spreading is a secondary effect of seismically-induced liquefaction where blocks of ground move down slopes or toward an open face such as a stream bank or manufactured channel. Project TSPs sited in areas with liquefaction potential are not sited in near proximity to open faces, and therefore the potential for damage due to lateral spreading is not significant.

No areas of subsidence or soil collapse are known within the Project Area, nor are any expected to occur based on review of published soil data; therefore, impacts under the subsidence and collapse criteria were less than significant.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

Soils with moderate to high shrink-swell potential (expansive soils) as identified by NRCS soil surveys (SSS 2012) are summarized in Table 4.6-1 and shown on Figure 4.6-3. SCE designed and located Project components to minimize the potential effects from expansive soils. Because the effects of expansive soils are most significantly realized at shallow depths, the deep foundations of TSPs and the burial depths of LWS poles result in these poles not being susceptible to the effects associated with expansive soils. Therefore, the design features of the TSP and LWS poles and the location of those poles reduced potential impacts due to expansive soils during past construction activities to less than significant levels.

Did the Project 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?

Assessment Summary: No Impact

Construction Impacts

No septic tanks or alternative waste water disposal systems were constructed as part of the Project; therefore, no impacts occurred under this criterion.

4.6.5 Impact Analysis, Future Activities

Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, or injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42); strong seismic ground shaking; seismic related ground failure, including liquefaction; and landslides?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The Project crosses, and would have the potential to be directly impacted by, surface rupture of the Simi-Santa Rosa A-P Zone. Portions of the Project would be constructed within the A-P Zone. However, the subtransmission infrastructure would be placed at locations on opposite sides of the mapped fault traces. During future construction activities, there would be a risk of very strong seismic ground shaking due to nearby active fault zones. As a result, the Project could experience strong seismic ground shaking.

Even though the Project is located in an area susceptible to earthquake forces, the subtransmission infrastructure involved would not be used for human occupancy and would be designed consistent with CPUC GO 95, Rules for Overhead Line Construction, to withstand wind, temperature, and wire tension loads. Accounting for these factors would result in a design that would be adequate to withstand expected seismic loading, and therefore impacts due to strong seismic ground shaking would be less than significant.

Liquefaction hazards are considered to be low in all areas of the Project where future construction activities would occur, with the exception of Project Sections 1 and 2 within Little Simi Valley and Project Sections 2 and 3 within Santa Rosa Valley, which are located within mapped Liquefaction Hazard Zones as portrayed on Figure 4.6-4 (CGS 2000, 2002b). TSP structures located in potential liquefaction zones in the Little Simi and Santa Rosa valleys have been designed with large diameter, relatively deep, single (mono) foundations. Settlements induced by dynamic (earthquake) forces are anticipated to be uniform for mono foundations, and therefore use of these foundations reduces the potential for differential settlements and other adverse effects including loss of functionality, or risk of injury or loss of life. Therefore, impacts associated with liquefaction would be reduced to less than significant for Project components within the mapped Liquefaction Hazard Zones.

The potential for seismically-induced landslides are a low to moderate potential hazard in portions of the Project due to steep slopes (Figure 4.6-2). SCE designed and sited Project components to minimize the potential effects from landslides: TSPs would not be located on mapped landslides that could be subject to renewed movements during an earthquake event. Further, the hillside areas of the Project are rated primarily with low susceptibility to earthquake induced landslide instability, with a few areas with steep natural slopes rated with moderate susceptibility (see Figure 4.6-2). Due to siting and design constraints, as well as access and constructability factors, TSPs are generally not located on steep slopes, and/or

have deep foundations which reduce the effects of earthquake induced slope instability. Therefore, impacts due to landslides would be less than significant.

The potential for seismically-induced landslides is low to moderate in portions of the Project Area due to steep slopes (Figure 4.6-2). SCE would design and site Project components to minimize the potential effects from landslides, thus reducing impacts due to landslides to less than significant.

Operation Impacts

As presented above, some Project facilities would be located within the Simi-Santa Rosa A-P Zone. Ground shaking due to earthquakes would likely occur during the operational life of the Project; however, as described above, all Project components would be designed consistent with CPUC GO 95, Rules for Overhead Line Construction, to withstand wind, temperature, and wire tension loads. Accounting for these factors would result in a design that would be adequate to withstand expected seismic loading. Operational impacts under this criterion would be less than significant.

During operation, liquefaction hazards are expected to be similar to those described for construction above; operational impacts due to liquefaction would be less than significant.

The design and siting considerations of the Project reduce potential impacts from seismically-induced landslides and would also reduce the risk of impacts resulting from seismically-induced landslides during operation of the Project. Landslides could block access roads and reduce access to Project facilities. Periodic maintenance patrols would be conducted during operation of the Project and would identify areas of active slope instability. Any areas of slope instability that would potentially affect Project facilities (e.g., access roads and TSPs) would be addressed on a case-by-case basis in order to minimize on-site and off site impacts. Operational impacts under the landslide criterion would be less than significant.

Would the Project result in substantial soil erosion or the loss of topsoil?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Future construction activities would result in disturbance of approximately 1.6 acres of soils. Erosion control measures included in the Project construction SWPPP would minimize erosion. Soil excavated during the installation of the duct bank at Moorpark Substation and that excavated for the TSP foundations at Newbury Substation may be removed from the site; this soil would be transported off site. Due to the small area of surface disturbance and small volumes of soil to be removed, impacts under this criterion would be less than significant.

Operation Impacts

Long-term use of access roads may lead to rutting, which concentrates runoff and increases rill erosion. However, regular maintenance of existing features such as water bars (i.e., low soil berms constructed across the road that redirect flow) that control the velocity and pattern

of road runoff would minimize erosion on roads. As a result, impacts under this criterion would be less than significant.

Would the Project 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?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The majority of the Project would be constructed in areas subject to precipitation- or seismically-induced slope instability (Figure 4.6-2).

Site-specific subsurface borings and laboratory analyses have been conducted. Portions of Project Sections 1 and 2 within Little Simi Valley, and Project Sections 2 and 3 within Santa Rosa Valley along Coyote Creek, are mapped as liquefaction hazard zones and are anticipated to have a similar risk of lateral spreading where slopes are present (CGS 2000, 2002b). Future construction activities also would occur in areas susceptible to seismically-induced landslides.

However, impacts associated with the risk of landslides, liquefaction, and lateral spreading would be reduced to less than significant through the design and siting of Project components:

- Project TSPs are not located on mapped landslides that could be subject to renewed movements during an earthquake event. Further, the hillside areas of the Project are rated primarily with low susceptibility to earthquake induced landslide instability, with a few areas with steep natural slopes rated with moderate susceptibility (see Figure 4.6-2). Due to siting and design constraints, as well as access and constructability factors, TSPs are generally not located on steep slopes, and/or have deep foundations which reduce the effects of earthquake induced slope instability.
- Project TSP structures located in potential liquefaction zones in the Little Simi and Santa Rosa valleys have been designed with large diameter, relatively deep, single (mono) foundations. Settlements induced by dynamic (earthquake) forces are anticipated to be uniform for mono foundations, and therefore use of these foundations would reduce the potential for differential settlements and other adverse effects including loss of functionality, or risk of injury or loss of life.
- Lateral spreading is a secondary effect of seismically-induced liquefaction where blocks of ground move down slopes or toward an open face such as a stream bank or manufactured channel. Project TSPs sited in areas with liquefaction potential are not sited in near proximity to open faces, and therefore the potential for damage due to lateral spreading would not be significant.

No areas of subsidence or soil collapse are known within the Project Area, nor are any expected to occur based on review of published soil data; therefore, impacts under the subsidence and collapse criteria would be less than significant.

Operation Impacts

The design and siting considerations discussed above reduce the risk of impacts resulting from seismically-induced landslides during construction of the Project. Portions of the Project Area would be prone to landslides (seismically-induced or otherwise) during Project operations. Landslides could block access and spur roads and reduce access to Project facilities. Periodic maintenance patrols would be conducted over the operational life of the Project and would identify areas of active slope instability. Any areas of slope instability that would potentially affect Project facilities (e.g., access roads, TSPs) would be addressed on a case-by-case basis in order to minimize on-site and off site impacts. Operational impacts related to landslides would be less than significant.

Liquefaction and lateral spreading hazards are expected to be similar throughout the operational life of the Project and would be the same as presented above for construction of the Project. Operational impacts due to liquefaction would be less than significant with implementation of the same measures that would be implemented during construction.

As presented above, because no areas of subsidence or soil collapse are known or expected to occur within the Project Area, operational impacts associated with the risk of subsidence and collapse would be less than significant.

Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Soils with moderate to high shrink-swell potential (expansive soils) as identified by NRCS soil surveys (SSS 2012) are summarized in Table 4.6-1 and shown on Figure 4.6-3. SCE would design and site Project components to minimize the potential effects from expansive soils. Because the effects of expansive soils are most significantly realized at shallow depths, the deep foundations of TSPs and the burial depths of LWS poles result in these poles not being susceptible to the effects associated with expansive soils. Therefore, the design features and location of poles would reduce potential impacts due to expansive soils during future construction activities to less than significant levels.

Operation Impacts

Implementation of the siting and design features described above during construction would also reduce the risk of impacts to Project facilities during operations. Minor impacts to access roads could occur due to soil expansion and formation of moderate swales and/or mounds in the roads which could reduce accessibility to portions of the Project Area. Periodic road grading would ensure that Project facility accessibility is maintained and that impacts under the expansive soil criterion are less than significant.

Would the Project 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?

Assessment Summary: No Impact

Construction Impacts

No septic tanks or alternative waste water disposal systems would be constructed as part of the future construction activities; therefore, no impacts would occur under this criterion.

Operation Impacts

No septic tanks or alternative waste water disposal systems would be used once the Project is operational; therefore, no impacts would occur under this criterion.

4.6.6 References

California Department of Conservation (CDOC) Division of Oil, Gas, & Geothermal Resources. 2011. Online Well Record Search. [Web Page]. Located at: http://owr.conservation.ca.gov/WellSearch/WellSearch.aspx.

CDOC. 2012. Division of Oil, Gas & Geothermal Online Mapping System (DOMS). [Web Page]. Located at http://maps.conservation.ca.gov/doms/doms-app.html.

California Division of Mines and Geology (CDMG). 1981. Mineral Land Classification of Ventura County – Parts I, II, and III. CDMG Special Report 145.

CDMG. 1999. State of California Earthquake Fault Zones – Newbury Park Quadrangle. Effective May 1, 1999.

California Geological Survey (CGS). 2000. State of California Seismic Hazard Zones – Moorpark Quadrangle. Released November 17, 2000.

CGS. 2002a. California Geomorphic Provinces. CGS Note 36.

CGS. 2002b. State of California Seismic Hazard Zones – Newbury Park Quadrangle. Released February 7, 2002.

Cao, T., W.A. Bryant, B. Rowshandel, D. Branum and C.J. Wills. 2003. The Revised 2002 California Probabilitic Seismic Hazard Maps. Appendix A – 2002 California Fault Parameters.

City of Moorpark. 1986. City of Moorpark General Plan – Open Space, Conservation & Recreation Element. Adopted August 4, 1986.

City of Thousand Oaks. 1996a. Thousand Oaks General Plan – Conservation Element. Adopted July 2, 1996.

City of Thousand Oaks. 1996b. Thousand Oaks General Plan – Safety Element. Adopted July 2, 1996.

Dibblee, T.W. Jr. and H.E. Ehrenspeck. 1990. Geologic Map of the Camarillo and Newbury Park Quadrangles, Ventura County, California. Dibblee Geological Foundation Map DF-28.

Dibblee, T.W. Jr. 1992. Geologic Map of the Moorpark Quadrangle, Ventura County, California. Dibblee Geological Foundation Map DF-40.

Jadczyszyn, J. and J. Niedzwiecki. 2005. Relation of saturated hydraulic conductivity to soil losses. Polish Journal of Environmental Studies. Vol. 14(4). pp. 431-435.

Kalkan, E., C.J. Wills, and D.M. Branum. 2010. Seismic Hazard Mapping of California Considering Site Effects. Earthquake Spectra. Vol. 26(4). pp. 1039-1055.

Minor, S.A., K.S. Kellogg, R.G. Stanley, L.D. Gurrola, E.A. Keller and T.R. Brandt. 2009. Geologic Map of the Santa Barbara Coastal Plain Area, Santa Barbara County, California. USGS Scientific Investigations Map 3001.

Morton, D.M., R.M. Alvarez and R.H. Campbell. 2003. Preliminary soil-slip susceptibility maps, southwestern California. United States Geological Survey Open-File Report OF 03-17. 46 pp.

Peterson, M.D., A.D. Frankel, S.C. Harmesen, C.S. Mueller, K.M. Haller, R.L. Wheeler, R.L. esson, Y. Zeng, O.S. Boyd, D.M. Perkins, N. Luco, E.H. Field, C.J. Wills, and K.S. Rukstales. 2008. Documentation for the 2008 Update of the United States National Seismic Hazard Maps. USGS Open File Report 2008-1128.

Soil Survey Staff (SSS). 2012. Web Soil Survey. [Web Page]. Located at: http://websoilsurvey.nrcs.usda.gov.

Southern California Earthquake Data Center. 2012. Significant Earthquakes and Faults: Chronological Earthquake Index. [Web Page]. Located at http://www.data.scec.org/significant/chron-index.html.

NRCS. 2008. Soil Survey Geographic (SSURGO) database for Ventura Area, California. NRCS Soil Survey CA674. Published January 3, 2008. [Web Page]. Located at http://SoilDataMart.nrcs.usda.gov.

USGS. 2012a. 2008 Interactive Deaggregations (Beta). [Web Page]. Available at: https://geohazards.usgs.gov/deaggint/2008/.

USGS. 2012b. Mineral Resource Data System: Conterminous US. [Web Page]. Located at http://mrdata.usgs.gov/mineral-resources/mrds-us.html.

USGS and CGS. 2006. Quaternary Fault and Fold Database for the United States. [Web Page]. Located at http://earthquakes.usgs.gov/regional/qfaults.

Ventura County. 2011a. Ventura County General Plan – Resources Appendix. Amended June 28, 2011.

Ventura County. 2011b. Ventura County General Plan – Hazards Appendix. Amended June 28, 2011.

Wald, D.J., V. Quitoriano, T.H. Heaton, H. Kanamori, C.W. Scrivner and C.B. Worden. 1999. TriNet "ShakeMaps": Rapid generation of peak ground motion and intensity maps for earthquakes in southern California. Earthquake Spectra. Vol. 15(3). pp. 537-555.

4.7 Greenhouse Gas Emissions

This section describes the greenhouse gas emissions associated with past and future construction activities, and those associated with future operation of the Project.

4.7.1 Environmental Setting

The Project lies within the South Central Coast Air Basin (SCCAB), a region that is comprised of Ventura County, Santa Barbara County, and San Luis Obispo County. The portion of the SCCAB in which the Project is located is regulated by the Ventura County Air Pollution Control District (VCAPCD).

Greenhouse gases refer to gases that trap heat in the atmosphere, causing a greenhouse effect. GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6). Atmospheric concentrations of the two most important directly emitted, long-lived GHGs, CO_2 and CH_4, are currently well above the range of atmospheric concentrations that occurred over the last 650,000 years (Pew Center 2008). According to the Intergovernmental Panel on Climate Change (IPCC), increased atmospheric levels of CO_2 are correlated with rising temperatures; concentrations of CO_2 have increased by 31 percent above pre-industrial levels since the year 1750. Climate models show that temperatures will probably increase by 1.4 degrees Celsius (°C) to 5.8°C by the year 2100 (IPCC 2007).

Global warming potential (GWP) estimates how much a given mass of a GHG contributes to climate change. The term enables comparison of the warming effects of different gases. GWP uses a relative scale that compares the warming effect of the gas in question with that of the same mass of CO_2. The CO_2 equivalent (CO_2e) is a measure used to compare the effect of emissions of various GHGs based on their GWP, when projected over a specified time period (generally 100 years). CO_2e is often expressed in metric tons (MT) of CO_2 equivalents ($MTCO_2e$). The CO_2e for a gas is obtained by multiplying the mass of the gas (in tons) by its GWP.

4.7.2 Regulatory Setting

4.7.2.1 Federal Regulatory Setting

4.7.2.1.1 Federal Mandatory Reporting of Greenhouse Gases (40 CFR Parts 86, 87, 89 et. al)

The U.S. Environmental Protection Agency (USEPA) promulgated this rule in 2009 to require mandatory reporting of GHG from large GHG emissions sources within 31 source categories in the United States. In general, the threshold for reporting is 25,000 metric tons CO_2e ($MTCO_2e$). Reporting is at the facility level, except that certain suppliers of fossil fuels and industrial greenhouse gases along with vehicle and engine manufacturers report at the corporate level. Facilities and suppliers began collecting data on January 1, 2010. GHG data is accessible to the public through USEPA's GHG Reporting Program. SCE complies with Federal mandatory reporting requirements to the USEPA per 40 CFR 98, Subpart DD.

4.7.2.2 State Regulatory Setting

4.7.2.2.1 Global Warming Solutions Act (AB 32)

The California Global Warming Solutions Act of 2006 (AB 32) charges the California Air Resources Board (CARB) with the responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. CARB established a scoping plan in December 2008 for achieving reductions in GHG emissions and implemented regulations for reducing those emissions by the year 2020. AB 32 also directs CARB to recommend a *de minimis* threshold of GHG emissions below which emission reduction requirements will not apply.

CARB presented a Preliminary Draft Staff Proposal with an example threshold of 7,000 $MTCO_2e$ per year for operational emissions (excluding transportation related emissions) from industrial projects (CARB, 2008). To date, CARB has not adopted this threshold or proposed alternative thresholds.

Pursuant to AB 32, CARB adopted the Mandatory Greenhouse Gas Reporting Regulation (Tit. 17, Cal. Code Regs. §§ 95100-95157). The facilities required to annually report their GHG emissions include electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 $MTCO_2e$ from stationary source combustion. In particular, retail providers of electricity are required to report fugitive emissions of SF_6 related to transmission and distribution systems, substations, and circuit breakers located inside California that the retail provider or marketer is responsible to maintain in proper working order.

4.7.2.2.2 CEQA Guidelines

The State CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions that would result from a project. Moreover, the State CEQA Guidelines emphasize the necessity to determine potential climate change effects of a project and propose mitigation as necessary. The State CEQA Guidelines confirm the discretion of lead agencies to determine appropriate significance thresholds, but require the preparation of an environmental impact report (EIR) if "there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with adopted regulations or requirements" (Section 15064.4).

State CEQA Guidelines Section 15126.4 includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, which may include, among others, measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision; implementation of project features, project design, or other measures which are incorporated into the project to substantially reduce energy consumption or GHG emissions; off site measures, including offsets that are not otherwise required, to mitigate a project's emissions; and, measures that sequester carbon or carbon-equivalent emissions.

4.7.2.3 Local Regulatory Setting

The Ventura County Air Pollution Control District (VCAPCD) currently does not have formally adopted GHG thresholds of significance for CEQA review projects. VCAPCD has recently evaluated various approaches to determining GHG significance in its *Greenhouse Gas Thresholds of Significance Options for Land Use Development Projects in Ventura County*, November 2011. This document states:

> "Given that Ventura County is adjacent to the South Coast AQMD jurisdiction and is a part of the SCAG region, District (VCAPCD) staff believes it makes sense to set local GHG emission thresholds of significance for land use development projects at levels consistent with those set by the South Coast AQMD. GHG emissions are not like local air pollutant emissions that only affect the area in which they are emitted. Local GHG emissions potentially affect the entire globe and having harmonized regional GHG emission thresholds would help streamline project review and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout most of Southern California. However, since the South Coast AQMD has put their GHG thresholds effort on hold until sometime next year due to higher priority commitments, there are at least three options for proceeding with local GHG emission thresholds of significance as follows:
>
> (1) Delay adopting local GHG thresholds until the South Coast AQMD adopts GHG thresholds;
>
> (2) Proceed with interim local GHG thresholds with the understanding that they may be revised after the South Coast AQMD adopts GHG thresholds, or
>
> (3) Not wait for the South Coast AMQD and proceed with our own set of GHG thresholds.
>
> District staff is not certain when the South Coast AQMD will restart their effort to adopt GHG significance thresholds, and if we wait until they have adopted GHG thresholds, our effort to adopt GHG thresholds may be unnecessarily delayed. However, as mentioned above, District staff believes it is desirable that there be regional consistency of GHG thresholds, and moving forward now may mean that local GHG thresholds end up being different from those of that adjacent larger region. Therefore, unless directed otherwise by the Air Pollution Control Board, District staff will continue to evaluate and develop suitable GHG threshold options for Ventura County with preference for GHG threshold consistency with the South Coast AQMD and SCAG region" (VCAPCD 2011).

The South Coast Air Quality Management District (SCAQMD) has adopted an interim operational significance threshold of 10,000 $MTCO_2e$ per year for stationary sources (SCAQMD 2008). Therefore, for the purposes of this analysis, GHG emissions were compared to the SCAQMD interim threshold of 10,000 $MTCO_2e$ in order to determine significance.

4.7.3 Significance Criteria

The significance criteria for assessing greenhouse gas related impacts come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment[46]
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

4.7.4 Impact Analysis, Past Activities

4.7.4.1 Methodology

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

During the past construction activities, GHG emissions were generated from operation of heavy equipment and support vehicles. The most common GHGs associated with fuel combustion are CO_2, CH_4, and N_2O. Annual GHG emissions were estimated for past construction activities using the CalEEMod model for both on-road and off-road sources. As explained in Section 4.3, O&M related emissions would be equivalent to emissions associated with current O&M activities.

As noted above, the SCAQMD's GHG significance threshold is intended for long-term operation related GHG emissions. However, the SCAQMD has developed guidance for the determination of significance of GHG construction emissions that recommends that total emissions from construction be amortized over 30 years and added to operational emissions and then compared to the applicable significance threshold (SCAQMD 2008). This analysis of the past Project activities applies SCAQMD's guidance with regard to the assessment of construction related GHG emissions; as there are no operations related emissions related to the past construction activities, only construction related emissions are considered in the past activities related analyses below.

[46] CEQA Guidelines Section 15064.4 further provides that the determination of significance should take into account several factors:
1. The extent to which the project may increase or reduce greenhouse gas 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.
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 greenhouse gas emissions.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past construction activities resulted in short-term construction emissions of GHG during the October 2010-November 2011 period. Past activities generated exhaust emissions from vehicular traffic, as well as from construction equipment and machinery. Short-term GHG emissions from the Project were estimated to be approximately 635 $MTCO_2e$ over the October 2010-November 2011 period. GHG emissions from past construction activities, amortized over 30 years, would be approximately 21 $MTCO_2e$, and would fall well below the 10,000 $MTCO_2e$ threshold of significance currently recommended by VCAPCD. Therefore, the past construction activities did not generate, either directly or indirectly, GHG emissions that had a significant impact on the environment.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

As discussed above, GHG emissions from past construction activities, amortized over 30 years, would be approximately 21 $MTCO_2e$, which was well below the interim numerical threshold of significance. Therefore, the past construction activities did not conflict with any applicable plan, policy, or regulation, and impacts were less than significant.

4.7.5 Impact Analysis, Future Activities

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

Assessment Summary: Less Than Significant Impact

Construction and Operation Impacts

Future construction activities would result in emissions of GHG over a period lasting approximately 10 months.[47] Construction activities would result in exhaust emissions from vehicular traffic, as well as from construction equipment and machinery. Over the future 12-month construction period, approximately 1,587 $MTCO_2e$ would be emitted. GHG construction emissions from future activities amortized over 30 years is approximately 53 $MTCO_2e$.

[47] The proposed construction schedule does not include delays due to inclement weather and/or stoppages necessary to protect biological resources (e.g., nesting birds).

The estimated annual operations related emissions of GHGs from Project equipment would be primarily from SF_6 emissions (see Appendix E, Air Quality Calculations, for details) from circuit breakers at Moorpark Substation and Newbury Substation. As explained in Section 4.3, operational emissions would not differ in scope or scale from activities currently conducted in SCE's ROWs in which the Project would be operated. The estimated annual emission of GHGs from Project operations is 6 $MTCO_2e$, primarily from SF_6 emissions (see Appendix E for details).

Combined, the 59 $MTCO_2e$ emissions associated with future construction, operations, and SF_6 emissions would be well below the 10,000 $MTCO_2e$ threshold of significance for industrial sources recommended by VCAPCD. Therefore, the Project would not generate, either directly or indirectly, GHG emissions that would have a significant impact on the environment, and impacts would be less than significant.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

As discussed above, GHG construction emissions from future activities amortized over 30 years would be approximately 53 $MTCO_2e$. GHG emissions would fall well below the interim numerical thresholds of significance. Therefore, the Project would not conflict with any applicable plan, policy, or regulation, and less than significant impacts would occur from construction emissions.

Operation Impacts

As part of the Project, four SF6-containing circuit breakers were installed at Newbury Substation. CARB has developed regulations (Tit. 17 Cal. Code Regs. §§ 95350-95359) for reducing SF6 emissions from gas-insulated switchgears, including circuit breakers. These regulations contain, among others, the maximum annual SF6 emission rate from equipment, inventory measurement procedures, and recordkeeping requirements. SCE has developed and would implement SF6 gas management guidelines as described in SCE's document entitled "An Asset Management Approach for EPA/CARB SF6 Regulations," dated April 2012. This document includes an overview of the tools and methods that SCE utilizes to comply with both EPA's Voluntary SF6 Emission Reduction Partnership program and CARB's SF6 Regulations. Following the guidelines in this document would ensure compliance with these regulations. This guideline document identifies storage methods, disposal method alternatives, and record-keeping requirements. Inventories are documented and annually reported to USEPA and CARB.

SCE has made a significant investment in not only improving its SF_6 gas management practices but also purchasing state-of-the-art gas handling equipment that minimizes SF_6 leakage. The new equipment has improved sealing designs that virtually eliminate possible sources of leakage. SCE has also addressed SF_6 leakage on older equipment by performing repairs and replacing antiquated equipment through its infrastructure replacement program.

With implementation of the recommendations in SCE's existing SF_6 gas management guidelines document discussed above, SF_6 emissions from the Project would be expected to meet the regulatory requirements. In addition, the Project would not cause emissions that would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

4.7.6 References

California Air Resources Board (CARB). 2008. Preliminary Draft Staff Proposal. Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act. October 24.

CARB. 2009. Climate Change Scoping Plan: A Framework for Change; published December 2008, amended version included errata and Board requested modifications posted May 11, 2009. Located at http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf.

South Coast Air Quality Management District (SCAQMD). 2008. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. [Web Page]. Located at http://www.aqmd.gov/hb/2008/December/081231a.htm.

Ventura County Air Pollution Control District (VCAPCD). 2011. Greenhouse Gas Thresholds of Significance Options for Land Use Development Projects in Ventura County. November 8, 2011.

4.8 Hazards and Hazardous Materials

This section describes the potential hazards associated with past and future construction, and future operation, of the Project, excluding the geological hazards discussed in Section 4.6. This section addresses the use of hazardous materials during construction and operations, the likelihood of encountering historical contamination during grading, and fire hazards. The regulatory setting and potential impacts are also discussed.

For purposes of this section, Project Area is defined as the locations where work described in Chapter 3: Project Description would be performed.

4.8.1 Environmental Setting

The information contained in Section 4.8 was developed by identifying and reviewing general and comprehensive plans and county and city websites, querying a number of Federal and State databases, and evaluating aerial imagery.

4.8.1.1 Hazardous Waste

State and Federal databases were reviewed to identify hazardous waste facilities including Federal Superfund sites, State Response sites, Voluntary Cleanup sites, School Cleanup sites, Permitted Operating sites, Corrective Action sites, and Tiered Permit sites within or adjacent to the Project. Four records were found in Department of Toxic Substances Control's (DTSC's) EnviroStor database; 14 records were found in the State Water Resources Control Board GeoTracker database; one landfill record was found; five records were found in the USEPA's Toxic Release Inventory database; three records were found in the Ventura County Environmental Health Division's underground storage tank database; and 20 hazardous waste generators were identified within 0.25 miles of the Project alignment.

No records were found that indicate the presence of hazardous materials within or immediately adjacent to the Project alignment. Substation related work completed as part of the Project would necessitate the removal of equipment, including relays and capacitors, that contain hazardous materials. Safety Data Sheets (SDS) are, and would continue to be, made available to all workers during construction and operations.

A search of the USEPA's Hazardous Waste Generators database did not reveal sites that are located within or that overlap the boundary of the Project. Additionally, there are no hazardous materials sites that meet Government Code Section 65962.5 within the project boundary. The Moorpark Substation has periodically generated limited amounts of hazardous waste, the last shipment being June 2011. Near the Newbury Substation, one large quantity generator and a few small quantity generator sites are identified approximately 385 feet south of Newbury Substation, in an industrial/warehouse area.

4.8.1.2 Airports, Airstrips, and Heliports

There are two helipads located within 2 miles of the Project including one at SCE's Moorpark Substation. Table 4.8-1 lists the airports or helipads identified by the U.S. Department of Transportation (USDOT) within a 10-mile radius of the Project.

Table 4.8-1: List Of Airstrips And Heliports Near The Project

Name and Type	Location	Distance (miles/direction)
SCE Moorpark Substation Heliport	5027 Gabbert Road Moorpark, CA 93021	0.0 / E
RI Science Center Helistop	North of Camino Dos Rio Road Thousand Oaks, CA 91360	1.3 / E
TWI II Heliport	North of Potrero Road Triunfo Pass-Coastal, CA 91361	2.7 / S
Los Robles Regional Medical Center Heliport	Lynn Road & Janss Road Thousand Oaks, CA 91360	2.8 / E
East Valley Sheriff's Station Heliport	Olsen Road & SR-23 Thousand Oaks, CA 91360	4.7 / E
William Shells Co. Heliport	Guiberson Road & Calumet Canyon Filmore, CA 93015	7.0 / NE
Camarillo Airport	South of US 101, Camarillo, CA	8.0 / W
Los Angeles County Fire Department Heliport	North of Encinal Canyon Road Malibu, CA 90265	8.7 / SE
Santa Paula Airport	South of SR-126 Santa Paula, CA	9.6 / NW

4.8.1.3 Emergency Response

The City of Moorpark, City of Thousand Oaks, and Ventura County each have developed and implemented emergency response plans.

4.8.1.3.1 City of Moorpark

The City of Moorpark maintains and implements a Standardized Emergency Management System Multihazard Functional Plan, and participates as a member of the County-wide interagency coalition to coordinate the emergency services provided by the city, county, State, Federal and volunteer agencies.

4.8.1.3.2 City of Thousand Oaks

The City of Thousand Oaks has developed the City of Thousand Oaks Emergency Plan, which is intended to provide for the effective mobilization of all of the resources of the City, both public and private, to meet any condition constituting a local emergency, state of emergency, or state of war emergency and provides for the organization, powers and duties, services, and staff of the emergency organization.

4.8.1.3.3 Ventura County

The Ventura County Sheriff's Office of Emergency Services (OES) is responsible for the day-to-day administration of the County's disaster preparedness and response program, as well as development of the Ventura County Multi Hazard Functional Plan, which serves as the County's Emergency Response Plan (Ventura County Sheriff's Office 2012).

The OES in Ventura County is responsible for county-wide disaster planning and emergency management coordination (Ventura County Sheriff's Office 2012). The intent of the OES is to help prepare the communities and residents of Ventura County for the impacts of emergencies and disasters. This is accomplished by coordinating actions; communicating essential information to the public; providing proactive customer service; and implementing effective planning measures for disaster preparedness, response recovery, and mitigation. In Ventura County, the Sheriff also serves as the Director of Emergency Services. Emergency Response Plans have been developed to respond to a number of natural and man-made disasters. As part of this planning, the Sheriff's Office of Emergency Services has pre-designated evacuation routes for disaster events.

4.8.1.4 Wildland Fires

Fire protection in the Project Area, including the cities of Moorpark and Thousand Oaks, is provided by the Ventura County Fire Department (VCFD). The Ventura County Fire Department has implemented a Wildfire Action Plan to assist residents in saving themselves and their property through advanced planning (VCFD 2012).

On January 12, 2012, the CPUC, through the issuance of Decision 12-01-032 (D. 12-01-032), established new rules to reduce fire hazards associated with overhead power lines. The new rules bring several changes that increase utility safety practices associated with power lines while improving safety conditions for residents living near these facilities. One such change is the addition of new paragraph 'E' to CPUC GO 166, which requires electric utilities to submit a Fire Prevention Plan to the CPUC by December 31, 2012, describing the short and long term measures to prevent power line fires during extreme fire-weather events. SCE submitted to the CPUC Advice Letter 2828-E on December 20, 2012, with its Fire Prevention Plan attached. As described D. 12-01-032, the CPUC will continue to evaluate additional safety measures, including the creation of a fire threat map, in the next phase of the proceeding (Rulemaking 08-11-005).

The California Department of Forestry and Fire Prevention (CAL FIRE) has identified fire hazard areas within Ventura County (CAL FIRE 2007). The adopted fire hazard map for Ventura County shows the fire hazard potential for all areas within the County (Figure 4.8-1). The specific fire hazard designation for areas traversed by each of the Project Sections is discussed below:

Project Section 1: Project Section 1 is located wholly within Moorpark Substation. This area is located in a Very High Fire Hazard Severity Zone (FHSZ) as identified by CAL FIRE.

Project Section 2: Project Section 2 begins at the fenceline of the Moorpark Substation and traverses areas that are generally open space or used for agricultural purposes, with scattered residences in the area. Project Section 2 is routed largely through Very High FHSZ, with smaller lengths of the Project alignment found in High or Moderate FHSZ.

Project Section 3: Project Section 3 is located wholly on lands that have been identified as a Very High FHSZ.

Project Section 4: Project Section 4, including Newbury Substation, is located wholly on lands that are located in a Very High FHSZ as identified by CAL FIRE.

Per the Ventura County Fire Protection District Ordinance Number 27, M103, fire officials may restrict entry to public lands during wildfires. The fire code official is authorized to determine and publicly announce when Wildland Urban Interface (WUI, Figure 4.8-2) zone FHSZ areas shall be closed to entry and when the areas should be reopened. Entry on and occupation of WUI or FHSZ areas is prohibited, except for public roadways, inhabited areas, or established trails and campsites that have not been closed when the WUI or FHSZ area is closed to entry.

4.8.1.5 Schools

There are three schools located within 0.25 mile of the Project (Figure 4.14-1b). The Newbury Park Adventist Academy is a private high school located at the terminus of Wendy Drive, approximately 0.15 mile south the alignment in the vicinity of Newbury Substation. The Conejo Adventist Elementary School is a private school (pre-school through 8th grade) located approximately 1,000 feet from the alignment and Newbury Substation. Passageway School, a special education school, is located approximately 400 feet south of the alignment and Newbury Substation.

4.8.2 Regulatory Setting

4.8.2.1 Federal Regulatory Setting

4.8.2.1.1 Clean Water Act

The Clean Water Act (CWA; 33 U.S.C. § 1251 et seq.) is the primary Federal law in the United States governing the protection of water quality through the goals of eliminating water pollution and providing for standards of water quality. Requirements for Spill Prevention, Control, and Countermeasure (SPCC) Plans are provided in Title 40 CFR Part 112. SPCC Plans are intended to reduce the threat of spills of petroleum products to navigable waters of the U.S.

4.8.2.1.2 Occupational Safety and Health Administration

The Federal Occupational Safety and Health Administration (OSHA) establishes and enforces regulations covering the handling of hazardous materials in the workplace. The regulations established in the Code of Federal Regulations (CFR) Title 29 are designed to protect workers from hazards associated with encountering hazardous materials at the work site. The regulations require certain training, operating procedures, and protective equipment to be used at work sites that may encounter hazardous materials.

4.8.2.1.3 Resource Conservation and Recovery Act of 1976

The Resource Conservation and Recovery Act (RCRA), which amended the Solid Waste Disposal Act (42 U.S.C. § 6901 et seq.), establishes a framework for the proper management of hazardous and non-hazardous waste. This act, along with the Toxic Substances Control Act of 1976 (TSCA), enacted a program administered by the USEPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes from their creation to disposal. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the HSWA. RCRA focuses on active and future facilities; it does not address abandoned or historical sites, which are managed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; 42 U.S.C. § 9601 et seq.).

4.8.2.1.4 Superfund Amendments and Reauthorization Act of 1986

The Superfund Amendments and Reauthorization Act (SARA; 42 U.S.C. § 9601 et seq.) established a nationwide emergency planning and response program and imposed reporting requirements for businesses which store, handle, or produce significant quantities of extremely hazardous materials. SARA requires the States to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. Additionally, SARA identifies requirements for planning, reporting, and notification concerning hazardous materials.

4.8.2.1.5 Toxic Substances Control Act

The Toxic Substances Control Act of 1976 (15 U.S.C. § 2601 et seq.) was enacted by Congress to give the USEPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. The USEPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental human-health hazard. The USEPA can ban the manufacture and import of those chemicals that pose an unreasonable risk.

4.8.2.2 State Regulatory Setting

4.8.2.2.1 Health and Safety Code § 25500 et seq. (Waters Bill)

The Waters Bill and the regulations implementing it (Tit. 19, Cal. Code. Regs. § 2620 et seq.), provide that local governments are responsible for regulating local facilities that store, handle, or use hazardous materials in amounts above threshold quantities (TQs). The TQs for identified hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure. Additionally, the legislation and regulations mandate that facilities that store these hazardous materials prepare a Hazardous Materials Business Plan (HMBP). The HMBP is required to identify the facility's internal response to emergencies and the associated employee training necessary for that response. The law also requires that the HMBP be submitted to the local administering agency.

4.8.2.2.2 Health and Safety Code § 25531 et seq. (La Follette Bill)

The La Follette Bill requires the registration of, and regulates the handling of, acutely hazardous materials. With some exceptions, California's identified acutely hazardous materials are listed by the USEPA as extremely hazardous substances. A listing of the Federal extremely hazardous substances is provided in Title III of SARA. Therefore, this State law overlaps or duplicates some of the requirements of SARA and the CWA. The California law requires that facilities which handle, store, or use acutely hazardous materials above total planning quantities (TPQs) register the material with their local administrating agency

4.8.2.2.3 Safe Drinking Water and Toxics Enforcement Act (Proposition 65)

Proposition 65, or the Safe Drinking Water and Toxics Enforcement Act, regulates chemicals that cause cancer and/or affect reproduction. Users of regulated chemicals identified under this law are responsible for informing the public that could be exposed to releases of these materials from their facility. Additionally, the law is intended to prevent discharges of specified hazardous materials into drinking water sources. The law provides a listing of chemicals of concern, which is updated periodically. Proposition 65 is administered through California's Office of Environmental Health Hazard Assessment.

4.8.2.2.4 California Code of Regulations

Title 22 California Code of Regulations Sections 66261.20-24, contain technical descriptions of characteristics that would classify waste material, including soil, as hazardous waste. When excavated, soils with concentrations of contaminants higher than certain acceptable levels must be handled and disposed as hazardous waste.

4.8.2.2.5 California Government Code § 65962.5

California Government Code 65962.5 directs the Department of Toxic Substances Control, the State Department of Health Services, the State Water Resources Control Board, and the

Department of Resources Recycling and Recovery to compile, update, and submit to the Secretary for Environmental Protection lists of hazardous waste facilities, lands designated as hazardous waste property, hazardous waste disposals, public drinking wells that contain detectable levels of organic contaminants, underground storage tanks, and other defined infrastructure with hazardous waste related concerns.

4.8.2.2.6 California Public Utilities Commission, General Order 95, Rule 35

CPUC General Order 95, Rule 35, Vegetation Management, states in part:

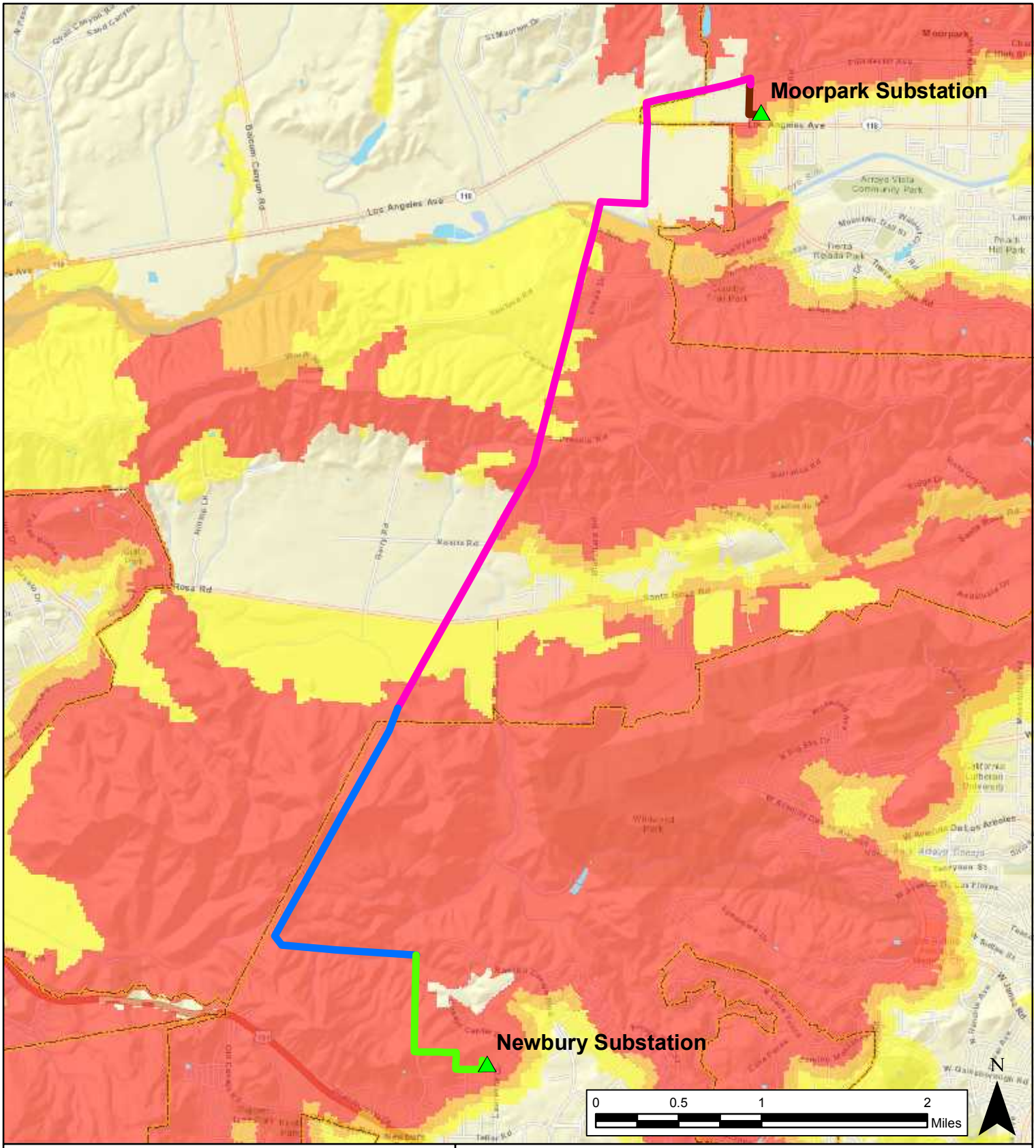
> "Where overhead conductors traverse trees and vegetation, safety and reliability of service demand that certain vegetation management activities be performed in order to establish necessary and reasonable clearances, the minimum clearances set forth in Table 1, Cases 13 and 14, measured between line conductors and vegetation under normal conditions shall be maintained. (Also see Appendix E for tree trimming guidelines.) These requirements apply to all overhead electrical supply and communication facilities that are covered by this General Order, including facilities on lands owned and maintained by California state and local agencies."

4.8.2.2.7 Department of Toxic Substances Control

The DTSC is responsible for regulating the use, storage, transport, and disposal of hazardous substances in the State. DTSC maintains a Hazardous Waste and Substances Site List for site cleanup. This list is commonly referred to as the Cortese List. Government Code Section 65962.5 requires the DTSC to compile, update, and submit information for the list to the California Environmental Protection Agency (Cal/EPA). Local enforcement agencies are required to submit information for the list to the Department of Resource Recycling and Recovery, which compiles a statewide list for submittal to Cal/EPA.

4.8.2.2.8 Hazardous Materials Transportation Regulations

The State of California has adopted USDOT regulations for the intrastate movement of hazardous materials; State regulations are contained in Title 26 of the California Code of Regulations. In addition, the State of California regulates the transportation of hazardous waste originating in the State and passing through the State. Both regulatory programs apply in California. The two State agencies with primary responsibility for enforcing Federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). The CHP enforces hazardous materials and hazardous waste labeling and packing regulations to prevent leakage and spills of material in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are the



SCE Substations
City Boundaries

Project Sections

- Project Section 1
- Project Section 2
- Project Section 3
- Project Section 4

CALFIRE Fire Hazard Severity Zones

- Very High
- High
- Moderate

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

FIRE HAZARD SEVERITY ZONES

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Figure
4.8-1

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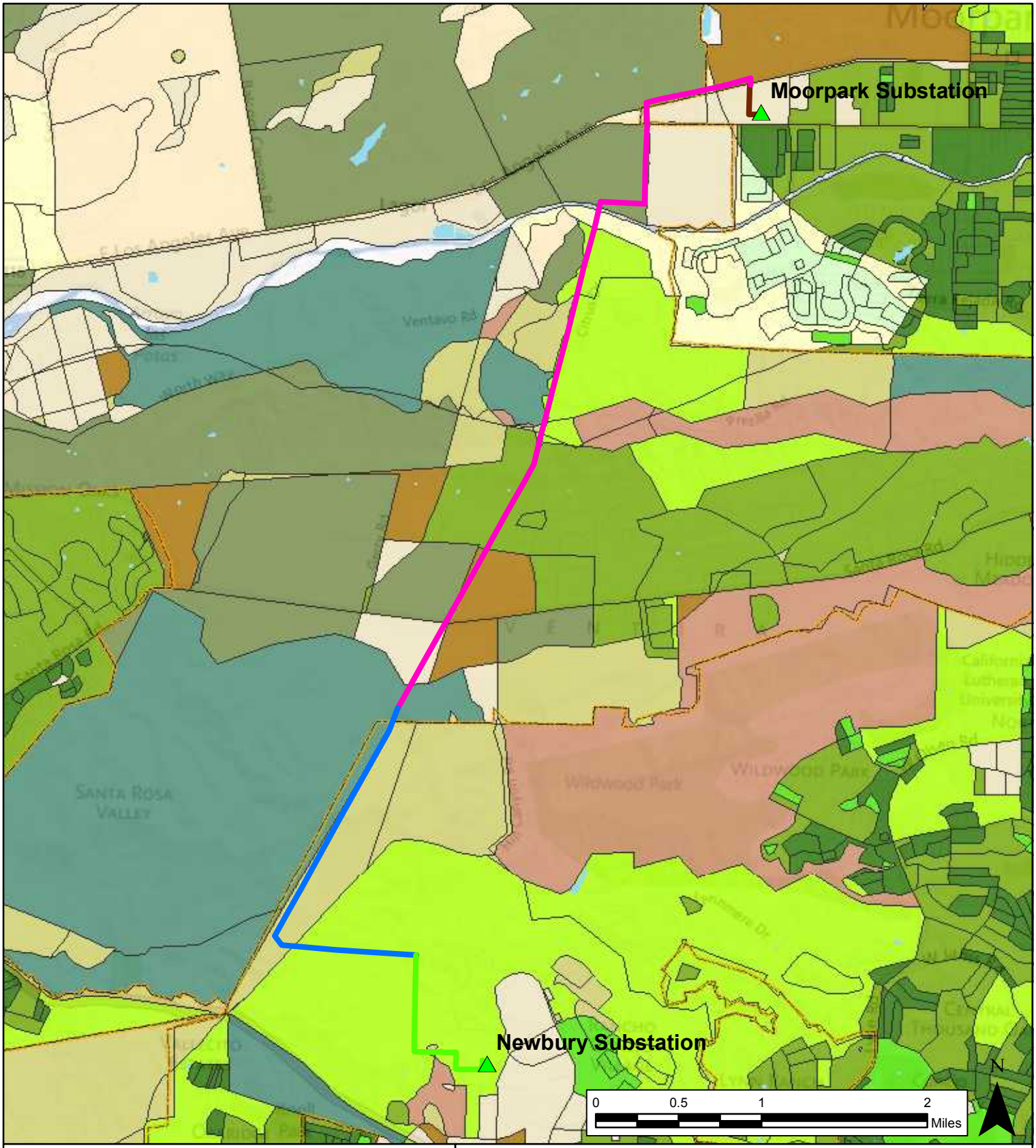

SCE Substations

Project Sections
- Project Section 1
- Project Section 2
- Project Section 3
- Project Section 4
- City Boundaries

California Wildland Urban Interface
- High Density Interface
- High Density Intermix
- High Density No Vegetation
- Low Density Interface
- Low Density Intermix
- Low Density No Vegetation
- Medium Density Interface
- Medium Density Intermix
- Medium Density No Vegetation
- Uninhabited No Vegetation
- Uninhabited Vegetation
- Very Low Density No Vegetation
- Very Low Density Vegetation

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

WILDLAND URBAN INTERFACE

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Figure
4.8-2

ARCADIS: SCEMN_041, 03/21/13, R01

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responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at as many as 72 locations throughout the State that can respond quickly in the event of a spill.

Common carriers are licensed by the CHP pursuant to California Vehicle Code Section 32000. This Section requires the licensing of every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time, and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards.

4.8.2.2.9 Public Resources Code § 4292

Public Resources Code Section 4292 states:

> "Except as otherwise provided in Section 4296, any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or forest-covered land, brush-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for fire protection of such areas, maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such pole or tower. This section does not, however, apply to any line which is used exclusively as telephone, telegraph, telephone or telegraph messenger call, fire or alarm line, or other line which is classed as a communication circuit by the Public Utilities Commission. The director or the agency which has primary fire protection responsibility for the protection of such areas may permit exceptions from the requirements of this section which are based upon the specific circumstances involved."

4.8.2.2.10 Public Resources Code § 4293

Public Resources Code Section 4293 states:

> "Except as otherwise provided in Sections 4294 to 4296, inclusive, any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, brush-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such areas, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current:
>
> a) For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet.
>
> b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet.
>
> c) For any line which is operating at 110,000 or more volts, 10 feet.

In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire, or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard. The director or the agency which has primary responsibility for the fire protection of such areas may permit exceptions from the requirements of this section which are based upon the specific circumstances involved."

4.8.2.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.8.2.3.1 Certified Unified Program Agency

A Certified Unified Program Agency (CUPA) is an agency certified by the Secretary of Cal/EPA to conduct the Unified Program. The Unified Program consolidates the administration, permits, inspections, and enforcement activities of the following environmental and emergency management programs: Hazardous Materials Release Response Plans and Inventories (Business Plans); California Accidental Release Prevention (CalARP) Program; Area Plans for Hazardous Materials Emergencies; Underground Storage Tank Program; Aboveground Petroleum Storage Act Program; Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs; and California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements (Tit. 27 Cal. Code Regs. § 15100 et seq.).

The Ventura County Environmental Health Division is the CUPA with jurisdiction over the Project area.

4.8.2.3.2 The Uniform Fire Code, Article 80

This article addresses hazardous materials, and identifies local fire departments' responsibility to require the development of HMBPs and submittal of a Hazardous Material Inventory Statement. The County of Ventura adheres to Uniform Fire Code (UFC) Article 80 as discussed below.

A hazardous materials management plan (HMMP) may be required of any business storing or using hazardous materials or waste above the thresholds defined by UFC Article 80. In California, UFC Article 80 is included in the Hazardous Materials Unified Program. However, businesses with a HMBP are usually not required to have an HMMP. Businesses with hazardous materials at thresholds below those defined in the Business Plan Program and facilities with "special district" exemptions are usually required to have an HMMP. Construction activities with hazardous materials at thresholds below those defined in the Business Plan Program are not required to have an HMMP.

The Ventura County CUPA / Hazardous Materials Program provides regulatory oversight for six statewide environmental programs: Hazardous Waste Generators; Hazardous Materials Release Response Plans and Inventories (Business Plans); California Accidental Release Prevention Program; Underground Storage Tank Program; Aboveground Petroleum Storage Act Program; and Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs (County of Ventura Environmental Health Division 2012). For the above programs, the CUPA implements State and Federal laws and regulations, county ordinance codes, and local policies. Compliance is achieved through routine and follow-up inspections, educational guidance, and enforcement actions. The CUPA also is involved with hazardous materials emergency response, investigation of illegal disposal of hazardous waste, and public complaints (County of Ventura Environmental Health Division 2012). The CUPA has Participating Agencies (PAs) that implement some of the above programs within their jurisdiction.

4.8.3 Significance Criteria

The significance criteria for assessing the impacts associated with hazards and hazardous materials come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- 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
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

4.8.4 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

No acutely hazardous materials (as defined in Tit. 22 Cal. Code Regs. § 66260.10) were used or stored on location during past construction activities. Hazardous materials that were used during past construction activities included gasoline, diesel fuel, oil, solvents, and lubricants associated with construction equipment and other vehicles and construction activities. These materials were transported, used, and disposed of in accordance with applicable laws, regulations, and SCE protocols designed to protect the environment, workers, and the public. No contaminated soil was encountered during excavation or other ground disturbing activities. Therefore, less than significant impacts occurred under this criterion as a result of the Project.

Did the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Hazardous materials used during past construction activities included gasoline, diesel fuel, oil, solvents, and lubricants associated with construction equipment and vehicles and construction activities.

Reasonably foreseeable upset and accident conditions during past construction activities included minor spills or drips. Best management practices (BMPs) as shown in Table 3.8-1 were implemented during past construction activities to reduce the potential for or exposure to accidental spills or fires involving the use of hazardous materials. The effects of such incidents were minimized by thoroughly cleaning up minor spills as soon as they occurred. A construction stormwater pollution prevention plan (SWPPP) was developed and implemented (see Section 4.9 for more detail) to ensure quick response to minor spills and to ensure less than significant impacts to the public or the environment. The SWPPP identified the locations for storage of hazardous materials during past construction activities, as well as

protective measures, notifications, and cleanup requirements for an accidental spill or other potential release of hazardous materials. Further, the SWPPP included good housekeeping BMPs and waste management BMPs that were implemented and inspected on a regular basis, as required by the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ, to ensure BMP effectiveness at the Project during past construction activities.

Did the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Assessment Summary: Less Than Significant Impact

Construction Impacts

There are three schools located within 0.25 mile of components of the Project, including Newbury Substation. Hazardous materials used during past construction of the Project consisted of limited quantities of low-toxicity materials including gasoline, diesel fuel, oil, solvents, and lubricants associated with the construction equipment and vehicles and construction activities. In addition, substation related work completed as part of the Project necessitated the removal of equipment including relays and capacitors that contained hazardous materials. All hazardous materials were stored, handled, and used in accordance with applicable regulations. No acutely hazardous materials (as defined in Tit. 22 Cal. Code Regs. § 66260.10) were used or stored on location during past construction activities.

Although there are three schools located within 0.25 mile of the Project, the limited quantities and low toxicity of materials associated with the Project, and implementation of site-specific SWPPP(s) that required good housekeeping, spill containment and response measures, and waste management BMPs, ensured less than significant impacts.

Was the project 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, did it create a significant hazard to the public or the environment?

Assessment Summary: No Impact

Construction Impacts

Based on field conditions and SCE personnel's knowledge of historical and current use of lands in the vicinity of the Project, there were no indications that hazardous waste had been generated or stored at or along any component of the Project. No past construction activities were located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and no impact occurred under this criterion as a result of past construction activities.

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, did the project result in a safety hazard for people residing or working in the project area?

Assessment Summary: No Impact

Construction Impacts

No past construction activities were located within an area covered under an airport land use plan. There were no public airports or public use airports within 2 miles of any past construction activity. Therefore, no impact occurred under this criterion as a result of past construction of the Project.

For a project within the vicinity of a private airstrip, did the project result in a safety hazard for people residing or working in the project area?

Assessment Summary: No Impact

Construction Impacts

There were no private airstrips within the vicinity of any past construction activities. Therefore, no impact occurred under this criterion as a result of past construction of the Project.

Did the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Assessment Summary: Less Than Significant Impact

Construction Impacts

As discussed below in Section 4.16, past construction activities did not significantly impact traffic circulation or increase demands on existing emergency response services, and did not significantly impact emergency access in the area. SCE coordinated with local authorities regarding appropriate procedures to ensure that access road blockages were temporary and intermittent and that the roads remained available for use in case of emergency. There was no blockage of public roadways during past construction. Therefore, the impacts associated with past construction activities were less than significant under this criteria.

Did the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Vegetation at construction areas and along access roads was cleared and maintained to avoid the potential for ignition. During past construction activities, SCE implemented fire prevention protocols; no wildland fires or other fires were caused by past construction activities. When Red Flag Warnings were issued by the National Weather Service during past construction activities, SCE implemented measures to address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. As a result of these measures, past construction activities had a less than significant impact to risk of loss, injury, or death involving wildland fires.

4.8.5 Impact Analysis, Future Activities

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

No acutely hazardous materials (as defined in Tit. 22 Cal. Code Regs. § 66260.10) would be used or stored on location during construction of any component of the Project. Hazardous materials that would be used in limited volumes during the construction of the Project would include gasoline, diesel fuel, oil, solvents, and lubricants associated with construction equipment and other vehicles and construction activities. These materials would be transported, used, and disposed of in accordance with applicable rules, regulations, and SCE protocols designed to protect the environment, workers, and the public.

In the event that contaminated soil is encountered during excavation or other ground disturbing activities, the soil would be segregated, sampled, and tested to determine appropriate treatment and disposal options. If the soil is classified as hazardous, it would be properly managed on location and transported in accordance with USDOT regulations using a Uniform Hazardous Waste Manifest to a Class I Landfill or other appropriate soil treatment or recycling facility. All hazardous materials would be transported, used, and disposed of in accordance with applicable rules, regulations, and SCE protocols designed to protect the environment, workers, and the public. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

Operation Impacts

No acutely hazardous materials would be used or stored on location during operation of the Project. Hazardous materials used during the operation of the Project would include gasoline, diesel fuel, oil, solvents, and lubricants associated with vehicles and operation activities. Mineral oil is currently used and is expected to continue to be used during the operation of the substations. All hazardous materials would be transported, used, and disposed of in accordance with applicable rules, regulations, and SCE protocols designed to protect the environment, workers, and the public. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Hazardous materials that would be used during construction of the Project would include gasoline, diesel fuel, oil, solvents, and lubricants associated with construction equipment and vehicles and construction activities. No acutely hazardous materials (as defined in Tit. 22 Cal. Code Regs. § 66260.10) will be used or stored on location during construction activities.

Reasonably foreseeable upset and accident conditions during the construction phase could include minor spills or drips. Project-specific BMPs would be developed prior to the resumption of construction; such BMPs may be similar to those presented in Table 3.8-1. Implementation of these BMPs during construction would reduce the potential for or exposure to accidental spills or fires involving the use of hazardous materials. Environmental impacts from such incidents would be minimized by thoroughly cleaning up minor spills as soon as they occur. A construction SWPPP or erosion and sediment control plan would be developed (see Section 4.9 for more detail) and implemented to ensure quick response to minor spills and to ensure less than significant hazards to the public or the environment. Prior to construction, the locations for storage of hazardous materials during construction would be identified, as well as protective measures, notifications, and cleanup requirements for an accidental spill or other potential release of hazardous materials. Further, good housekeeping BMPs and waste management BMPs would be implemented and inspected on a regular basis, as required by the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ.

Operation Impacts

No acutely hazardous materials (as defined in Tit. 22 Cal. Code Regs. § 66260.10) will be used or stored onsite during operation. Hazardous materials that would be used during operation of the Project would include gasoline, diesel fuel, oil, solvents, and lubricants associated with construction equipment and vehicles and operation activities. Reasonably foreseeable upset and accident conditions during the operation phase could include minor spills or drips. BMPs would be implemented during operations to reduce the potential for or

exposure to accidental spills or fires involving the use of hazardous materials. Environmental impacts from such incidents would be minimized by thoroughly cleaning up minor spills as soon as they occur.

Mineral oil (a low-toxicity material) is used during the operation of the substations. The existing transformer banks at the substations would continue to contain mineral oil that could leak or spill if the transformers were damaged from a seismic event, fire, or other unforeseen incident. To minimize potential impacts from spills, the design of the substations provides sufficient containment and/or diversionary structures or equipment as described in the SPCC requirements (40 CFR Part 112.1-Part 112.7). If appropriate, the SPCC Plans for the existing substations would be updated consistent with applicable requirements. If applicable, the SPCC Plans for the substations would be updated to describe how oil released from electrical equipment would be diverted and directed toward containment structures, and how containerized hazardous materials would be stored within a temporary containment area with sufficient containment capacity. Mineral oil-impacted soils would be excavated. Liquids in containment structures would be retrieved by vacuum trucks. Soils and liquids would be tested and disposed of according to applicable laws, regulations, and SCE protocols.

As required by OSHA, personnel handling any hazardous materials would be trained to understand the hazards associated with these materials and would be instructed in the proper methods for storing, handling, and using these hazardous materials. The on-site foreman would ensure that all on-site health and safety guidelines and regulations involving hazardous materials handling are followed during the construction and operations phases of the Project.

Due to the low volume and proper management of the hazardous materials that would be used during operation of the Project, the potential for creating a significant hazard to the public or environment from hazardous material incidents is low. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Assessment Summary: Less Than Significant Impact

Construction Impacts

There are three schools located within 0.25 mile of a portion of the new Moorpark-Newbury 66 kV Subtransmission Line, the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line, and Newbury Substation. Hazardous materials to be used during the construction and operation of the Project would consist of low-toxicity materials including gasoline, diesel fuel, oil, solvents, and lubricants associated with the construction equipment and vehicles and construction activities. The low-toxicity materials would be used at all Project construction sites. In addition, substation related work completed as part of the Project would necessitate the removal of equipment including relays and capacitors that contain hazardous materials. All hazardous materials would be stored, handled, and used in accordance with applicable regulations. No acutely hazardous materials (as defined in Tit. 22 Cal. Code Regs. § 66260.10) will be used or stored on location during construction activities.

Although there are three schools located within 0.25 mile of the Project, the low toxicity of materials associated with the Project, and implementation of a construction SWPPP or sediment and erosion control plan that would include good housekeeping, spill containment and response measures, and waste management BMPs, would ensure less than significant impacts.

Operation Impacts

There are three schools located within 0.25 mile of a portion of the new Moorpark-Newbury 66 kV Subtransmission Line, the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line, and Newbury Substation. The existing substation operations use only low-toxicity materials, such as mineral oil. No acutely hazardous materials (as defined in Tit. 22 Cal. Code Regs. § 66260.10) will be used or stored onsite during operation.

Implementation of SCE operating procedures at existing operational substations already require good housekeeping and proper waste management methods. These practices and procedures would also be implemented during operation of the Project to further minimize any potential impacts associated with hazardous materials. As a result, no significant impacts associated with hazardous emissions or the handling of acutely hazardous materials would occur.

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

Assessment Summary: No Impact

Construction Impacts

No component of the Project would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impact would occur under this criterion as a result of the Project.

Operation Impacts

No component of the Project would be located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impact would occur under this criterion as a result of the Project.

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

Assessment Summary: No Impact

Construction Impacts

No component of the Project would be located within an airport land use plan. There are no public airports or public use airports within 2 miles of any component of the Project. Therefore, no impact would occur under this criterion as a result of the Project.

Operation Impacts

No component of the Project would be located within an airport land use plan. There are no public airports or public use airports within 2 miles of any component of the Project. Therefore, no impact would occur under this criterion as a result of the Project**.**

For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Assessment Summary: No Impact

Construction Impacts

There are no private airstrips within the vicinity of any component of the Project. Therefore, no impact would occur under this criterion as a result of the Project.

Operation Impacts

There are no private airstrips within the vicinity of any component of the Project. Therefore, no impact would occur under this criterion as a result of the Project.

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

Assessment Summary: Less Than Significant Impact

Construction Impacts

As discussed below in Section 4.16, the Project would not be expected to significantly impact traffic circulation or substantially increase demands on existing emergency response services during temporary construction activities, and would not significantly impact emergency access in the area. In the event that any construction related activity would result in such a blockage or closure, SCE would coordinate with applicable State and local authorities including emergency responders regarding appropriate procedures. In the event of a lane closure, construction crews would employ California Joint Utility Traffic Control Manual (CJUTCM) procedures and such lane closures would be conducted consistent with local ordinances, in cooperation with the applicable local jurisdiction, and/or consistent with CJUTCM. (Note that any such closures would be anticipated to be short-term in duration).

Therefore, the impacts associated with construction activities would be less than significant under this criterion.

Operation Impacts

Operation and maintenance activities as described in Chapter 3: Project Description would be conducted along the length of the Project. Although it is not anticipated that operation activities would result in the blockage of any roadways that could be used in the case of an emergency, SCE would coordinate with local authorities including emergency responders regarding appropriate procedures in the event that additional work beyond patrolling and inspection is needed. In the event that any lane closure would be necessary, the Project would conduct such lane closures consistent with local ordinances, in cooperation with the applicable local jurisdiction, and/or consistent with the CJUTCM. Therefore, less than significant impacts would occur under this criterion as a result of the Project.

Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Vegetation (both natural and ornamental) at the substations and at construction areas along access roads for the subtransmission lines would be maintained to eliminate contact with equipment, and thus avoid potential for ignition.

SCE would implement fire prevention protocols during future construction activities. Additional protocols would be implemented when the National Weather Service issues a Red Flag Warning, such as measures to address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. As a result of these measures, construction of the Project would have a less than significant impact to risk of loss, injury, or death involving wildland fires.

Operation Impacts

SCE complies with CPUC GO 95, Rule 35 and other applicable laws and regulations with respect to vegetation management requirements for electrical lines. SCE also complies with Public Resources Code Sections 4292 and 4293 in mountainous or forested lands along with Title 14 of the California Code of Regulations. Under the CPUC's Rulemaking 08-11-005, SCE has developed a fire prevention plan to reduce the fire hazards associated with overhead power lines in close proximity to trees and brush lands.

Vegetation (both natural and ornamental) at the substations and along subtransmission lines would be maintained to eliminate contact with equipment and thus avoid potential for ignition. In addition, SCE has fire prevention protocols that would be implemented when the National Weather Service issues a Red Flag Warning. These protocols include measures to address smoking and fire rules, storage and parking areas, use of gasoline-powered tools, use

of spark arresters on construction equipment, road closures, use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. As a result of these measures, operation of the Project would have a less than significant impact to risk of loss, injury, or death involving wildland fires.

4.8.6 References

California Department of Forestry and Fire Protection (CAL FIRE). 2002. Multi-source Land Cover Data. Version: v02_2. [Web Page]. Located at http://frap.cdf.ca.gov/data/frapgisdata/download.asp?spatialdist=1&rec=fveg02_2.

CAL FIRE. 2005. Ventura County Fire Protection District Fire Management Plan. Located at http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf240.pdf.

CAL FIRE. 2007. Fire Hazard Severity Zones in State Responsibility Areas. [map] Adopted by CAL FIRE on November 7, 2007. Located at http://frap.cdf.ca.gov/webdata/maps/statewide/fhszs_map.pdf.

CAL FIRE. 2012. California Department of Forestry and Fire Protection. [Web Page]. Located at http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_process.php.

California Department of Toxic Substances Control (DTSC). 2012. Envirostor Database. [Web Page]. Located at http://www.envirostor.dtsc.ca.gov/public/.

California State Water Resources Control Board. 2010. Geotracker Database (updated: 10/16/2010). [Web Page]. Located at http://geotracker.waterboards.ca.gov/

City of Moorpark. City of Moorpark General Plan – Safety Element. [Web Page]. Located at http://ci.moorpark.ca.us/moorparkcity/img/cdd_gp_safety_element.pdf.

City of Thousand Oaks. 2000. Thousand Oaks General Plan – Safety Element. Adopted July 2, 1996.

U.S. Environmental Protection Agency (USEPA). 2011. CERCLIS database (updated: 10/25/2011). [Web Page]. Located at http://www.epa.gov/enviro/facts/cerclis/search.html

USEPA. 2011. Facility Registry System (FRS) database (updated: 06/24/2011). [Web Page]. Located at http://www.epa.gov/enviro/html/fii/fii_query_java.html

Ventura County. 2005. Multi-jurisdictional Hazard Mitigation Plan for Ventura County, California. Located at: http://www.countyofventura.org/rhmp/docs/OES_MHP_03-02-05.pdf.

Ventura County. 2011. Ventura County General Plan. Located at http://www.ventura.org/rma/planning/general_plan/general_plan.html.

Ventura County Fire Department. 2012. Ventura County Fire Department. [Web Page]. Located at http://fire.countyofventura.org/.

Ventura County Sheriff's Office. 2012. Office of Emergency Services webpage [Web Page]. Located at http://www.vcsd.org/sub-office-er.php.

4.9 Hydrology and Water Quality

This section describes the hydrology and water quality in the vicinity of the Project. The potential impacts are also discussed. For purposes of this section, the Project Area is defined as the locations where work described in Chapter 3: Project Description would be performed.

4.9.1 Environmental Setting

The Project is approximately 9 miles in length, and traverses portions of the City of Moorpark, unincorporated areas of Ventura County, and the City of Thousand Oaks. The Project is located in a region characterized by an east/west-trending sequence of ridges and valleys within the Ventura Basin. The Project alignment is located generally north of the Santa Monica Mountains and begins on the northern slopes of the Conejo Valley, continues north over the Camarillo Hills, across the Santa Rosa Valley, and over the Las Posas Hills to Moorpark Substation on the northern side of Little Simi Valley. The Project crosses over lands primarily in agricultural use (orchards), sparse rural development, and undeveloped open space. All components of the Project are located outside a Tsunami Hazard Zone as identified by the California Emergency Management Agency. Surface waters in the Project vicinity include the upstream reaches of Calleguas Creek, Las Posas Arroyo, Lower Conejo Arroyo and Upper Conejo Arroyo. The Project crosses the South Las Posas, Arroyo Santa Rosa, and Thousand Oaks groundwater basins.

4.9.1.1 Surface Water Resources

Surface waters are delineated by the United States Geological Service (USGS), which divides surface waters into successively smaller hydrologic units: regions, sub-regions, accounting units, and cataloging units. The hydrologic units are arranged within each other, from the smallest (cataloging units) to the largest (regions). Each hydrologic unit is identified by a unique hydrologic unit code (HUC) consisting of two to eight digits based on the four levels of classification in the hydrologic unit system.

The first classification level divides the United States into 21 major geographic areas, or regions. The second classification level divides the 21 regions into 221 sub-regions. A sub-region includes the area drained by a river system, a reach of a river and its tributaries in that reach, a closed basin(s), or a group of streams forming a coastal drainage area. The third classification level subdivides many of the sub-regions into accounting units. The fourth classification level is the cataloging unit, the smallest element in the hierarchy of hydrologic units. A cataloging unit is a geographic area representing part of all of a surface drainage basin, a combination of drainage basins, or a distinct hydrologic feature (sometimes referred to as watersheds).

4.9.1.1.1 Surface Water Hydrology

The Project is located entirely within the Ventura-San Gabriel Coastal Hydrologic Cataloging Unit (HUC 180701), and within the approximately 343-square-mile Calleguas Creek watershed (HUC 18070103) (USGS 2012). Within this watershed, Project Sections 1 and 2 cross the Las Posas Arroyo, and Project Sections 3 and 4 cross the Lower Conejo Arroyo. The southernmost portion of Project Section 4 and Newbury Substation are located within the Upper Conejo Arroyo (EPA 2012). The major waterways, watersheds, and sub-watersheds, and the associated portions of the Project alignment are presented in Table 4.9-1 and described below.

The Calleguas Creek Watershed covers 343 square miles of land from the Los Angeles County border on the east to Mugu Lagoon on the west, and from the Santa Monica Mountains on the south to Oak Ridge to the north. The watershed is an elongated area with a maximum east-west length of 32 miles and a maximum north-south width of 14 miles. Elevations within the watershed range from 3,700 feet above sea level in the upper watershed to sea level at the outlet to the Pacific Ocean at Mugu Lagoon (USACE 2003).

Approximately half of the drainage area within the watershed is mountainous, with steep rocky ridges and numerous canyons. The remaining half consists of rolling hills with well-defined stream courses and relatively flat valley areas. The surface waters are primarily arroyos (dry creek beds) and creeks that have historically carried storm flows and post-storm flows from the upper watershed down to the alluvial valleys and the southeastern portion of the Oxnard Plain.

Numerous small tributaries flow into Calleguas Creek in the upper two-thirds of the watershed and drain the upper mountainous portion of the watershed. Conejo Creek and Revelon Slough, two major tributaries, enter Calleguas Creek in the lower one-third of the watershed. Calleguas Creek is also known as Arroyo Las Posas and Arroyo Simi in the middle and upper reaches respectively (USACE 2003). Extensive urban development, farmland conversion, and the development of orchards on steep slopes have altered the geomorphology of the watershed area and have led to accelerated erosion rates. Water now flows from Calleguas Creek into Mugu Lagoon year-round due to urban runoff and discharges from wastewater treatment plants. However, the volume and peak of the year-round flow are negligible compared to runoff during and following rainfall (USACE 2003).

Runoff within the watershed occurs during and immediately following rainfall and stream flow increases rapidly in response to rainfall. Approximately 50 percent of the Calleguas Creek watershed consists of undeveloped areas. In these areas, some of the rainfall is intercepted by vegetation or evaporates, and some percolates into the ground, resulting in relatively minor amounts of storm runoff except in very large storms (VCWPD 2003). High intensity rainfall, in combination with the effects of sparse vegetation, possible denudation by fire, and steep gradients in the upper watershed, result in intense, sometimes sediment-laden floods. These high-velocity flows generally produce channel scouring on unimproved channel reaches. Sediment transported by storm flows settles and deposits in lower Calleguas Creek as stream gradients become less steep. Rainfall occurring over the urbanized area of

the watershed will typically generate higher peak discharges with a shorter peak time and a greater total volume than rainfall occurring over natural watershed lands (USACE 2003).

Historically, flood flows in the Calleguas Creek Watershed would spread across the Oxnard Plain, depositing the sediment that created the rich agricultural lands in that area. Presently, much of the Oxnard floodplain is used for year-round agricultural activities and significant portions of Calleguas Creek have been channelized to convey and contain larger flows. Flood management activities in the watershed are administered by the Ventura County Watershed Protection District (VCWPD) and include land use planning and channel maintenance (County of Ventura 2008). However, development in the Calleguas Creek Watershed has increased peak flows in these channels, resulting in semi-regular flood events (USACE 2003). The watershed experienced major storms and flooding in 1918, 1938, 1943, 1969, 1978, 1980, and 1983 (USACE 2003). The Federal Emergency Management Agency (FEMA) maps areas subject to flooding during a 100-year flood event (FEMA 1996) (Figures 4.9-1 and 4.9-2). These maps show that the proposed subtransmission alignment would pass through the 100-year floodplains associated with Arroyo Simi and Arroyo Santa Rosa.

4.9.1.1.2 Precipitation

The Project is located in an area with a Mediterranean climate characterized by mild, moist winters and moderately warm, generally dry summers. Precipitation occurs primarily in winter, with nearly 90 percent of rainfall between November and April (UCNRS 2012).

Mean annual precipitation is between 12 inches on the Oxnard Plain to 21 inches in the higher elevations. Major winter storms generally originate over the Pacific Ocean and often last several days, and are accompanied by heavy precipitation (VCWPD 2003). Dry periods can be considerable and may extend over many months, or even years (USACE 2003).

4.9.1.2 Surface Water Quality

Surface water quality in Calleguas Creek is affected by adjacent land uses, including agriculture and development (Los Angeles Regional Water Quality Control Board [LARWQCB] 1995). As required by Section 303(d) of the Federal Clean Water Act (CWA), the LARWQCB compiles a list of water bodies that do not achieve water quality standards established by EPA (Strauss 2011). Table 4.9-1 lists the water quality status of the two Calleguas Creek reaches that cross the Project Area.

Table 4.9-1: Surface Water Quality Standard Attainment Status

Water Body	Water Quality Standards Not Met	Project Components
Calleguas Creek Reach 6 (was Arroyo Las Posas Reaches 1 and 2 on 1998 303d list) Assessed area: 15.00 miles	Ammonia, chlordane, chloride, chlorpyrifos, DDT (sediment), diazinon, dieldrin, fecal coliform, nitrate, sedimentation/siltation, sulfates, total dissolved solids, toxicity.	Project Section 2
Calleguas Creek Reach 11 (Arroyo Santa Rosa, was part of Conejo Creek Reach 3 on 1998 303d list)	Ammonia, ChemA, chlordane, DDT (tissue), dieldrin, endosulfan (tissue), algae growth, fecal coliform, PCBs, sedimentation/siltation, sulfates, total dissolved solids, toxaphene (tissue and sediment),	Project Section 2 Project Section 3

Notes:
ChemA: the sum of the chemicals aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, HCH (including lindane), endosulfan, and toxaphene
Source: SWRCB 2010

4.9.1.3 Groundwater

Groundwater resources (basins) are delineated by the California Department of Water Resources. A basin is defined as an alluvial aquifer or a stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction and having a definable bottom. The first number in the sequence assigns the basin to one of the nine RWQCB boundaries. The second number is the groundwater basin number. Any number following the decimal identifies that the groundwater basin has been further divided into sub-basins.

Groundwater in the region is used for agricultural and urban supply, particularly in drought years. Aquifers range from large extensive alluvial valleys with thick multilayered aquifers and aquitards to small inland valleys and coastal terraces (DWR 2003).

4.9.1.3.1 Las Posas Valley Groundwater Basin

Project Sections 1 and 2, including Moorpark Substation, overlies the Las Posas Valley Groundwater Basin (No. 4-8). This groundwater basin underlies the Los Posas Valley. This basin is bounded on the south by the City of Camarillo and the Los Posas Hills and on the north by South Mountain and Oak Ridge (DWR 2004). The basin is bounded on the east by the Santa Susana Mountains and on the west by the Oxnard sub-basin of the Santa Clara River Valley Groundwater Basin. Las Posas Arroyo drains surface waters westward to the Pacific Ocean. Water-bearing materials in this basin include alluvium, the San Pablo Foundation and the Santa Barbara Foundation. Productive aquifers in the basin include an unconfined upper aquifer and two confined aquifers in the lower area of the basin. Groundwater recharge is mainly through percolation of precipitation. Groundwater storage capacity in this basin is estimated at approximately 345,000 acre feet. In October 1999, the basin was estimated to be approximately 50 to 65 percent full (DWR 2004). Groundwater within this basin is calcium bicarbonate in character. Analysis from 23 public wells shows an average total dissolved solids (TDS) content of 742 mg/L.

4.9.1.3.2 Arroyo Santa Rosa Valley Groundwater Basin

Portions of Project Section 2 overlie the Arroyo Santa Rosa Valley Groundwater Basin (No. 4-7). This basin occurs beneath Arroyo Santa Rosa Valley and is bounded to the north by the Santa Rosa fault, to the south and east by the Santa Monica Mountains, and to the west by the Pleasant Valley Groundwater Basin. The major hydrologic features in this basin include Arroyo Santa Rosa and Conejo Creek which drain surface waters to the Pacific Ocean. Water-bearing materials within the basin include the alluvium and the San Pedro Formation. Groundwater is generally unconfined in this basin. Groundwater storage capacity in this basin is estimated at 94,000 to 103,600 acre feet (DWR 2004). Water quality in this basin identifies elevated levels of sulfate and nitrates. According to sampling of seven public wells, TDS content ranges from 670 to 1,200 mg/L and averages 1,006 mg/L (DWR 2004).

4.9.1.3.3 Conejo Valley Groundwater Basin

Newbury Substation and portions of Project Sections 3 and 4 overlie the Conejo Valley Groundwater Basin (No. 4-10). This groundwater basin underlies Conejo Valley. The primary water-bearing units in the basin are Quaternary alluvium and the Modelo, Topanga, and Conejo Formations. Ground water in the basin is generally unconfined and generally flows westward. Recharge to the basin is provided by percolation of rainfall to the valley floor, percolation of surface water from Conejo Creek and its tributaries, and irrigation return. The total storage capacity of this basin is estimated at 7,106 acre feet; the basin was estimated to have been about 75 percent full in 1999, which amounts to approximately 5,330 acre feet of groundwater in storage.

4.9.2 Regulatory Setting

4.9.2.1 Federal Regulatory Setting

4.9.2.1.1 Clean Water Act

Enacted in 1972, the Federal Clean Water Act (CWA; 33 U.S.C. § 1251 et seq.) and subsequent amendments outline the basic protocol for regulating discharges of pollutants to waters of the U.S. It is the primary Federal law applicable to water quality of the nation's surface waters. Enforced by the United States Environmental Protection Agency (USEPA), it was enacted "… to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA authorizes states to adopt water quality standards and includes programs addressing both point and non-point pollution sources. The CWA also established the National Pollutant Discharge Elimination System (NPDES), and provides the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry and water quality standards for surface waters (see below for a discussion of the NPDES program).

In California, programs and regulatory authority under the CWA have been delegated by USEPA to the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs). Under Section 402 of the CWA as delegated to the State of California, a discharge of pollutants to navigable waters is prohibited unless the discharge complies with an NPDES permit.

4.9.2.1.2 Section 303(d) – Impaired Water Bodies and Total Maximum Daily Loads

Section 303(d) of the CWA requires states to identify waters where adopted water quality standards and beneficial uses are still unattained. These lists of prioritized impaired water bodies, known as the "303(d) lists," are submitted to the USEPA every 2 years.

The law requires the development of Total Maximum Daily Loads (TMDLs) to improve water quality of impaired water bodies. TMDLs are the quantities of pollutants that can be assimilated by a water body without violating water quality standards. A TMDL must account for point and nonpoint sources as well as background (natural) sources and is implemented by allocating the total allowable pollutant loading among dischargers.

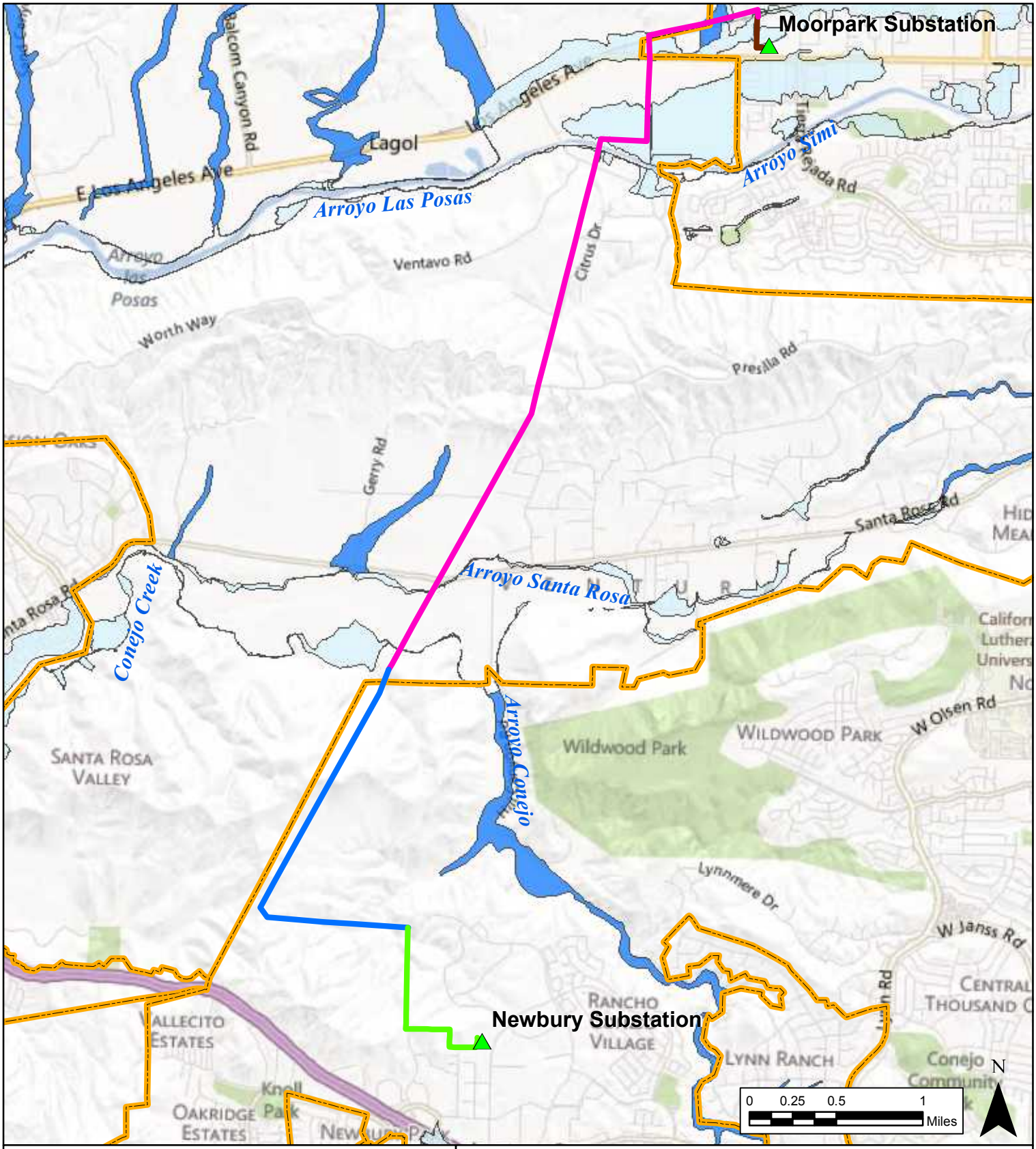
4.9.2.1.3 Section 401 – Water Quality Certification

Section 401 of the CWA specifies that the SWRCB or applicable RWQCB must certify that any discharge into waters of the U.S. complies with State water quality standards, including beneficial uses (Tit. 23 Cal. Code Regs. § 3830 et seq.). Under California's policy of no net loss of wetlands, the SWRCB and RWQCBs require mitigation for dredge and fill impacts to wetlands and waterways (see Section 4.4, Biological Resources). Dredge and fill activities in wetlands and waterways that impact waters of the U.S. will require a Federal Section 404 permit from the USACE. These permits trigger the requirement to obtain a Section 401 water quality certification, which must be obtained prior to issuance of a Section 404 permit.

4.9.2.1.4 Section 402 – National Pollutant Discharge Elimination System

The SWRCB and the RWQCBs implement and enforce the NPDES program in California. Issued in 1972, the NPDES regulations initially focused on municipal and industrial wastewater discharges, followed by stormwater discharge regulations, which became effective in November 1990. NPDES permits provide two levels of control: technology-based limits and water quality-based limits. Technology-based limits are based on the ability of dischargers to treat wastewater, while water quality-based limits are required if technology-based limits are not sufficient to protect the water body. Additionally, stormwater permitting for construction site discharges is described below under State Regulations.

Dischargers with water quality-based effluent limitations must achieve water quality standards in the receiving water. Published by the USEPA on May 18, 2000, the California Toxics Rule (CTR) largely reflects the water quality criteria contained in the USEPA's Section 304(a) Gold Book (USEPA 1986) and the later National Recommended Water Quality Criteria (USEPA 2006). With promulgation of the CTR, these Federal criteria are



Flood Zone

- 1% Annual Chance Flood (100 year flood)
- 2% Annual Chance Flood
- SCE Substations
- City Boundaries

Project Sections

- Project Section 1
- Project Section 2
- Project Section 3
- Project Section 4

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VENTURA COUNTY, CALIFORNIA
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FLOODPLAINS IN PROJECT AREA

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Figure
4.9-1

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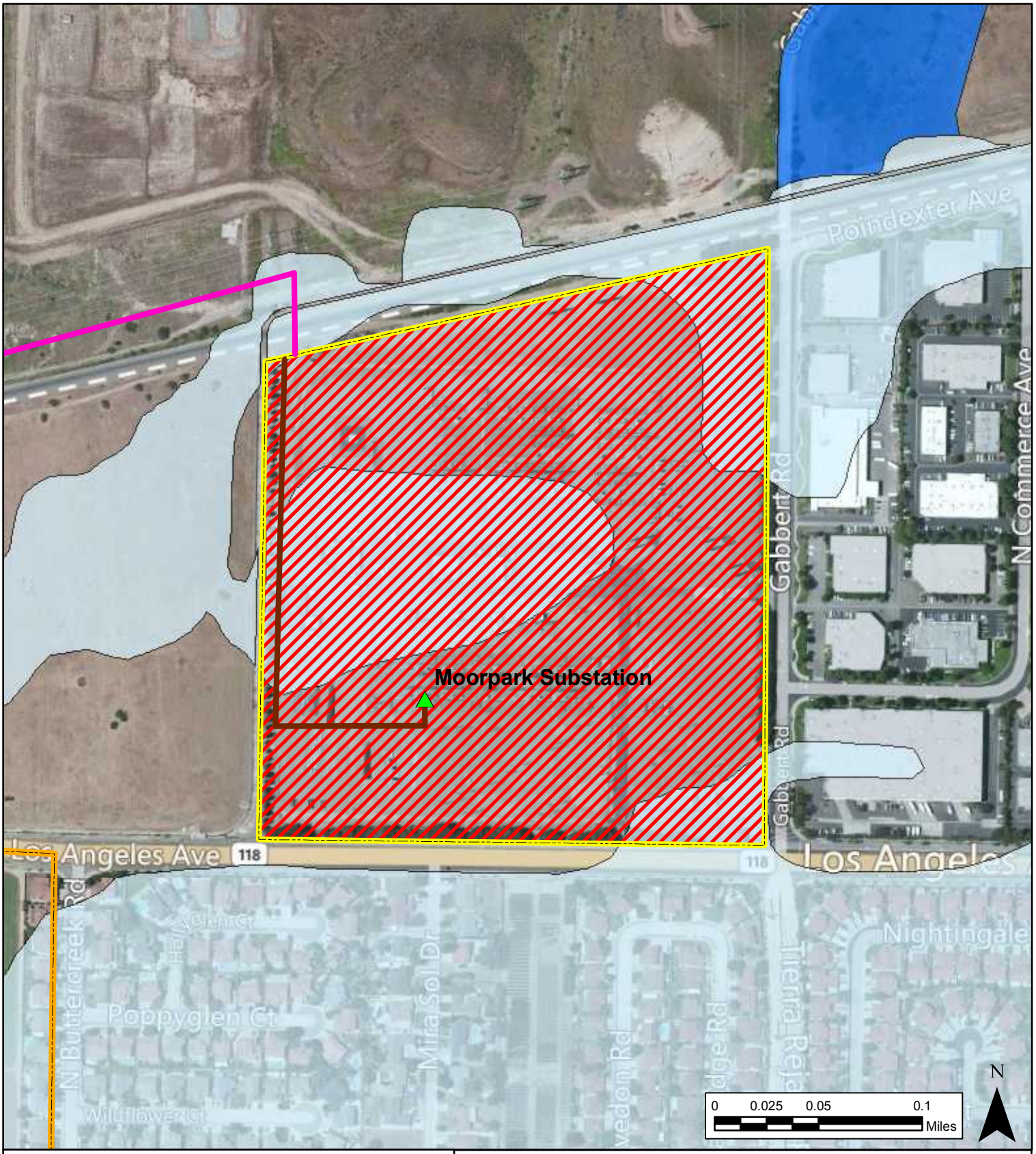

Project Sections
- Project Section 1
- Project Section 2
- Project Section 3
- Project Section 4
- City Boundaries
- Substation Boundary
- SCE Substations

Flood Zone
- 1% Annual Chance Flood (100 year flood)
- 2% Annual Chance Flood

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Figure
4.9-2

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legally applicable in California to inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA. NPDES permits must also incorporate TMDL waste load allocations when they are developed.

4.9.2.1.5 Section 404 – Permitting for Dredge and Fill Activities in Wetlands and Waters of the U.S.

The United States Army Corps of Engineers (USACE) is responsible for issuing permits under CWA Section 404 for placement of fill or dredged material in waters of the U.S. and jurisdictional wetlands. Waters of the U.S. refers to oceans, bays, rivers, streams (including non-perennial streams with a defined bed and bank), lakes, ponds, and seasonal and perennial wetlands.

Project proponents must obtain a permit from the USACE for all discharges of fill or dredged material before proceeding with a proposed activity. The USACE may issue either an individual permit or a general permit. Nationwide Permits (NWPs) are a type of general permit issued to cover activities that the USACE has determined to have minimal adverse effects, such as routine maintenance (i.e., Nationwide Permit 3) or utility line activities (i.e., Nationwide Permit 12).

4.9.2.1.6 National Flood Insurance Act

The National Flood Insurance Act of 1968 and the National Flood Insurance Program make Federally subsidized flood insurance available for flood-prone property in participating communities. The Program is administered by the Federal Insurance Administration of the Federal Emergency Management Agency (FEMA) and requires that participating communities adopt certain minimum floodplain management standards, including restrictions on floodplain development requirements to minimize exposure to flood hazards. To identify areas prone to flooding and insurance rates, FEMA develops Flood Insurance Rate Maps.

4.9.2.2 State Regulatory Setting

4.9.2.2.1 Porter-Cologne Water Quality Act (Wat. Code § 13000 et seq.)

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) requires protection of water quality by appropriate designing, sizing, and construction of erosion and sediment controls. The Porter-Cologne Act established the SWRCB and divided California into nine regions, each overseen by a RWQCB. The SWRCB is the primary State agency responsible for protecting the quality of the State's surface and groundwater supplies and has delegated primary implementation authority to the nine RWQCBs. The Porter-Cologne Act assigns responsibility to the SWRCB and the RWQCBs for implementing CWA, including Sections 401 through 402 (see above).

The RWQCBs also implement CWA Section 303(d). Under Section 303(d), the RWQCBs identify streams and waters that have "Water Quality Limited Segments," or portions that do not meet water quality standards even after point sources of pollution have installed the minimum required levels of pollution control technology. Pursuant to the CWA, the

SWRCB establishes priority rankings for water on the lists and develops TMDL criteria (i.e., the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects) to improve water quality.

Under the Porter-Cologne Act and NPDES, the SWRCB administers California's stormwater permitting program. This program requires all projects that will disturb one acre or more of land to implement stormwater best management practices (BMPs) to prevent discharge of sediments and stormwater. The permit (General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order 2009-0009-DWQ as amended by Order 2010-0014-DWQ) requires preparation of a Stormwater Pollution Prevention Plan (SWPPP) and implementation of BMPs, stormwater sampling, and reporting.

The SWRCB and the RWQCBs are responsible for addressing dredge and fill impacts to wetlands and waterways in California to support the State goal of no net loss of wetlands. The SWRCB and the RWQCBs are responsible for the issuance of Section 401 water quality certifications for Federal actions that result in dredge and fill activities in Federally jurisdictional wetlands and waterways. Dredge and fill activities in non-Federally jurisdictional wetlands and waterways must be covered under a waste discharge requirement (WDR) issued by the SWRCB or applicable RWQCB.

The Porter-Cologne Act requires the development and periodic review of water quality control plans (Basin Plans) that designate beneficial uses of California's major rivers and groundwater basins. The Basin Plans establish narrative and numerical water quality objectives for those waters, provide the technical basis for determining waste discharge requirements, identify enforcement actions, and evaluate clean water grant proposals. The Basin Plans are updated every 3 years.

The RWQCBs throughout California adopt and implement water quality control plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The RWQCBs adopt and implement water quality control plans that designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters addressed through the plan (Wat. Code, §§ 13240-13248). The Project Area is located within the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB).

The LARWQCB is responsible for the protection of the beneficial uses of waters within the coastal watersheds of Ventura County and Los Angeles County. The LARWQCB uses its planning, permitting, and enforcement authority to meet this responsibility and has adopted the Basin Plan to implement plans, policies, and provisions for water quality management.

In accordance with State policy for water quality control, the LARWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan has identified existing, intermittent and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. The beneficial uses

designated in the Basin Plan for the surface water bodies in or adjacent to the Project Area are identified in Table 4.9-2. The existing uses of groundwater in the vicinity of the Project Area include municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PROC) (LARWQCB 1995). The Basin Plan also includes water quality objectives that are protective of the identified beneficial uses; the beneficial uses and water quality objectives collectively makeup the water quality standards for the region. Table 4.9-3 presents selected, quantitative surface water quality objectives of Calleguas Creek relevant to the Project Area. Table 4.9-4 presents selected, quantitative groundwater quality objectives for the groundwater basins relevant to the Project Area.

Table 4.9-2: Beneficial Uses of Waters in the Project Area

Waterbody Name	Existing Beneficial Uses	Intermittent Beneficial Uses	Potential Beneficial Uses
Arroyo Conejo	WILD, RARE	GWR, FRSH, WARM, REC-1, REC-2	MUN
Arroyo Las Posas	GWR, FRSH, WARM, WILD, REC-1, REC-2	—	MUN, IND, PROC, AGR, COLD
Arroyo Santa Rosa	WILD	GWR, FRSH, WARM, REC-1, REC-2	MUN
Arroyo Simi	WILD	MUN, IND, GWR, FRSH, REC-1, REC-2, WARM	—
Conejo Creek	IND, PROC, AGR, GWR, REC-1, REC-2, WARM, WILD, SPWN	FRSH	MUN

Notes:
MUN - Municipal and Domestic Supply
IND - Industrial Service Supply
PROC - Industrial Process Supply
AGR - Agricultural Supply
GWR - Groundwater Recharge
FRSH - Freshwater Replenishment
REC 1 - Water Contact Recreation
REC 2 - Non-Contact Water Recreation
WARM - Warm Freshwater Habitat
COLD - Cold Freshwater Habitat
WILD - Wildlife Habitat
RARE - Rare, Threatened, or Endangered Species
SPWN - Spawning, Reproduction, and/or Early Development
— - None
Source: LARWQCB, 1995

Table 4.9-3: Selected Water Quality Objectives for Calleguas Creek

Constituent	Total Dissolved Solids (TDS)	Sulfate (mg/L)	Chloride (mg/L)	Boron (mg/L)	Nitrogen (mg/L)
Concentration (mg/L)	850	250	150	1.0	10

Source: LARWQCB, 1995

Table 4.9-4: Selected Water Quality Objectives for Groundwater near the Project Area

Constituent	Total Dissolved Solids (TDS) (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Boron (mg/L)
Arroyo Santa Rosa Basin	900	300	150	1.0
South Las Posas (Grimes Canyon Road area)	700	300	100	1.5
Thousand Oaks	1,400	700	150	1.0

Source: LARWQCB 1995

Under CWA § 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives.

4.9.2.2.2 Los Angeles Region Basin Plan

The Project is located in the Los Angeles RWQCB's jurisdiction and therefore subject to the Los Angeles Region Basin Plan. The Project facilities within the Los Angeles Region Basin Plan area would be located in open space areas near the region's northern border. The Los Angeles Region Basin Plan establishes water quality objectives and strategies to maintain water quality and beneficial uses including stormwater permitting and other nonpoint source controls, Section 401 certification, and TMDLs. The Los Angeles Basin Plan includes TMDLs for Calleguas Creek (LARWQCB 2012).

Pollutant/stressors in the Calleguas Creek Watershed for which TMDLs have been approved include toxicity, nutrients, toxics, metals, trash, and salts. In addition, Calleguas Creek was listed as impaired for sedimentation/siltation on the 2010 303(d) list (LARWQCB 2010).

4.9.2.2.3 California Fish and Game Code §§ 1600-1616

California Fish and Game Code (FGC) Section 1600 et seq. sets forth guidelines for the protection and conservation of habitat for fish and wildlife, including aquatic habitat. CFG Code Section 1602 requires any person, State or local governmental agency, or public utility to notify the California Department of Fish and Wildlife (CDFW) before beginning an activity that would substantially modify the bank or bed of a river, stream, or lake (i.e., prior to causing any potential hydrological impacts). If the CDFW determines that the activity could substantially adversely affect a fish and wildlife resource, a Lake or Streambed Alteration Agreement is required. Refer to Section 4.4 for additional information.

4.9.2.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.9.2.3.1 Ventura County General Plan

The following goals and policies are identified in the Ventura County General Plan (County of Ventura 2008):

2.10 Flood Hazards

2.10.1 Goals

1. Minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from flood hazards.

2. Design and construct appropriate surface drainage and flood control facilities as funding permits.

3. Prevent incompatible land uses and development within flood plains.

2.10.2 Policies

2. Within areas subject to flooding, the County shall require the recordation of a Notice of Flood Hazard or dedication of a flowage easement with the County Recorder for all divisions of land and discretionary permits.

3. Development shall be protected from a 100-year flood if built in the flood plain areas.

4. The design of any structures which are constructed in flood plain areas as depicted.

4.9.2.3.2 Ventura County Grading Ordinance

The Ventura County grading ordinance is found in Appendix J to the Ventura County Building Code (Ordinance No. 4369). The provisions of this appendix set forth the rules and regulations to control excavation, grading and earthwork construction, including fills and embankments, and the control of grading site runoff, including erosion sediments and construction related pollutants; establishes the administrative procedure for the issuance of permits related to grading; and provides for approval of plans and inspection of grading construction.

4.9.2.3.3 Ventura County Watershed Protection District

The Project is located within the VCWPD jurisdiction. The VCWPD was formed in 1944 to provide for the "control and conservation of flood and stormwaters and for the protection of watercourses, watersheds, public highways, life and property in the district from damage or destruction from these waters" (VCWPD 2009). The authority of the VCWPD over its jurisdictional channels is established through a number of ordinances and policies. The primary ordinance that established the VCWPD's authority and requirements to obtain permits for encroachments in jurisdictional waters and rights-of-way (ROWs) is Ventura County Ordinance FC-18. Ordinance FC-18 relates to protection and regulation of flood control facilities and watercourses. This ordinance has been amended by FC-19 through FC-23 and FC-27 (VCWPD 1981). Additionally, the VCWPD implements the Flood Plain Management Ordinance 3841 on behalf of the County of Ventura to ensure compliance with FEMA regulations. This includes all proposed residential and non-residential development within the 1 percent annual chance base flood area (100-year floodplain).

The Ventura County Watershed Protection District is responsible for the protection of life, property, waterways, watersheds, and public highways from damage or destruction caused by flooding or stormwater. The District regulates channels with peak runoff flows of more than 500 cubic feet per second (cfs) during a 100-year storm. The District requires a permit for any encroachment into regulated channels or their ROWs. The District also implements the Ventura County Flood Plain Management Ordinance (Ventura County Ordinance No. 3841, as amended), which requires permit review of structures built in the floodplain. The ordinance requires construction of utilities, such as electrical, sewer, water, and gas systems in a manner designed to minimize flood damage.

4.9.2.3.4 City of Moorpark

The City of Moorpark Municipal Code, Chapter 8.52, Stormwater Quality Management, implements the Federal Clean Water Act and California Water Code by prohibiting any unapproved discharges to navigable waters. Developments must comply with an applicable NPDES permit, a SWPPP, and a stormwater pollution control plan per city requirements.

4.9.2.3.5 City of Thousand Oaks

City of Thousand Oaks Municipal Code includes Title 4, Public Safety, Chapter 7 – Flood Control Damage, which includes standards for utilities development. Title 7, Chapter 3 – Grading, requires a grading permit for, among other activities, those that divert a drainage course. In addition, the City of Thousand Oaks General Plan contains goals and policies related to flood hazards including minimizing public and private losses and risks to life and property.

4.9.3 Significance Criteria

The potential environmental impacts of the Project on hydrology and water quality were evaluated using the criteria from the CEQA Appendix G Environmental Checklist. A Project causes a potentially significant impact if it would:

- Violate any water quality standards or waste discharge requirements
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on or off site
- Create or contribute to runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
- Otherwise substantially degrade water quality
- Place housing within a 100-year floodplain, as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam
- Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow

4.9.4 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project violate any water quality standards or waste discharge requirements?

Assessment Summary: No Impact

Construction Impacts

Past construction activities included ground-disturbing activities in erosion-prone areas that could have increased soil erosion rates, potentially resulting in violating water quality standards and impacts to beneficial uses in adjacent water bodies (see Table 4.9-2). Soil disturbance adjacent to streams within the Project vicinity could have had adverse effects on water quality, including in Calleguas Creek, which does not currently meet water quality standards for turbidity. Rehabilitation of access roads and the development of spur roads and equipment pad/turnaround areas in erosion-prone areas could have resulted in soil loss and sedimentation.

To minimize soil erosion and resulting impacts on water quality, SCE complied with State stormwater regulations. Past construction activities were completed under the Construction General Permit (SWRCB Order 2009-0009-DWQ as amended by 2010-0014-DWQ) and an approved SWPPP (WDID# 4 56C359579). BMPs identified in the SWPPP were utilized to address sediment discharge and erosion control to meet water quality standards (see Table 3.8-1).

Past construction activities did not involve discharges of domestic sewage. Temporary sanitary facilities were provided during past construction activities; these facilities were serviced by a licensed contractor and all wastes disposed of according to applicable regulations.

With the implementation of BMPs from the SWPPPs required under the Construction General Permit, the Project did not cause a violation of water quality standards. Therefore, no impacts occurred under this criterion.

Did the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there was a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells dropped to a level which does not support existing land uses or planned uses for which permits have been granted)?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past construction activities did not involve direct extraction of groundwater. As described in Chapter 3: Project Description and Section 4.17, SCE used water during construction for dust control and other purposes (including site rehabilitation and revegetation related work). This water was obtained from providers who use both surface and groundwater. Given the small volume of water used during past activities (which totaled less than 1 acre-foot, including water used for rehabilitation and revegetation activities), the Project did not substantially deplete groundwater supplies in the area.

Past construction activities did not substantially interfere with groundwater recharge. The past activities did not alter the course of a stream or river in any way that affected groundwater recharge. The TSP concrete foundations are impervious; each foundation is approximately 6 to 8 feet in diameter. A total of 28 TSP foundations were constructed along the length of the Project during past construction activities; these foundations are widely spaced, and as such, the presence of these foundations has not resulted in an increase in impervious surface that could substantially affect groundwater recharge.

New spur roads were constructed from pervious local soils, and did not substantially interfere with groundwater recharge. Therefore, past construction activities did not cause a net deficit in aquifer volume or a lowering of the local groundwater table level, and thus less than significant impacts occurred under this criterion.

Did the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which resulted in substantial erosion or siltation on- or off site?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past construction activities included upgrading and replacing deteriorated drainage facilities during the rehabilitation of access roads; these drainage facilities, and existing facilities that did not require upgrades or replacement, were used during past activities. In addition, as described in Chapter 3: Project Description, new spur roads were constructed in a manner which did not substantially alter existing drainage patterns. The development of construction pads resulted in minor localized changes in runoff volumes and velocities. However, in compliance with State stormwater regulations as described above, SCE developed and implemented a SWPPP and erosion and sediment control plans with BMPs to minimize soil erosion.

As presented in Chapter 3: Project Description, during past Project related grading activities, certain soils were deposited by SCE on slopes below pole locations 38, 39 and 40. These activities altered the existing drainage patterns on and in the immediate vicinity of the slopes; however, substantial erosion or siltation did not occur either on- or off site, and the areas were rehabilitated at the direction of CDFG.

As noted above, past construction activities did not alter the course of a stream or river in a manner that substantially altered the existing drainage pattern of the area. Therefore, past construction activities had less than significant impacts on drainage patterns and resulting erosion and sedimentation.

Did the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on- or off site?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past construction activities included upgrading and replacing deteriorated drainage facilities during the rehabilitation of access roads; these drainage facilities, and existing facilities that did not require upgrades or replacement, were used during past activities. In addition, as described in Chapter 3: Project Description, new spur roads were constructed so that they did not alter existing drainage patterns. Construction pads did result in minor localized changes in runoff volumes and velocities, as did the deposition by SCE of certain soils on sloped surfaces below pole locations 38, 39 and 40. However, in compliance with State stormwater regulations as described above, SCE developed and implemented a SWPPP that included measures designed to prevent stormwater and floodwater from coming into contact with potential construction related sources of sediments or other pollutants. SCE also performed remedial activities on the slopes adjacent to pole locations 38, 39, and 40 as directed by CDFG. In addition, SCE obtained permits and complied with Ventura County flood control requirements for encroachments on ROWs of channels regulated by the VCWPD and for new structures in floodplains.

The Project incorporated design features to control runoff rates, which minimized the chances of flooding receiving waters or causing sedimentation that would reduce their capacity. Through drainage design and implementation of stormwater BMPs during and after construction as required by existing regulatory programs, the Project minimized the potential for flooding area streams and rivers. Therefore, past construction activities resulted in less than significant impacts related to the alteration of drainage patterns that would have resulted in flooding on or off site, and no impacts that may have resulted from altering a stream or river.

Did the project create or contribute to runoff water, which exceeded the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Site runoff was addressed through stormwater BMPs implemented in compliance with the Construction General Permit. This included the installation and/or upgrading of stormwater drainage systems along the Project alignment; the capacity of these systems was designed to accommodate the maximum expected stormwater drainage from the Project's sites. As such, the Project did not create or contribute to runoff water which exceeded the capacity of existing or planned stormwater drainage systems or provided substantial additional sources of polluted runoff. Therefore, less than significant impacts occurred under this criterion.

Did the project otherwise substantially degrade water quality?

Assessment Summary: Less Than Significant Impact

Construction Impacts

During past construction activities, no additional sources of potential water degradation were identified beyond those previously discussed for other Hydrology and Water Quality Significance criteria. As discussed above, substantial degradation of water quality did not occur; therefore, less than significant impacts occurred under this criterion as a result of past Project construction.

Did the project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Assessment Summary: No Impact

Construction Impacts

No housing was constructed as part of the past construction activities. As a result, past construction did not place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Map or Federal Flood Insurance Map. Therefore, no impacts occurred under this criterion.

Did the project place within a 100-year flood hazard area structures which did or would impede or redirect flood flows?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Construction of the subtransmission line occurred within a FEMA designated 100-year flood hazard zone associated with Calleguas Creek (Conejo Creek, and Arroyo Los Posas and Arroyo Simi), but not within the active channel; however the subtransmission structures have not altered drainage patterns and do not have a large cross section that would significantly impede flood flows. During construction, no dams or other temporary structures that could impede or redirect flow were required. Therefore, the impacts from placing structures in a 100-year flood hazard were less than significant.

Did the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Project Section 1 and the northern portions of Project Section 2 are located in the Wood Ranch Reservoir (Bard Lake) failure inundation path; however, these Project Sections are located at the far end of the inundation path, and therefore past construction work did not expose workers to a significant risk of loss, injury, or death involving flooding from the failure of the reservoir's dam (City of Moorpark 2001). Construction work adjacent to tributaries to Calleguas Creek was conducted in identified flood zones. However, past construction activities were conducted during the dry season to the extent feasible, and were halted on account of weather when necessary, and thus did not expose people or structures to a significant risk of loss, injury, or death involving flooding. Therefore, the risk of loss, injury, or death as a result of flooding was less than significant.

Did the project expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?

Assessment Summary: Less Than Significant Impact

Construction Impacts

According to the California Emergency Management Agency (Cal EMA 2009), all components of the Project are located outside of a mapped tsunami hazard zone. The nearest water body in which a seiche could occur is the Wood Ranch Reservoir (Bard Lake) in Simi Valley. The past construction activities occurred more than 4 miles from the reservoir, and thus was not susceptible to a seiche. Therefore, due to the location of past construction activities, and because these activities did not involve construction of residences or other land uses involving human occupancy, there was no impact from risk of loss, injury, or death from tsunamis or seiches.

The Project is routed through areas that may be susceptible to mudflows; however, past construction activities did not involve the development of residences or other structures or facilities designed for human occupation. Additionally, construction work was halted on account of weather when necessary, and no mudflows in the Project Area occurred during past construction activities. Therefore, there was a less than significant impact from loss, injury, or death involving mudflows.

4.9.5 Impact Analysis, Future Activities

Would the project violate any water quality standards or waste discharge requirements?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Future construction activities would require ground-disturbing activities that could increase soil erosion rates, potentially resulting in violating water quality standards and impacts to beneficial uses in adjacent water bodies (see Table 4.9-2). The Project crosses mountainous and erosion-prone areas. Soil disturbance adjacent to streams within the Project vicinity could have adverse effects on water quality, including in Calleguas Creek, which does not currently meet water quality standards for turbidity. Rehabilitation of access roads and equipment pad/turnaround areas in erosion-prone areas could result in soil loss and sedimentation.

To minimize soil erosion and resulting impacts on water quality, SCE would comply with State stormwater regulations. Future construction activities will be implemented in compliance with the Construction General Permit. BMPs (as presented in Table 3.8-1) would be utilized as needed to address sediment discharge and erosion control to meet water quality standards.

The Project would not involve discharge of domestic sewage. If necessary, SCE or its Contractor would install temporary sanitary facilities during construction; the sewage from these facilities would be disposed of according to applicable regulations.

With the implementation of BMPs identified in Table 3.8-1 as needed and compliance with the Construction General Permit, and compliance with terms and conditions of other applicable permits, future construction activities would not violate water quality standards or applicable waste discharge requirements. Therefore, less than significant impacts would occur under this criterion.

Operation Impacts

Operation and maintenance activities as described in Chapter 3: Project Description would be conducted along the length of the Project. Access, spur road, and equipment pad/turnaround area maintenance may involve periodic light grading and/or vegetation removal. If necessary for this work, SCE would obtain and comply with any applicable grading permits. Compliance with the conditions of any necessary or applicable grading permit would ensure

that water quality standards or waste discharge requirements are met, and thus impacts would be less than significant.

During operation, effluent from the site would largely be limited to stormwater discharge. As noted above and in Table 3.8-1, the Project would incorporate design features, BMPs, and other related measures or practices during operation of the Project. Water quality would be further protected by implementing an existing Stormwater Management Plan (SWMP) and SPCC Plan, which would further reduce the potential for the Project to result in polluted discharge.

Project maintenance would not generate sanitary wastewater or dewatering discharges. Maintenance activities during operations would not typically involve dredge and fill activities and would not require Section 404 or 401 permitting. Following compliance with terms and conditions of any necessary permits (including grading permits), the Project would not violate water quality standards or applicable waste discharge requirements associated with construction activities. Therefore, less than significant impacts would occur under this criterion.

Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The Project would not involve direct extraction of groundwater for use during future construction activities. As described in Chapter 3: Project Description and Section 4.17, SCE would use water during construction for dust control and other purposes; this water would be obtained from providers who use both surface and groundwater. Given the small volumes of water to be used during future construction activities, the Project would not substantially deplete groundwater supplies in the area.

Future construction activities would not substantially interfere with groundwater recharge. The Project would not alter the course of a stream or river in a manner that would substantially alter the existing drainage pattern of the area resulting in an effect on groundwater recharge. The TSP concrete foundations are impervious; each foundation would be approximately 6 to 8 feet in diameter. Upon completion of the Project, a total of approximately 44 TSP foundations would be installed along the length of the Project. These TSP foundations are widely spaced, and as such the presence of these foundations would not result in an increase in impervious surface that could substantially affect groundwater recharge.

Future construction activities would occur on roads and pads constructed from pervious local soils, and would not substantially interfere with groundwater recharge. Therefore, the Project would not cause a net deficit in aquifer volume or a lowering of the local groundwater table level, and thus less than significant impacts would occur under this criterion.

Operation Impacts

The Project would not directly extract groundwater for use during operations. During operations, water would be used at substation locations for landscaping and for sanitary purposes, and would be used along the subtransmission line for washing of insulators; this water would be obtained from providers who use both surface and groundwater. The volumes of water would be equivalent to the small volumes currently used for the same purposes. Given the small volume of water to be used during operations, the Project would not substantially deplete groundwater supplies in the area.

Operation of the Project would not introduce substantial new areas of impervious surfaces and would have no impact on groundwater recharge. The Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The volumes of water to be used during operation would be insufficient to result in a substantial depletion of groundwater supplies. Therefore, the Project would not cause a net deficit in aquifer volume or a lowering of the local groundwater table level, and thus less than significant impacts would occur under this criterion.

Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off site?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The Project would use existing drainage facilities and would upgrade or replace deteriorated drainage facilities during the rehabilitation of access roads. Construction pads would result in minor localized changes in runoff volumes and velocities. However, SCE would comply with the Construction General Permit and implement measures consistent with the provisions of the Construction General Permit. Implementation of those measures, as well as SCE's preparation of an erosion and sediment control plan with BMPs, such as those discussed above and presented in Table 3.8-1, would minimize soil erosion during construction. As noted above, the Project would not alter the course of a stream or river in a manner that would substantially alter the existing drainage pattern of the area. As a result, impacts to the existing drainage pattern resulting from erosion or siltation would be less than significant, and the Project would have less than significant impacts on drainage patterns and resulting erosion sedimentation.

Operation Impacts

Operation and maintenance activities as described in Chapter 3: Project Description would be conducted along the length of the Project. Access, spur road, and equipment pad/turnaround area maintenance may involve periodic light grading and/or vegetation removal. The scope of these activities would not result in substantial erosion or siltation on or off site.

The Project's operations would not alter drainage patterns, including the course of any stream or river. Stormwater runoff would use existing drainage facilities.

At substations, SCE would implement its existing operational SWMPs and BMPs to minimize soil erosion and associated siltation on or off site during operations.

Emergency operations may result in alterations to the amount of erosion or siltation associated with runoff due to grading/construction actions, vehicle movements, and other activities. These activities would be short-term and localized to the area in which emergency operations were being conducted.

As presented above, the Project's operations would not alter the existing drainage pattern of a stream, river, site or area, and would not result in substantial erosion or siltation on- or off site; therefore, impacts would be less than significant under this criterion.

Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on- or off site?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The Project would use existing drainage facilities and would upgrade or replace deteriorated drainage facilities during the rehabilitation of access roads. Construction pads would result in minor localized changes in runoff volumes and velocities. However, SCE would comply with the Construction General Permit and implement measures consistent with the provisions of the Construction General Permit. Implementation of those measures, as well as SCE's preparation of an erosion and sediment control plan with BMPs, such as those discussed above and presented in Table 3.8-1, would minimize soil erosion during construction. In addition, if needed, SCE would obtain permits and comply with Ventura County flood control requirements for any encroachments on ROWs of any channels regulated by the VCWPD and any new structures in floodplains.

The Project would incorporate design features to control runoff rates, which would minimize the chances of flooding receiving waters or causing sedimentation that would reduce their capacity. Any dredge and fill activities would be conducted in a manner so as not to impact the hydraulic capacity of the existing channel.

Through drainage design and implementation of stormwater BMPs during and after construction as required by existing regulatory programs, the Project would minimize the potential for flooding area streams and rivers. Therefore, the Project would have less than significant impacts related to the alteration of drainage patterns that would result in flooding on or off site, and no impacts that may result from altering a stream or river.

Operation Impacts

The Project's operation would not alter drainage patterns and would not introduce new impervious surfaces. Stormwater runoff would follow existing drainage patterns, and the Project would incorporate design features to control runoff rates, which would minimize the chances of flooding. In compliance with State and local stormwater and flood control regulations as described above, SCE would implement its existing operational SWMP and BMPs to minimize contact with floodwaters and to minimize runoff velocities.

Emergency operations may result in alterations to existing drainage patterns and increases in the rate or amount of surface runoff due to grading/construction actions, vehicle movements, and other activities. These activities would be short-term and localized to the area in which emergency operations were being conducted. Compliance with these regulations would result in the minimization of flooding on or off site, and thus impacts would be less than significant.

Normal operations would typically have no impacts from altering a stream or river and would not require grading or alteration of drainage patterns. Therefore, Project operations would have minimal incremental impacts related to drainage alterations resulting in flooding.

Would the project create or contribute to runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Site runoff would be addressed through stormwater BMPs as required by the Construction General Permit. Past construction activities included the installation and/or upgrading of drains, waddling, and silt fences, among other measures along the Project alignment; the capacity of these systems was designed to accommodate the maximum expected stormwater drainage from the Project's sites. As such, the Project would not create or contribute to runoff water which would exceed the capacity of existing stormwater drainage systems or that would provide substantial additional sources of polluted runoff. Therefore, less than significant impacts would occur under this criterion.

Operation Impacts

Project operations would generate only stormwater runoff, which would use existing and upgraded drains that have the capacity to accept this runoff. Therefore, less than significant impacts would occur under this criterion.

Would the project otherwise substantially degrade water quality?

Assessment Summary: No Impact

Construction Impacts

No additional sources of potential water degradation during future construction activities have been identified beyond those previously discussed. As discussed above, substantial degradation of water quality is not anticipated; therefore, no impacts would occur under this criterion as a result of Project construction.

Operation Impacts

Project operation would not result in additional sources of potential water degradation beyond those identified above. Substantial degradation of water quality during operations is not anticipated; therefore, no impacts would occur.

Would the project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Assessment Summary: No Impact

Construction Impacts

No housing construction is proposed as part of the Project. As a result, future construction of the Project would not place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Map or Federal Flood Insurance Map. Therefore, no impacts would occur under this criterion as a result of the Project.

Operation Impacts

Project operations would not involve placement of housing within a 100-year flood hazard area. Therefore, no impacts would result.

Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Construction of the subtransmission line would occur within a FEMA-designated 100-year flood hazard zone associated with Calleguas Creek, but not within the active channel; however the subtransmission structures would not alter drainage patterns and would not have a large cross section that would significantly impede flood flows. During construction, no dams or other temporary structures that could impede or redirect flow would be required. Therefore, any impacts from placing structures in a 100-year flood hazard zone would be less than significant.

Operation Impacts

The Project's infrastructure would be operated within a FEMA-designated 100-year flood hazard zone associated with Calleguas Creek, but not within the active channel; however the subtransmission structures would not alter drainage patterns and would not have a large cross section that would significantly impede flood flows. Therefore, any impacts from placing structures in a 100-year flood hazard zone would be less than significant.

Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Project Section 1 and the northern portions of Project Section 2 are located in the Wood Ranch Reservoir (Bard Lake) failure inundation path; however, these Project Sections are located at the far end of the inundation path, and therefore future construction work would not expose workers to a significant risk of loss, injury, or death involving flooding from the failure of the reservoir's dam. Construction work adjacent to Calleguas Creek would be conducted in an identified flood zone. However, construction activities in this area would not generally be conducted immediately following heavy precipitation. Therefore, the risk of loss, injury, or death as a result of flooding would be less than significant and no impacts would result from a levee or dam failure.

Operation Impacts

Project Section 1 and the northern portions of Project Section 2 are located in the Wood Ranch Reservoir failure inundation path; however, these Project Sections are located at the far end of the inundation path, and therefore future construction work would not expose workers to a significant risk of loss, injury, or death involving flooding from the failure of the reservoir's dam (City of Moorpark 2001). The operating subtransmission line would cross identified flood zones adjacent to Calleguas Creek. However, operations in this area would not require human occupation and flooding would not expose people or structures to a significant risk of loss, injury, or death involving flooding. Therefore, the risk of loss, injury, or death as a result of flooding would be less than significant and no impacts would result from a levee or dam failure.

Would the project expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?

Assessment Summary: Less Than Significant Impact

Construction Impacts

According to the California Emergency Management Agency (Cal EMA 2009), all components of the Project are located outside of a mapped tsunami hazard zone. The nearest water body in which a seiche could occur is the Wood Ranch Reservoir (Bard Lake) in Simi Valley. The future construction activities would occur more than 4 miles from the reservoir, and thus would not be susceptible to a seiche. Therefore, due to the location of future

construction activities, and because these activities would not involve construction of residences or other land uses involving human occupancy, there would be no impact from risk of loss, injury, or death from tsunamis or seiches.

The Project is routed through areas that may be susceptible to mudflows; however, the Project would not involve the development of residences or other structures or facilities designed for human occupation. Therefore, there would be a less than significant impact from loss, injury, or death involving mudflows.

Operation Impacts

Because the Project would be located several miles from the Wood Ranch Reservoir (Bard Lake) in Simi Valley, 12 miles from the ocean, and not within a mapped tsunami hazard zone (Cal EMA 2009), Project operations would have no impacts from risk of loss, injury, or death from tsunamis or seiches. Project facilities are designed for unmanned operation, with only periodic visitation for maintenance and inspection. Therefore, Project operations would have a less than significant impact from loss, injury, or death involving mudflows.

4.9.6 References

Calleguas Creek Watershed Management Plan Steering Committee. 2004. Calleguas Creek Watershed Management Plan: A Cooperative Strategy for Resource Management and Protection - Phase I Report, November 10, 2004. Located at http://www.calleguascreek.org/ccwmp/CCWMP%20Phase%201%2011-10-04.pdf.

California Department of Water Resources (DWR). 2004. California's Groundwater, California Department of Water Resources, Bulletin 118. Last updated February 27, 2004.

California Emergency Management Agency (Cal EMA). 2009. Tsunami Inundation Map for Emergency Planning, Ventura County Quadrangle. February 15.

City of Moorpark. 2001. City of Moorpark General Plan – 2000-2005 Safety Element. Located at http://ci.moorpark.ca.us/moorparkcity/img/cdd_gp_safety_element.pdf.

Federal Emergency Management Agency (FEMA). 1996. Ventura County Flood Zones Q3 Flood Data, 1996.

Los Angeles Regional Water Quality Control Board (LARWQCB). 1995. Water Quality Control Plan Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties Basin Plan. Located at www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.shtml.

LARWQCB. 2010. 2010 CWA §303(d) List of Water Quality Limited Segments, USEPA approval date: November 12, 2010.

Metropolitan Water District of Southern California (MWD). 2007. Groundwater Assessment Study. Located at www.mwdh2o.com/mwdh2o/pages/yourwater/supply/groundwater/GWAS.html.

State Water Resources Control Board (SWRCB). 2010. Order 2009-0009-DWQ as amended by 2010-0014-DWQ; Construction General Permit. September 2, 2009, modified November 16, 2010. Located at http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

SWRCB. 2010 Clean Water Act Section 303(d) List, Integrated 303(d) List / 305(b) Report. [Web Page]. Located at http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.

Strauss, A. 2011. Final approval, California's Final 2008-2010 CWA Section 303(d). List of Impaired Waterbodies. U.S. Environmental Protection Agency. November 12, 2011. [Web Page]. Located at http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.

U.S. Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0). January, 1987. Located at http://el.erdc.usace.army.mil/elpubs/pdf/trel08-28.pdf.

USACE. 2003. Los Angeles District, Calleguas Creek Watershed Feasibility Study, Hydrology Appendix, February 2003.

USACE. 2008. Regional General Permit No. 63 for Repair and Protection Activities in Emergency Situations. Los Angeles District. (File No. 995007000-BAH. Available online at: http://www.spl.usace.army.mil/regulatory/RGP63_2008_California.pdf.

U.S. Environmental Protection Agency (USEPA). 1986. Quality Criteria for Water 1986 (Gold Book). EPA 440/5-86-001. USEPA, Office of Water, Regulations, and Standards. Washington, DC.

USEPA. 2006. National Recommended Water Quality Criteria: January 2006.

USEPA. 2012. Watershed Assessment, Tracking, & Environmental Results; California, Calleguas Watershed. [Web Page]. Located at http://iaspub.epa.gov/tmdl_waters10/attains_watershed.control?p_huc=18070103&p_cycle=&p_report_type=T.

U.S. Geological Survey (USGS). 2012. Water Resources of the United States. [Web Page]. Located at http://water.usgs.gov/GIS/huc_rdb.html.

Ventura County. 2011. Ventura County General Plan. Amended June 28, 2011.

Ventura County. 2010. Technical Guidance Manual for Stormwater Quality Control Measures, Manual Update 2010 (Ventura County TGM), 2010. Prepared by Larry Walker Associates and Geosyntec Consultants, November 2010.

Ventura County Watershed Protection District (VCWPD). 1981. Ventura County Flood Control District Ordinance No. FC-18, amended by FC-19 through FC-23 and FC-27.

VCWPD. 2003. Calleguas Creek Watershed Hydrology Study, Present Condition, March 2003.

VCWPD Watershed Protection District. 2012. Watershed Protection District Homepage [Web Page]. Located at http://portal.countyofventura.org/portal/page?_pageid=876,1324092&_dad=portal&_schema=PORTAL.

4.10 Land Use and Planning

This section discusses the existing land use within the vicinity of the Project and the potential impacts to existing land use as a result of construction and operation of the Project. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3: Project Description would be performed. The information presented in Section 4.10.1, is used to assess potential effects of past and future construction activities as well as the effects of Project operations.

The physical infrastructure of the Project, including subtransmission structures, conductor, and substation equipment would be located in existing SCE rights-of-way (ROWs) for existing 220 kV transmission infrastructure, in existing SCE ROWs for existing 66 kV subtransmission infrastructure, and on SCE-owned properties. Figures 4.10-1 through 4.10-3 show the designated land use and zoning in the area of the Project.

4.10.1 Environmental Setting

Land use designations presented in the discussions below are derived from the City of Moorpark General Plan, the City of Thousand Oaks General Plan, and the Ventura County General Plan. The Project has been subdivided into four distinct geographically-defined Project Sections as described in Chapter 3: Project Description.

4.10.1.1 Project Section 1

Project Section 1 is located entirely within Moorpark Substation and entirely within the city limits of the City of Moorpark. The substation is located on land designated in the City of Moorpark General Plan as Utilities (U) and zoned Limited Industrial (M-2). Lands to the west and east of the substation are designated Medium Industrial (I-2) and zoned Limited Industrial (M-2). Lands to the northwest are designated Medium Industrial (I-2) and zoned Limited Industrial (M-2). A small area located adjacent to the southwest corner of the substation property is designated as General Commercial and zoned as Commercial Planned Development (C-P-D). Areas to the south of the substation across SR-118 are designated Medium Density Residential (M) and zoned One Family Residential (R-1).

Lands to the north are designated Hitch Ranch Specific Plan (SP-1) and zoned Agriculture Exclusive (A-E); the land is currently undeveloped. The parcels located immediately to the west of the substation are also currently undeveloped.

4.10.1.2 Project Section 2

Project Section 2 begins at the northwest corner of Moorpark Substation in the City of Moorpark and terminates near the City of Thousand Oaks boundary. Approximately 3,200 feet of Project Section 2 is located within the City of Moorpark in an area designated in the City of Moorpark General Plan as Medium Industrial (I-2) and zoned Limited Industrial (M-2). The remainder of Project Section 2 is located in unincorporated Ventura County on private lands designated in the Ventura County General Plan as Agriculture (40 acre

minimum), Existing Community, Open Space (10 acre minimum), and Rural (2 acre minimum), and zoned as Open Space (OS, 20 and 160 acre minimum) and Agricultural (AE, 40 acre minimum).

4.10.1.3 Project Section 3

Project Section 3 begins near the northern edge of the COSCA Conejo Canyons area and is located largely on lands managed by COSCA. These lands are designated in the City of Thousand Oaks General Plan as Existing Parks, Golf Course and Open Space, and zoned Open Space.

4.10.1.4 Project Section 4

Project Section 4 is located in the City of Thousand Oaks. Newbury Substation is located on land designated Industrial in the City of Thousand Oaks General Plan. The 66 kV subtransmission line would be located on lands designated in the General Plan as Existing Parks, Golf Course and Open Space; Institutional; and Industrial. Newbury Substation is located on land zoned Industrial Park Zones (M-1); the 66 kV subtransmission line would be located on lands zoned Industrial Park (M-1), Public (P-L), and Open Space (OS).

4.10.2 Regulatory Setting

4.10.2.1 Federal Regulatory Setting

There are no Federal land use regulations applicable to the Project.

4.10.2.2 State Regulatory Setting

The Project would not be located on any State lands.

The California Public Utilities Commission (CPUC) has sole and exclusive jurisdiction over the siting and design of the Project, because the CPUC regulates and authorizes the construction of investor-owned utility (IOU) facilities (see Section 4.0). The CPUC has adopted GO 131-D to regulate the construction of electric public utility facilities. General Order 131-D, Section XIV.B. states that "...local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction." As part of its environmental review process, SCE considered local and State land use plans and policies, and local land use priorities and concerns.

4.10.2.3 Local Regulatory Setting

4.10.2.3.1 Ventura County General Plan

The Ventura County General Plan sets forth the goals, policies, and programs that Ventura County will implement to manage future growth and land uses. In addition, the Ventura County General Plan includes implementation measures intended to ensure the policies of the plan are carried out. It describes the planning area, provides an overview of existing conditions, summarizes the issues raised during the preparation of the Ventura County General Plan, and identifies the environmental resources and constraints associated with the Ventura County General Plan.

Section 4.5 "Public Utilities" describes the County's policies regarding public utilities and recognizes the importance of ensuring compatibility between utilities and the general scenic qualities of its County. The following goals and policies in Section 4.5 "Public Utilities" apply to public utility siting:

Goal:

> Promote the efficient distribution of public utility facilities and transmission lines to assure that public utilities are adequate to service existing and projected land uses, avoid hazards and are compatible with the natural and human resources.

Policies:

1. New gas, electric, cable television and telephone utility transmission lines shall use or parallel existing utility ROWs where feasible and avoid scenic areas when not in conflict with the rules and regulations of the California Public Utilities Commission. When such areas cannot be avoided, transmission lines should be designed and located in a manner to minimize their visual impact.
2. All transmission lines should be located and constructed in a manner which minimizes disruption of natural vegetation and agricultural activities and avoids unnecessary grading of slopes when not in conflict with the rules and regulations of the California Public Utilities Commission.
3. Discretionary development shall be conditioned to place utility service lines underground wherever feasible.

4.10.2.3.2 Ventura County Non-Coastal Zoning Ordinance

The Ventura County Non-Coastal Zoning Ordinance, Division 8, Chapter 1 constitutes the comprehensive zoning regulations for the unincorporated area of the County of Ventura, excluding the Coastal Zone, and was adopted to protect and promote the public health, safety, and general welfare; to provide the environmental, economic, and social advantages which result from an orderly, planned use of resources; to establish the most beneficial and convenient relationships among land uses, and to implement the Ventura County General Plan.

Per Section 8105-4 - Permitted Uses in Open Space, Agricultural, Residential and Special Purpose Zones, transmission lines are permitted uses requiring a Planning Director-approved conditional use permit. However, pursuant to GO 131-D, Section XIV.B., the Project would not require a conditional use permit from the County.

4.10.2.3.3 City of Moorpark General Plan

The City of Moorpark General Plan is the City's long range policy document that sets forth broad goals and objectives for the growth and development of the City of Moorpark. The Land Use Element and General Plan map identify the classifications of land uses and compatible land uses.

4.10.2.3.4 City of Moorpark Municipal Code, Zoning Ordinance

The City of Moorpark's Zoning Ordinance is found in Chapter 17 of the Moorpark Municipal Code. The text of the Ordinance and zoning map contained in the chapter constitute the comprehensive zoning regulations for the City and are intended to protect and promote the public health, safety and general welfare; to provide the environmental, economic and social advantages which result from an orderly, planned use of resources; to establish the most beneficial and convenient relationships among land uses; and to implement the City's general plan.

The following Sections may be relevant to the Project:

Section 17.16.060 Industrial zones.

> "B. Limited Industrial (M-2) Zone. The purpose of this zone is to provide suitable areas for the development of a broad range of industrial and quasi-industrial activities of a light manufacturing, processing or fabrication nature, while providing appropriate safeguards for adjoining industrial sites, nearby nonindustrial properties and the surrounding community." (Ord. 189 § 3 (8104-5), 1994)

In addition, per Table 17.20.060 in Section 17.20.060, utility structures are permitted in the M-2 Zone upon receipt of an administrative permit. However, pursuant to GO 131-D, Section XIV.B., the Project would not require an administrative permit from the City.

4.10.2.3.5 City of Thousand Oaks General Plan, Open Space Element

The City of Thousand Oaks General Plan provides a long-range comprehensive guide for the physical development of the City's Planning Area. The General Plan comprises a set of goals and policies related to community development within the City.

The Open Space Element of the General Plan "is a tool to carry forth the Thousand Oaks vision to protect open space, direct growth and maintain the community's character and enviable quality of life." The Open Space Element identifies the open space resources that should be protected and specific methods to protect them." (City of Thousand Oaks 1996.) Policy OS-30 of the Open Space Element may be of relevance to the Project:

"Open space managers should work cooperatively with the utility companies, water agencies, and the Ventura County Flood Control District to assure that facilities subject to their jurisdiction are planned and designed in a manner which provides effective public service and also protects the natural environment."

4.10.2.3.6 City of Thousand Oaks Municipal Code, Zoning Regulations

Title 9, Chapter 4 of the City of Thousand Oaks Municipal Code is entitled "Zoning". The text and zoning maps therein constitute the comprehensive zoning plan and regulations for the City, the purpose of which are to protect and promote the public health, safety, morals, and welfare and to provide the economic and social advantages which result from an orderly, planned use of land resources.

Section 9-4.106, Public utilities, states:

> "The provisions of this chapter shall apply as specified within the various articles of this chapter to communication lines, electric transmission and distribution lines, and gas pipelines, regulators, and meters used directly or indirectly for service to the public, or any portion thereof, except as preempted by the authority and regulations of the Public Utilities Commission of the State."

4.10.2.3.7 Conejo Canyons Open Space Management Plan

The Conejo Canyons Open Space Management Plan (Management Plan) provides a comprehensive guide for the long term management of the Conejo Canyons area located in the northwest portion of the City of Thousand Oaks. The Management Plan was prepared by COSCA, which is a joint powers agency that was formed between the City of Thousand Oaks and the Conejo Recreation and Park District in 1977 in order to implement the adopted goals of the Open Space and Conservation Elements of the Thousand Oaks General Plan.

Section 2.4 of the Management Plan identifies public ROWs and alignments, including SCE's infrastructure located just beyond the western boundary of the planning area as follows:

> "Southern California Edison (SCE) electrical transmission lines and towers are located just beyond and parallel to the western boundary of the plan area. Portions of the access road ROW for the transmission lines traverse the western boundary of the Canyons West OSU [Open Space Unit]. SCE also has local transmission lines and access easements along the southern portion of the Canyons West OSU (Figure 2-8: SCE Easements). Dirt roads provide access through these easements, and some also serve as multipurpose trails. Two minor transmission lines serve the Hill Canyon Treatment Plant. The first runs from the Western Canyon area through the lower Conejo Creek to the plant. The second line runs from the Rancho Conejo Industrial Park down the canyon to the plant." (COSCA 2009)

4.10.3 Significance Criteria

The significance criteria for assessing the impacts to land use and planning are derived from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Physically divide an established community
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect
- Conflict with any applicable habitat conservation plan or natural community conservation plan

4.10.4 Impact Analysis, Past Activities

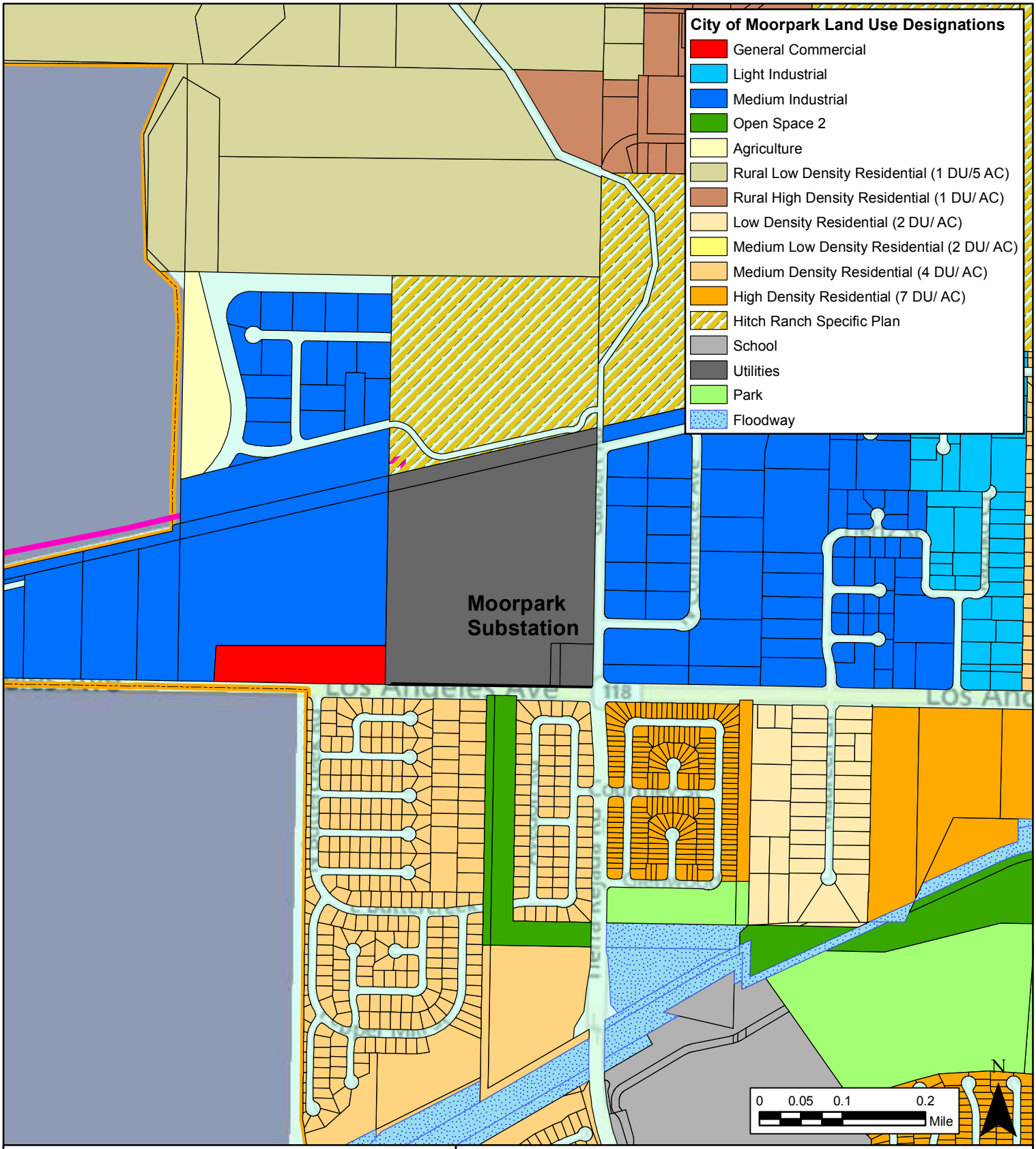
While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project physically divide an established community?

Assessment Summary: No Impact

Construction Impacts

Past construction activities occurred within substation boundaries or within existing utility ROWs that have been in existence for several decades. Areas designated and zoned for residential uses are located to the south of the Moorpark Substation, to the east of portions of Project Section 2, and in the vicinity of Newbury Substation; no construction occurred on these lands. Past construction activities at any given site were of short duration and intermittent; the entire past construction period lasted only 13 months. Construction of the subtransmission structures, installation of overhead conductor, and substation modifications did not physically divide an established community. Therefore, no impacts occurred under this criterion as a result of past construction activities.



Ventura County Land Use Designations
- Agriculture
- Existing Community
- Open Space
- Rural
- Urban

Project Sections
- Project Section 1
- Project Section 2

- Substation
- Moorpark Substation Boundary
- City Boundaries

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

MOORPARK SUBSTATION, LAND USE DESIGNATIONS

SOUTHERN CALIFORNIA EDISON®
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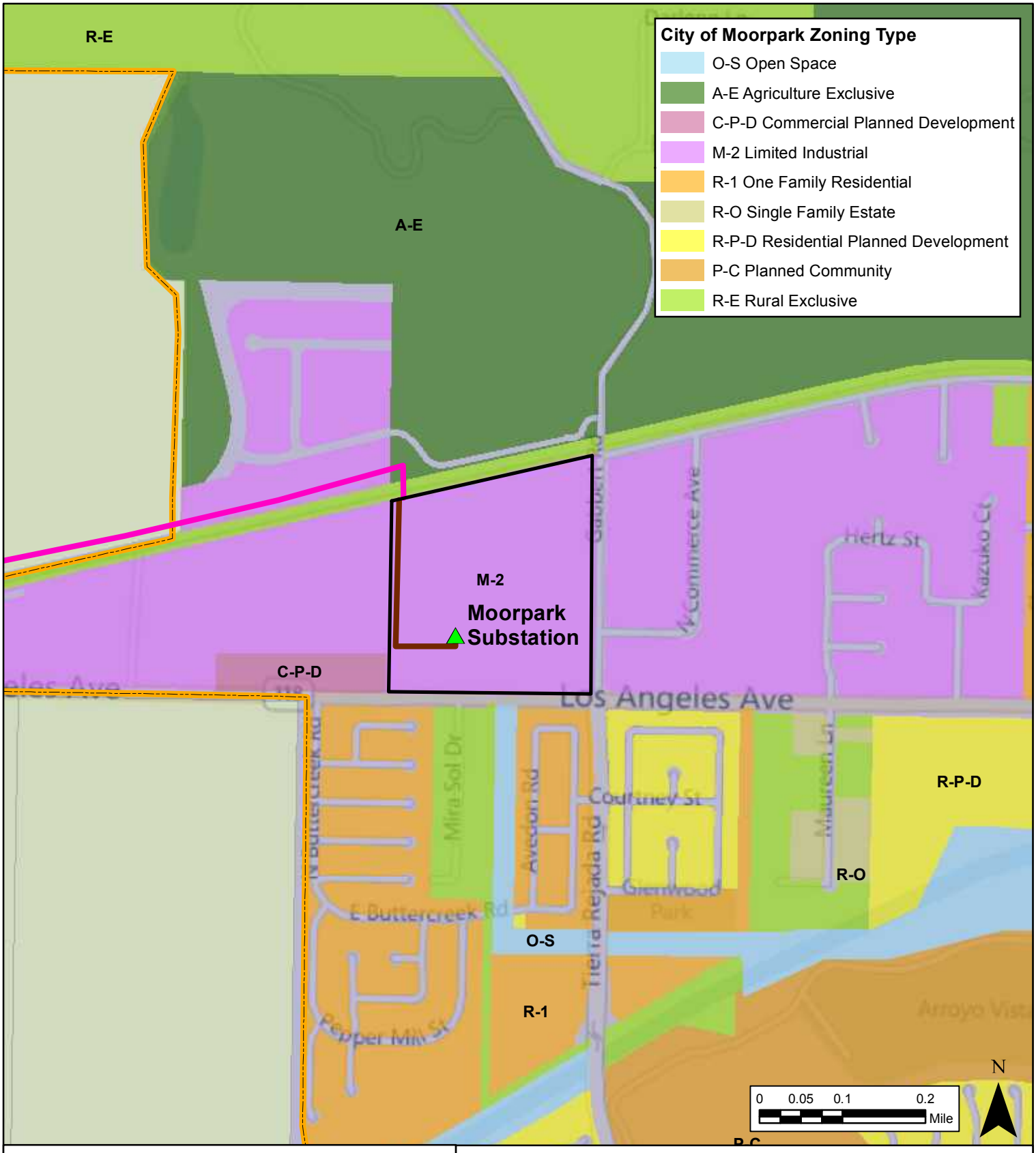

Ventura County Zoning Districts
- Agricultural
- City

Project Sections
- Project Section 1
- Project Section 2

- Substation
- Moorpark Substation Boundary
- City Boundaries

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

MOORPARK SUBSTATION, ZONING

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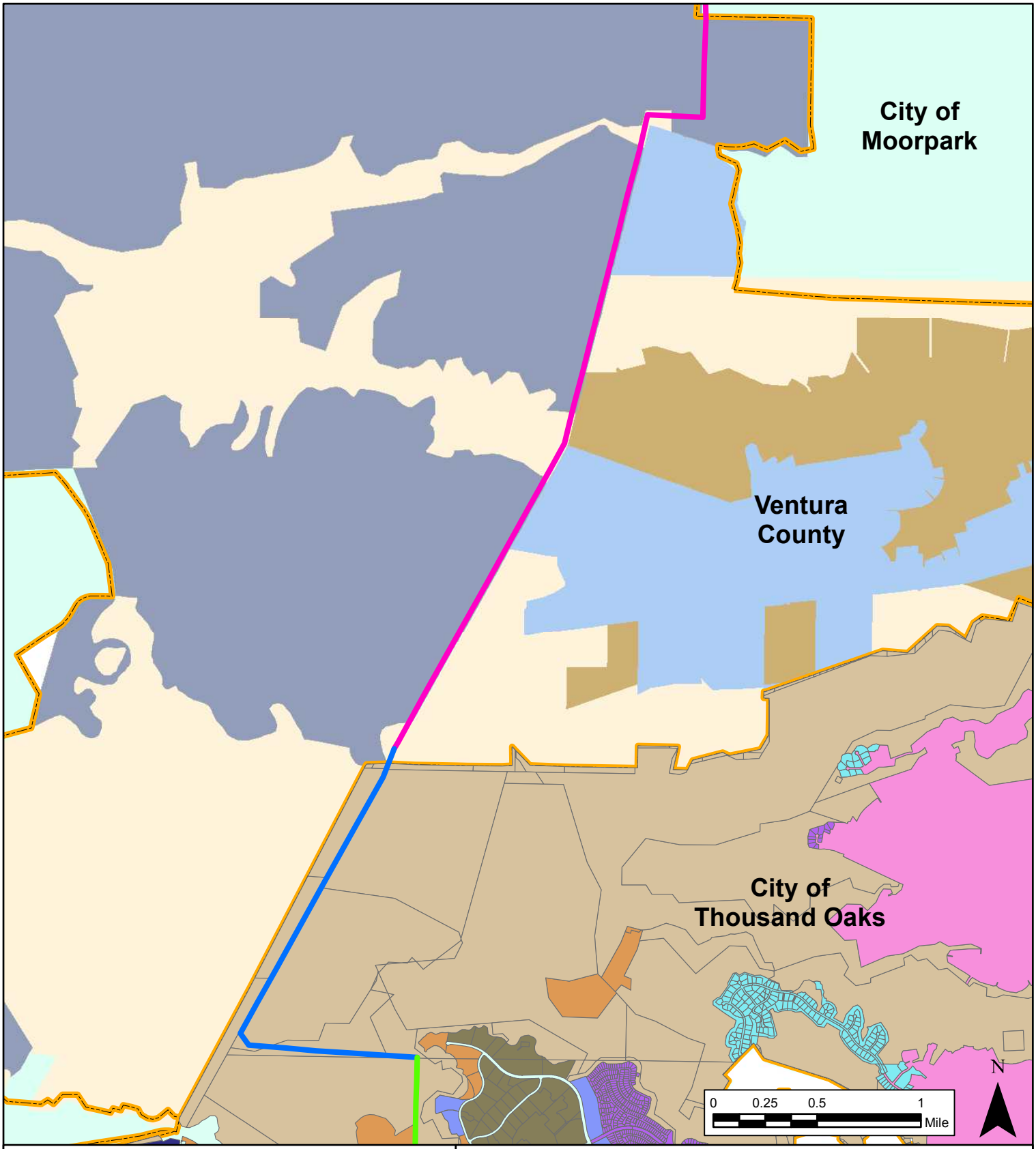

Ventura County Land Use

- Agriculture
- Existing Community
- Open Space
- Rural
- Urban

Project Sections

- Project Section 2
- Project Section 3
- Project Section 4
- City Boundaries

Thousand Oaks Plan Type

- Existing Parks, Open Space
- High Density Residential
- Industrial
- Institutional
- Low Density Residential
- Mobile Home Exclusive
- Residential Planned Dev.
- Very Low Density Residential

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PROJECT SECTIONS 2 & 3, LAND USE DESIGNATIONS

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Figure
4.10-2a

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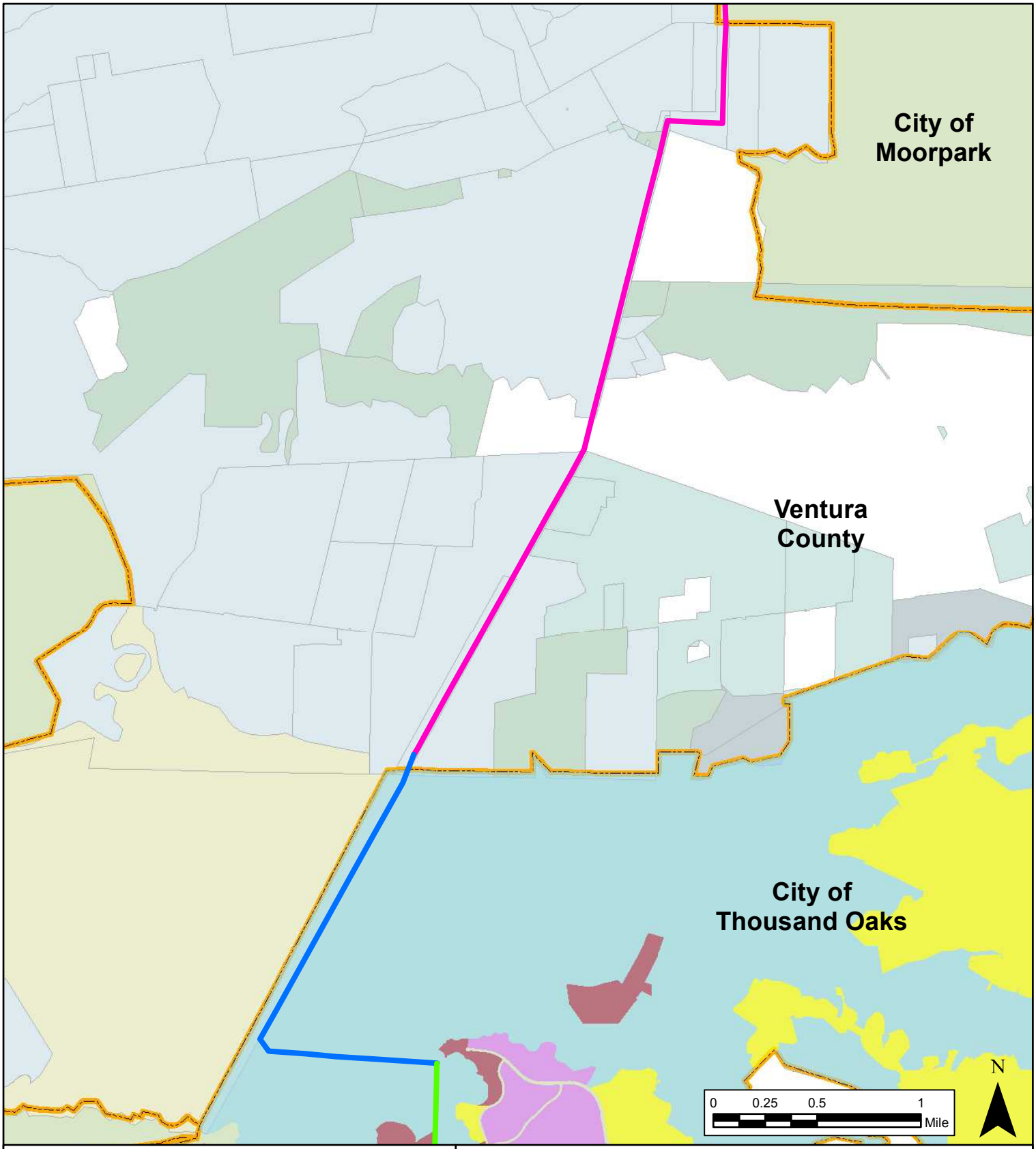

Ventura County Zoning Districts

- Agricultural, AE-40 ac
- City, City
- Open Space, COS-10 ac-sdf/M
- Open Space, OS-10 ac
- Open Space, OS-160 ac
- Open Space, OS-40 ac
- Open Space, OS-60 ac
- Rural Exclusive, RE-1 ac
- Rural Exclusive, RE-10,000 sq ft
- Urban Residential, R1-6,000 sq ft
- Urban Residential, R1-8,000 sq ft
- Urban Residential, RPD-15 du/ac
- City Boundaries

City of Thousand Oaks Zoning Type

- O-S Open Space
- C-O Commercial Office
- C-2 General Commercial
- CPD Commercial Planned Dev.
- C-1 Neighborhood Commercial
- C-3 Neighborhood Commercial 3
- M-1 Industrial Park
- P-L Public, Inst. Lands and Facilities
- R-P-D Residential Planned Dev.

Project Sections

- Project Section 2
- Project Section 3
- Project Section 4

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PROJECT SECTIONS 2 & 3, ZONING

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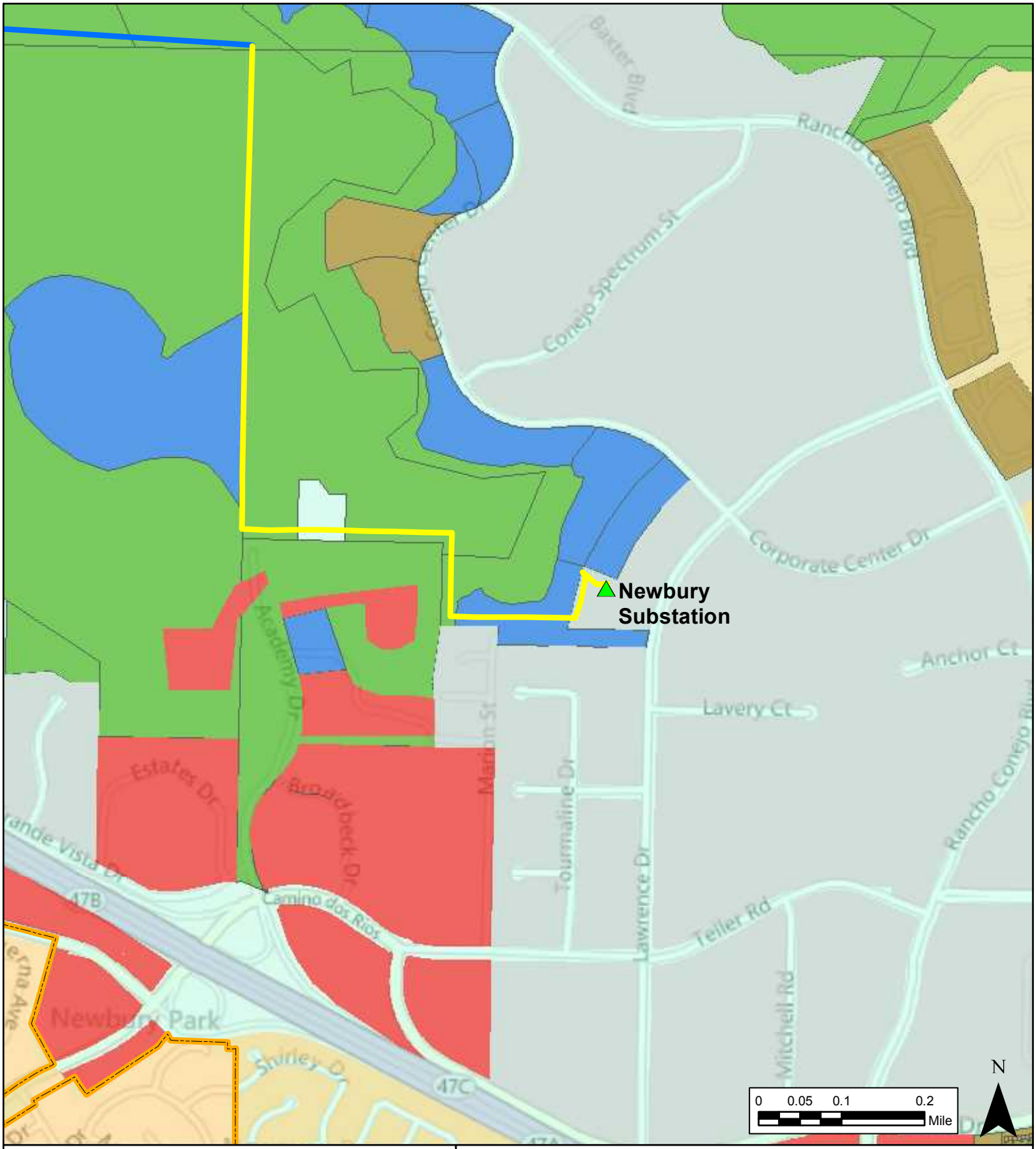

Ventura County Land Use Designations
- Urban

City of Thousand Oaks Land Use Designations
- Commercial
- Existing Parks, Golf Courses, Open Space
- High Density Residential (15-30 DU/NET ACRE)
- Industrial
- Institutional
- Low Density Residential (2-4.5 DU/NET ACRE)

Project Sections
- Project Section 3
- Project Section 4
- Substation
- City Boundaries

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

NEWBURY SUBSTATION, LAND USE DESIGNATIONS

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Figure
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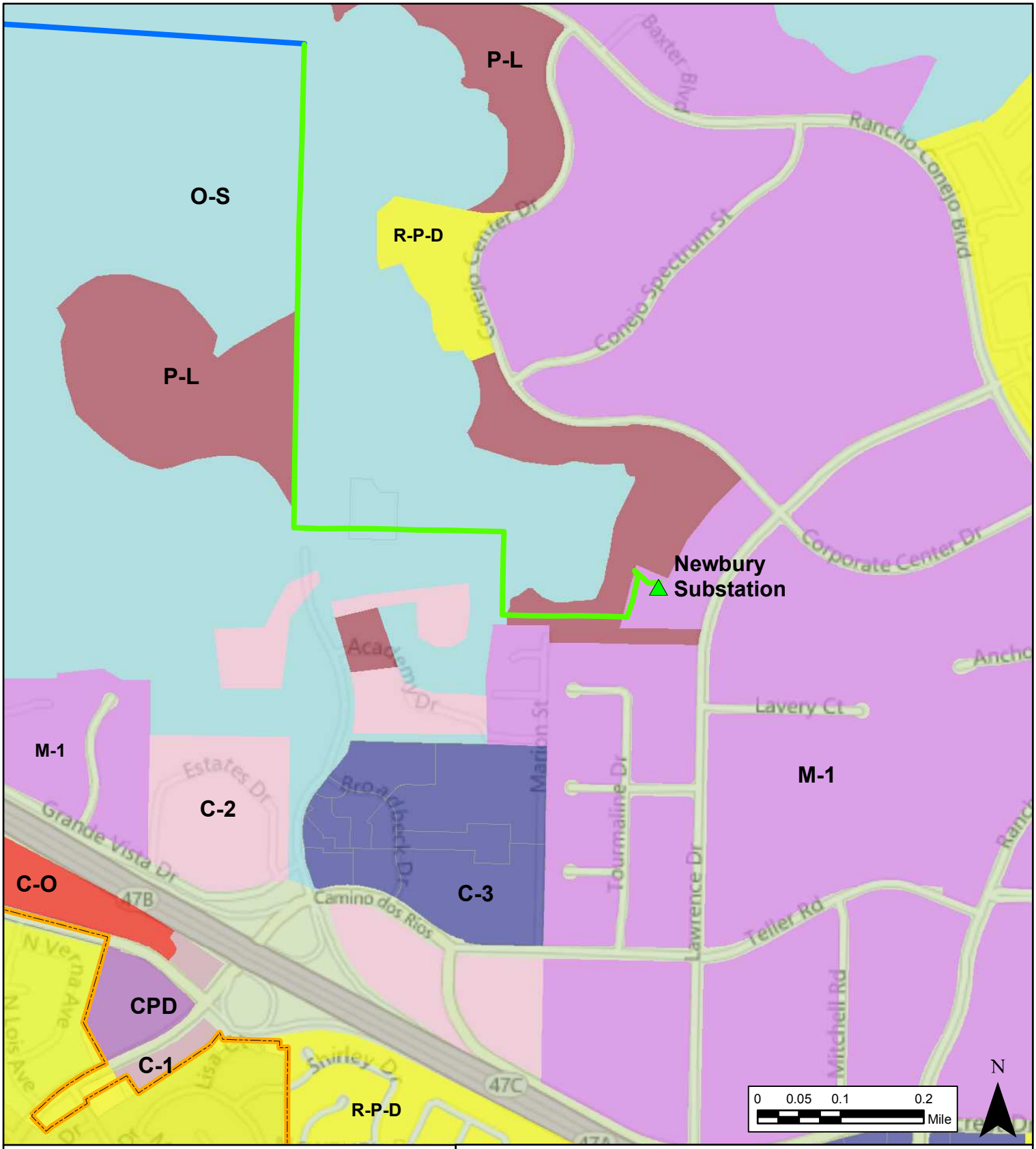

City of Thousand Oaks Zoning Type

- O-S Open Space
- C-O Commercial Office
- C-2 General Commercial
- CPD Commercial Planned Development
- C-1 Neighborhood Commercial
- C-3 Neighborhood Commercial 3
- M-1 Industrial Park
- P-L Public, Inst. Lands and Facilities
- R-P-D Residential Planned Development

Project Sections

- Project Section 3
- Project Section 4
- Substation
- City Boundaries

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

NEWBURY SUBSTATION, ZONING

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Figure
4.10-3b

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Did the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Assessment Summary: No Impact

Construction Impacts

Past construction activities occurred within existing SCE utility ROWs within the City of Moorpark, City of Thousand Oaks, and unincorporated Ventura County. As presented in the Regulatory Setting discussion, electric transmission lines are recognized as exempted from the zoning ordinance in the City of Thousand Oaks, are a permitted use in the City of Moorpark, and are a permitted use in Open Space, Agricultural, and Residential zones in Ventura County. Therefore, past construction activities were consistent with these plans and associated policies. For COSCA-managed lands, the Conejo Canyons Open Space Management Plan identifies the current location and easements for SCE's transmission lines. Because the past construction activities associated with the Project took place within existing ROWs within the Management Plan area, the past construction activities were consistent with the Management Plan. Accordingly, no impacts occurred under this criterion.

Did the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Assessment Summary: No Impact

Construction Impacts

Past construction activities were conducted within the boundaries of the City of Moorpark and City of Thousand Oaks, and in unincorporated Ventura County. There are no adopted Habitat Conservation Plans or Natural Community Conservation Plan applicable to the lands crossed by the Project.

Project Sections 3 and 4 traverse lands managed by COSCA; the management of these lands are guided by the Management Plan. Although the Management Plan is neither a defined Habitat Conservation Plan nor a defined Natural Community Conservation Plan, as discussed in Section 4.4, the Management Plan was prepared by COSCA in order to inventory the resources in the plan area, identify challenges and opportunities in managing these resources, and suggest actions to be taken for the long-term management and environmental sustainability of the land and resources within the Conejo Canyons area.

As discussed above, SCE has an easement through this area that allows construction and maintenance activities associated with the existing utility corridor. The Management Plan acknowledges the presence of the utility corridor. SCE, as the easement-holder, coordinated with COSCA regarding past construction activities.

Because there is no Habitat Conservation Plan or Natural Community Conservation Plan applicable to lands traversed by the Project, and because SCE's physical infrastructure and activities are included in the Management Plan, no impacts occurred under this criterion.

4.10.5 Impact Analysis, Future Activities

Would the project physically divide an established community?

Assessment Summary: No Impact

Construction Impacts

Future construction activities would occur within substation boundaries or within existing ROWs; the SCE ROWs in which future construction activities would occur have been in existence for several decades. Areas designated and zoned for residential uses are located to the south of the Moorpark Substation, to the east of portions of Project Section 2, and in the vicinity of Newbury Substation; no construction would occur on these lands. Future construction activities would be of a short duration, lasting approximately 10 months.[48] Future construction of the subtransmission structures, installation of the conductor, and modification of the substations would not physically divide an established community. All conductor would be installed and operated overhead on existing and newly-installed subtransmission structures, or would be placed underground at Moorpark Substation. In addition, Project infrastructure in proximity to residential areas and communities would be located overhead, and Project infrastructure would be operated in existing ROWs. Therefore, the Project would not physically divide any residential areas or established communities, and no impacts would occur under this criterion as a result of future construction activities.

Operation Impacts

Operation of the physical infrastructure associated with the Project would occur on substation properties and in existing ROWs; these lands are designated for agriculture or open space land uses and/or are zoned for commercial or industrial uses. As a result, no impacts would occur under this criterion during operations.

Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Assessment Summary: No Impact

Construction Impacts

Future construction activities would be located within existing ROWs within the City of Moorpark, City of Thousand Oaks, and unincorporated Ventura County. As presented in the Regulatory Setting discussion, electric transmission lines are recognized as exempted from the zoning ordinance in the City of Thousand Oaks, are a permitted use in the City of Moorpark, and are a permitted use in Open Space, Agricultural, and Residential zones in Ventura County. Therefore, future Project construction activities would be consistent with

[48] The proposed construction schedule does not include delays due to inclement weather and/or stoppages necessary to protect biological resources (e.g., nesting birds).

these plans and associated policies. For COSCA-managed lands, the Management Plan identifies the current location and easements for SCE's transmission lines. Because the Project would be constructed within existing ROWs within the Management Plan area, the Project would be consistent with the Management Plan. Accordingly, no impacts would occur under this criterion.

Operation Impacts

The Project would be operated within existing SCE ROWs within the City of Moorpark, City of Thousand Oaks and unincorporated Ventura County. As presented in the Regulatory Setting discussion, operation of electric transmission lines are recognized as exempted from the zoning ordinance in the City of Thousand Oaks, are a permitted use in the City of Moorpark, and are a permitted use in Open Space, Agricultural, and Residential zones in unincorporated Ventura County. Therefore, operation of the Project would be consistent with these plans and associated policies. The Management Plan identifies the current location and easements for SCE's transmission lines. Because the project would be operated within existing ROWs within the Management Plan area, the Project would be consistent with the Management Plan. Therefore, no impacts would occur under this criterion.

Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Assessment Summary: No Impact

Construction Impacts

Future Project construction activities would occur within the boundaries of the City of Moorpark and City of Thousand Oaks, and in unincorporated Ventura County. There are no adopted Habitat Conservation Plans or Natural Community Conservation Plans applicable to the lands crossed by the Project.

Project Sections 3 and 4 traverse lands managed by COSCA; the management of these lands are guided by the Management Plan. Although the Management Plan is neither a defined Habitat Conservation Plan nor a defined Natural Community Conservation Plan, as discussed in Section 4.4, the Management Plan was prepared by COSCA in order to inventory the resources in the plan area, identify challenges and opportunities in managing these resources, and suggest actions to be taken for the long-term management and environmental sustainability of the land and resources within the Conejo Canyons area.

As discussed above, SCE has an easement through this area that allows construction and maintenance activities associated with the existing utility corridor. The Management Plan acknowledges the presence of the utility corridor. SCE, as the easement-holder, coordinated with COSCA regarding past construction activities.

Because there are no Habitat Conservation Plans or Natural Community Conservation Plans applicable to lands traversed by the Project, and because SCE's physical infrastructure and activities are included in the Conejo Canyons Open Space Management Plan, no impacts would occur under this criterion.

Operation Impacts

As presented above for Construction Impacts, there are no Habitat Conservation Plans or Natural Community Conservation Plans applicable to lands traversed by the Project, and SCE's physical infrastructure and activities are included in the Management Plan. Operations activities would occur on the same lands where construction activities would occur. Therefore, because it is unlikely that any Project operations would occur on land contained within a Habitat Conservation Plan or Natural Community Conservation Plan, no impacts would under this criterion.

4.10.6 References

City of Moorpark. 2009. General Plan – Land Use Element. Located at http://ci.moorpark.ca.us/moorparkcity/img/cdd_gp_landuseelement.pdf.

City of Moorpark. 2008. General Plan – Land Use Map. Located at http://ci.moorpark.ca.us/moorparkcity/img/cdd_gp_map_24x20.pdf.

City of Thousand Oaks. 2012. General Plan – Land Use/Circulation Element Map. Located at http://www.toaks.org/civica/filebank/blobdload.asp?BlobID=21814.

City of Thousand Oaks. 1996. General Plan – Open Space Element. Located at http://www.toaks.org/civica/filebank/blobdload.asp?BlobID=1998.

Conjeo Open Space Conservation Agency. 2009 Conejo Canyons Open Space Management Plan. Located at http://www.conejo-openspace.org/Conejo%20Canyons%20Management%20Plan/CCMP%20Final%207-14-10/CCMP%20Final%207-14-10%20Part%202.pdf.

Ventura County. 2010. Ventura County General Plan – Land Use Appendix. Located at http://www.ventura.org/rma/planning/pdf/plans/General-Plan-Land-Use-Appendix.pdf.

Ventura County. 2011. Ventura County Non-Coastal Zoning Ordinance, Division 8, Chapter 1 of the Ventura County Ordinance Code, prepared by Ventura County Planning Division, Last amended June 28, 2011. Located at http://www.ventura.org/rma/planning/pdf/zoning/VCNCZO_current.pdf.

4.11 Mineral Resources

This section describes the mineral resources in the area of the Project. The potential impacts are also discussed. For purposes of this section, the Project Area is defined as the locations where work described in Chapter 3: Project Description would be performed.

4.11.1 Environmental Setting

The primary mineral resources of Ventura County are petroleum (oil and gas) and aggregates (sand and gravel). These resources have been, and are, important to the physical and economic development of the County. Other minerals of commercial value found in the County include asphalt, clay, decorative stone, expansible shale, gypsum, limestone, and phosphate (Ventura County 2011a). Surficial earth materials within the vicinity of the Project generally consist of poorly consolidated to unconsolidated Quaternary alluvium in Little Simi Valley and Santa Rosa Valley, highly folded and faulted Pliocene and Pleistocene sedimentary rocks in the Las Posas Hills, and volcanic rocks in the Calleguas Hills.

Thousands of oil and gas wells have been drilled in Ventura County since exploration and production began in the mid-1800s. In Ventura County, petroleum production accounts for approximately 75 percent of the total mineral production (Ventura County 2011a). There are approximately 50 petroleum fields in Ventura County (Ventura County 2005). The oil fields closest to the Project are the Moorpark West, Moorpark, and Conejo fields (approximately 1 mile northwest, northeast, and southwest, respectively). These fields are largely abandoned, with the exception of one producing and one idled well in the Moorpark West field. Multiple dry exploration wells are present in the Calleguas Hills near the Project. There are no producing, idle, or abandoned oil or gas wells within the ROW in which the Project would be constructed and operated (CDC 2012).

Aggregate resources within Ventura County have been identified and mapped pursuant to the California Surface Mining and Reclamation Act of 1975 (SMARA, discussed further below) and its subsequent revisions. As described below in Section 4.11.2.2, the State Geologist has classified lands into Mineral Resource Zones (MRZs). Areas designated Mineral Resource Zone 2 (MRZ-2) are areas where significant deposits are known to exist and warrant particular protection to ensure Ventura County and the Western Ventura County and Simi Production-Consumption Areas a long-term supply of construction material. The Project is not located within or near areas designated as MRZ-2; however, portions of the Project in the Las Posas Hills and Calleguas Hills are designated as MRZ-3 (Ventura County 2011). The USGS' Mineral Resource Data System indicates the nearest mineral resources to the Project are aggregate resources currently mined at the Blue Star Pit near Moorpark (USGS 2012).

4.11.2 Regulatory Setting

4.11.2.1 Federal Regulatory Setting

There are no minerals or mining related Federal regulations relevant to the Project.

4.11.2.2 State Regulatory Setting

4.11.2.2.1 California Surface Mining and Reclamation Act

The protection of regionally significant mineral resource deposits is one of the main emphases of the Surface Mining and Reclamation Act (SMARA) (Public Resources Code § 2710 et seq.). The law specifically mandates a two-phased process, commonly referred to as classification and designation, for mineral resources. The California Geological Survey is responsible under SMARA for carrying out the classification phase of the process. The California Mining and Geology Board is responsible for the second phase, which allows the Board to identify areas within a production-consumption region that contain significant deposits of certain mineral resources that may be needed to meet the region's future demand.

SMARA requires the State Geologist to classify lands into MRZs based on the known or inferred mineral resource potential of that land. The classification process is based solely on geology, without regard to land use or ownership. The primary goal of mineral land classification is to help ensure that the mineral resource potential of land is recognized and considered in the land use planning process. The MRZ categories are described below:

MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.

MRZ-2: Areas where adequate information indicates significant mineral deposits are present or where it is judged that a high likelihood exists for their presence.

MRZ-3: Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

MRZ-3a: Areas judged to have higher potential than other deposits classified MRZ-3.

MRZ-4: Areas where available information is inadequate for assignment to any other MRZ.

4.11.2.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.11.2.3.1 Ventura County General Plan

The Ventura County General Plan establishes Mineral Resource Areas that are subject to the Mineral Resource Protection Overlay Zone. The purposes of this zone are to safeguard future access to important resources, facilitate long-term supply of mineral resources within Ventura County, minimize land use conflicts, and provide notice to landowners and the general public of the presence of mineral resources (Ventura County 2010, 2011b). No portion of the Project is located within any Mineral Resource Area.

4.11.2.3.2 City of Moorpark

The City of Moorpark General Plan notes that no identified proved oil reserves are located within Moorpark City limits (City of Moorpark 1986). The City of Moorpark Municipal Code does not include provisions for protection or conservation of mineral resources.

4.11.2.3.3 City of Thousand Oaks

No significant mineral resources exist within the Thousand Oaks Planning Area and mineral resources are not described in the General Plan Conservation Element (City of Thousand Oaks 1996). The City of Thousand Oaks Municipal Code does not include provisions for protection or conservation of mineral resources.

4.11.3 Significance Criteria

The significance criteria for assessing the impacts to mineral resources come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- 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
- 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

4.11.4 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project 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?

Assessment Summary: No Impact

Construction Impacts

Past construction activities did not result in the loss of availability of any known mineral resource that would be of value to the region and the residents of the State. As indicated by previous oil and gas exploration in the vicinity of the Project Area, these resources may be present in the subsurface of the Project Area. Portions of the Project Area are categorized as MRZ-3, for the presence of mineral resources and aggregate of undetermined significance.

Past ground-disturbing construction activities involved, among other activities described in Chapter 3: Project Description, drilling holes for TSP foundations and the rehabilitation of some existing access roads and laydown areas; these activities resulted in relocation of soils and rock within the Project Area. Project activities were not located in an area known to contain or that is mined for rare or unique rocks or minerals. The past construction activities did not permanently preclude access or change the availability of any mineral resources. Therefore, past construction activities did not result in the loss of availability of a known mineral resource that was of value to the region and the residents of the State.

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

Assessment Summary: No Impact

Construction Impacts

As presented above, the Project is not located in an area containing or mined for rare or unique rocks or minerals, or where there is an indication that significant mineral deposits are present. Past ground-disturbing construction activities involved, among other activities described in Chapter 3: Project Description, drilling holes for TSP foundations and the installation of LWS poles, the rehabilitation of some existing access roads and laydown areas, and the grading of stringing sites; these activities resulted in relocation of soils and rock within the Project Area. Past construction activities were not located in an area known to contain or mined for rare or unique rocks or minerals, and were not located on a mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Therefore, past construction activities did not result in the loss of availability of a locally important mineral resource.

4.11.5 Impact Analysis, Future Activities

Would the project 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?

Assessment Summary: No Impact

Construction Impacts

Future construction activities would not result in the loss of availability of any known mineral resource that would be of value to the region and the residents of the State.

Future ground-disturbing construction activities would involve, among other activities described in Chapter 3: Project Description, drilling holes for TSP foundations and the rehabilitation of some existing access roads and equipment pad/turnaround areas. Future construction activities would not be located in an area known to contain or mined for rare or unique rocks or minerals. The future construction activities would not permanently preclude access or change the availability of known mineral resources. Therefore, future construction activities would not result in the loss or availability of a known mineral resource that is of value to the region and the residents of the State, and no impacts would occur.

Operation Impacts

Operation of the Project would require routine inspection and maintenance of subtransmission infrastructure. Operation and maintenance activities would occur using the same access roads and on the infrastructure installed during construction. Operation related activities would include access and spur road maintenance, including blading and grading; these activities would not result in the loss of known mineral resources. Because construction of the Project would not result in the loss of known mineral resources, neither would operation of the Project; therefore, no impacts would occur under this criterion.

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

Assessment Summary: No Impact

Construction Impacts

As presented above, future construction activities would not be located in an area containing or mined for rare or unique rocks or minerals, or where there is an indication that significant mineral deposits are present. Future ground-disturbing construction activities would involve, among other activities described in Chapter 3: Project Description, drilling holes for TSP foundations and rehabilitating some existing access roads and laydown areas; these activities would result in relocation of soils and rock within the Project Area. Future construction activities would not be located in an area known to contain or mined for rare or unique rocks or minerals, and would not be located on a mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Future construction activities would not permanently preclude access or change the availability of known mineral resources.

Therefore, future construction activities would not result in the loss or availability of a locally important mineral resource.

Operation Impacts

Operation of the Project would require routine inspection and maintenance of subtransmission infrastructure. Operation and maintenance activities would occur using the same access roads and on the infrastructure installed during construction. Operation related activities would include access and spur road maintenance, including blading and grading; these activities would not result in the loss of known mineral resources and would not be located on a mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Because construction of the Project would not result in the loss of a locally important mineral resource, neither would operation of the Project; therefore, no impacts would occur under this criterion.

4.11.6 References

California Department of Conservation (CDOC) Division of Oil, Gas, & Geothermal Resources. 2011. Online Well Record Search. [Web Page]. Located at http://owr.conservation.ca.gov/WellSearch/WellSearch.aspx.

California Geological Survey (CGS). 2006. Aggregate Availability in California. CGS Map Sheet 52.

City of Moorpark. 1986. General Plan – Open Space, Conservation, and Recreation Element. Located at http://ci.moorpark.ca.us/moorparkcity/img/cdd_gp_oscar_element.pdf.

City of Thousand Oaks. 1996. General Plan – Conservation Element. Located at http://www.toaks.org/civica/filebank/blobdload.asp?BlobID=2632.

US Geological Survey (USGS). 2012. Mineral Resource Data System: Coterminous US. [Web Page]. Located at http://mrdata.usgs.gov/mineral-resources/mrds-us.html.

Ventura County. 2005. Final Subsequent Environmental Impact Report for Focused General Plan Update and Related Amendments to the Non-Coastal Zoning Ordinance and Zone Change ZN05-0008. Located at http://www.ventura.org/rma/planning/pdf/plans/SEIR_for_GPU.pdf.

Ventura County. 2010. Ventura County General Plan. Located at http://www.ventura.org/rma/planning/general_plan/general_plan.html.

Ventura County. 2011a. Ventura County General Plan – Resources Appendix. Amended June 28, 2011. Located at http://www.ventura.org/rma/planning/pdf/plans/General-Plan-Hazards-Appendix-6-28-11.pdf

Ventura County. 2011b. Ventura County Non-Coastal Zoning Ordinance. Division 8, Chapter 1 of the Ventura County Ordinance Code. Amended June 28, 2011.

4.12 Noise

This section describes the noise in the vicinity of the Project as well as the potential noise impacts from construction and operation of the Project. For purposes of this section, Project Area is defined as the locations where work described in Chapter 3: Project Description has been or would be performed. This analysis describes the existing conditions of noise in the Project Area, evaluates the relevant components and characteristics of Project related activities, and assesses the potential noise impacts as a result of the Project.

4.12.1 General Noise and Vibration Information

4.12.1.1 Literature and Database Review

Sound is a physical disturbance in a medium, such as air, that is capable of being detected by the human ear. Sound waves in air are caused by variations in pressure above and below the static value of atmospheric pressure. Sound is measured in units of decibels (dB) on a logarithmic scale. The "pitch" (high or low) of the sound is a description of frequency, which is measured in Hertz (Hz). Most common environmental sounds are a composite of frequencies. A normal human ear can usually detect sounds within frequencies from 20 to 20,000 Hz. However, humans are most sensitive to frequencies in the range of 500 to 4,000 Hz.

Certain frequencies are given more "weight" during assessment because human hearing is not equally sensitive to all frequencies of sound. The A-weighted decibel (dBA) scale corresponds to the sensitivity range for human hearing. Noise levels capable of being heard by humans are measured in dBA. A noise level change of 3 dBA or less is barely perceptible to average human hearing. However, a 5 dBA change in noise level is clearly noticeable. A 10 dBA change is perceived as a doubling or halving of noise loudness, while a 20 dBA change is considered a "dramatic change" in loudness. Table 4.12-1 provides typical instantaneous noise levels of common activities in dBA.

Table 4.12-1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Concert
Jet Fly-over at 1,000 feet	100	
Gas Lawn Mower at 3 feet	90	
Diesel Truck at 50 feet, at 50 miles per hour (mph)	80	Food Blender or Garbage Disposal at 3 feet
Noisy Urban Area, Daytime Gas Lawn Mower at 100 feet	70	Vacuum Cleaner at 10 feet
Commercial Area Heavy Traffic at 300 feet	60	Normal Speech at 3 feet
Quiet Urban Daytime	50	Large Business Office, Dishwasher in Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night
	10	Broadcast/Recording Studio (background level)
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans 1998

Sound from a source spreads out as it travels away from the source, and the sound pressure level diminishes with distance. Individual sound sources are considered "point sources" when the distance from the source is large compared to the size of the source (e.g., transformer banks, construction equipment, and turbines). Sound from a point source radiates hemispherically, which yields a 6 dB sound level reduction for each doubling of the distance from the source. If the sound source is long in one dimension, the source is considered a "line source," (i.e., roadways and railroads). Sound from a line source radiates cylindrically, which typically yields a 3 dB sound level reduction for each doubling of the distance from the source.

In addition to distance attenuation, the air absorbs a certain amount of sound energy, and atmospheric effects (wind, temperature, precipitation), terrain, and vegetation also influence sound propagation and attenuation over large distances from the source.

An individual's sound exposure is a value based on a measurement of the noise that the individual experiences over a specified time interval. A sound level is a measurement of noise that occurs during a specified period of time. A continuous source of noise is rare for long periods of time and is typically not a characteristic of community noise. Rather, community noise refers to outdoor noise in the vicinity of a community.

A community noise environment varies continuously over time with respect to the contributing sources. Within a community, ambient noise levels gradually change throughout a typical day, and the changes can often be correlated to the increase and decrease of transportation noise or to the daytime/nighttime operation of stationary mechanical equipment. The variation in community noise throughout a day is also due to the addition of short-duration single-event noise sources, such as aircraft, sirens, and various natural sources.

The metrics for evaluating the community noise environment are based on measurements of the noise levels over a period of time. These metrics are used in order to characterize and evaluate the cumulative noise impacts. The most common metrics for evaluating community noise are as follows:

L_{dn}: The Day-Night Average Sound Level that represents a 24-hour A-weighted sound level average from midnight to midnight, where sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dB weighting.

L_{eq}: The equivalent sound level, or the time-integrated continuous sound level, that represents the same sound energy as the varying sound levels, logarithmically averaged over a specified monitoring period. May be expressed as L_{eq}xH, where xH is the monitoring period in hour(s).

L_{max}: The instantaneous greatest noise level measured on a sound level meter during a designated time interval.

L_{min}: The instantaneous lowest noise level measured on a sound level meter during a designated time interval.

CNEL: The Community Noise Equivalent Level represents a 24-hour A-weighted sound level average from midnight to midnight, where sound levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dB weighting, and nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dB weighting.

These noise levels are typically evaluated at sensitive receptor locations to determine compliance with noise standards. Examples of noise sensitive receptors include residential land uses, schools, hospitals, and parks.

4.12.1.2 Vibration

Construction activities could result in varying degrees of ground vibration, depending on the kind of equipment and operations involved, and the distances between the construction activities and the nearest receptors. The effects of construction vibration may be imperceptible at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and damage to nearby structures at the highest levels. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal and is typically expressed in units of inches per second (in/sec). The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration (FTA 2006).

4.12.2 Environmental Setting

The Project is located in the City of Moorpark, City of Thousand Oaks, and in unincorporated Ventura County. Project related construction activities have been and would occur mainly in rural agricultural areas and open space areas. However, some Project activities have been and would be conducted in proximity to residences and other potentially noise sensitive receptors. The noise sensitive receptors potentially impacted by the Project's construction activities include single-family residences and schools located near subtransmission lines. Existing noise sources identified in proximity to these noise sensitive receptors include community noise, including roadway and railway vehicle noise, aircraft overflight noise, and the operation of agricultural equipment.

To document the existing ambient noise levels in the Project Area, a series of one-hour equivalent sound level measurements (L_{eq}, A-weighted) were taken at a total of eight locations in the Project Area (Figures 4.12-1a through 1e). The results of this monitoring are shown in Table 4.12-2 below.

The noise measurement data provided in Table 4.12-2 shows that the hourly noise levels measured at the locations of noise sensitive receptors range from 42.4 to 74.2 dBA L_{eq}.

At each monitoring location, monitoring start and end times were recorded, and descriptions of background noise in the area, such as motor vehicle traffic on nearby or adjacent roadways, were noted. Other relevant field data were gathered at the monitoring locations including distances to receptors, angles-of-view, slopes, and site elevations. This information was subsequently cross-checked with available maps and records. All sound level meters were field-calibrated prior to and following the noise measurements to ensure accuracy. All sound level measurements presented in this report were taken with a sound level meter that conforms to the American National Standards Institute (ANSI SI.4-1983 - R2001) specifications for sound level meters. All instruments are maintained with the National Bureau of Standards traceable calibrations.

Table 4.12-2: Measured Ambient 1-Hour Noise Levels at Sensitive Receptors

Noise Measurement Location	Date	Noise Measurement Location	Measured 1 hour Noise Level (dBA L_{eq})
1	11/2/2012	Project Sections 1 and 2: Residential area south of Moorpark Substation	74.2
2	11/2/2012	Project Section 2: Southeast of intersection of Hitch Boulevard and Ventavo Road	47.4
3	11/2/2012	Project Section 2: End of Ternez Drive west of Citrus Drive	48.3
4	11/2/2012	Project Section 2: Western terminus of Presilla Road	44.8
5	11/1/2012	Project Section 2: Northwest of terminus of Yucca Drive	49.8
6	11/1/2012	Project Section 2: North of terminus of Churchman Lane	42.4
7	11/1/2012	Project Section 2: North of Intersection of Santa Rosa Road and Rosita Road	46.4
8	11/1/2012	Project Section 4: Residences west of Newbury Substation	44.4

4.12.3 Regulatory Setting

4.12.3.1 Federal Regulatory Setting

4.12.3.1.1 U.S. Environmental Protection Agency

The United States Environmental Protection Agency has developed and published criteria for environmental noise levels with a directive to protect public health and welfare with an adequate margin of safety (USEPA 1974). This USEPA criterion (Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety) was developed to be used as an acceptable guideline when no other local, county, or State standard has been established. However, the USEPA criterion is not meant to substitute for agency regulations or standards in cases where States and localities have developed criteria according to their individual needs and situations.

4.12.3.1.2 Federal Transit Administration

The Federal Transit Administration (FTA) has developed vibration impact thresholds for noise-sensitive buildings, residences, and institutional land uses. These thresholds are 80 VdB at residences and buildings where people normally sleep (e.g., nearby residences and daycare facilities) and 83 VdB at institutional buildings (e.g., schools and churches). These thresholds apply to conditions where there are an infrequent number of events per day.

4.12.3.2 State Regulatory Setting

4.12.3.2.1 California Public Utilities Commission

The CPUC uses the California Environmental Quality Act (CEQA) Appendix G Section XII – NOISE guidelines to determine the significance of the Project's noise impacts.

4.12.3.3 Local Regulatory Setting

4.12.3.3.1 Ventura County General Plan, Noise Element

The Ventura County's General Plan, Chapter 2.16 - Noise, includes the following noise policies:

Policy 2.16.2-1(4):

> "Noise generators, proposed to be located near any noise sensitive use, shall incorporate noise control measures so that ongoing outdoor noise levels received by the noise sensitive receptor, measured at the exterior wall of the building, does not exceed any of the following standards:
>
> L_{eq}1H of 55 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 6:00 a.m. to 7:00 p.m.
>
> L_{eq}1H of 50 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 7:00 p.m. to 10:00 p.m.
>
> L_{eq}1H of 45 dB(A) or ambient noise level plus 3 dB(A), whichever is greater, during any hour from 10:00 p.m. to 6:00 a.m."

Policy 2.16.2-1(5): "Construction noise shall be evaluated and, if necessary, mitigated in accordance with the County's Construction Noise Threshold Criteria and Control Plan."

4.12.3.3.2 Ventura County Construction Noise Threshold Criteria and Control Plan

The Ventura County Construction Noise Threshold Criteria and Control Plan establishes construction noise thresholds and standard noise monitoring and control measures for construction projects located in Ventura County (County of Ventura 2010).

Table 4.12-3 shows the daytime, evening, and nighttime construction noise threshold criteria for projects in Ventura County.

Table 4.12-3: Ventura County Construction Noise Thresholds

Construction Duration	Fixed ($L_{eq}h$ - dBA)	Hourly Equivalent Noise Level ($L_{eq}h$ - dBA)
Daytime (Mon-Fri 7:00 a.m. to 7:00 p.m.; Sat, Sun and holidays 9:00 a.m. to 7:00 p.m.)		
0 to 3 days	75	Ambient $L_{eq}h$ + 3 dBA
4 to 7 days	70	Ambient $L_{eq}h$ + 3 dBA
1 to 2 weeks	65	Ambient $L_{eq}h$ + 3 dBA
2 to 8 weeks	60	Ambient $L_{eq}h$ + 3 dBA
Longer than 8 weeks	55	Ambient $L_{eq}h$ + 3 dBA
Evening (7:00 p.m. to 10:00 p.m.)		
Any duration	50	Ambient $L_{eq}h$ + 3 dBA
Nighttime (Mon-Fri 10:00 p.m. to 7:00 a.m.; Sat, Sun and holidays 10:00 p.m. to 9:00 a.m.)		
Any duration	45	Ambient $L_{eq}h$ + 3 dBA

Source: Ventura County Construction Noise Threshold Criteria and Control Plan

The construction noise threshold criteria presented in Table 4.12-3 represent the not-to-exceed hourly average noise levels depending on project duration. The actual construction noise threshold criteria shall be the greater of the fixed $L_{eq}h$ limit or the measured ambient $L_{eq}h$ plus 3 dBA.

In addition to hourly average noise levels, the instantaneous maximum noise level (Lmax) shall not exceed the noise threshold criteria presented in the table by 20 dBA more than eight times per daytime hour, more than six times per evening hour, or more than four times per nighttime hour.

If construction projects exceed the construction noise threshold criteria at sensitive receptor sites, the County requires contractors to implement effective noise mitigation measures (County of Ventura 2010).

4.12.3.3.3 City of Thousand Oaks General Plan, Noise Element

The Noise Element of the City of Thousand Oaks General Plan defines thresholds for determining significance of noise impacts under CEQA as follows in Table 4.12-4 below.

Table 4.12-4: City of Thousand Oaks Noise Thresholds

If the annual average noise level with the proposed project, cumulative projects and General Plan buildout in an area currently used for or designated in the General Plan for a noise sensitive land use[1] is expected to be:	A significant project or cumulative impact may result if the change in annual average noise levels from existing conditions due to all sources in an area currently used for or designated in the General Plan for a noise sensitive land-use is:	The project alone may be considered to make a substantial contribution to significant cumulative impact if the change in annual average noise level due to the project is:
Less than 55 dB CNEL	Not significant for any change in noise level	Not significant for any change in noise level
55-60 dB CNEL	Equal to or greater than 3.0 decibels	Equal to or greater than 1.0 decibels
60-70 dB CNEL	Equal to or greater than 1.5 decibels	Equal to or greater than 0.5 decibels
Greater than 70 dB CNEL	Equal to or greater than 1.0 decibels	Equal to or greater than 0.5 decibels

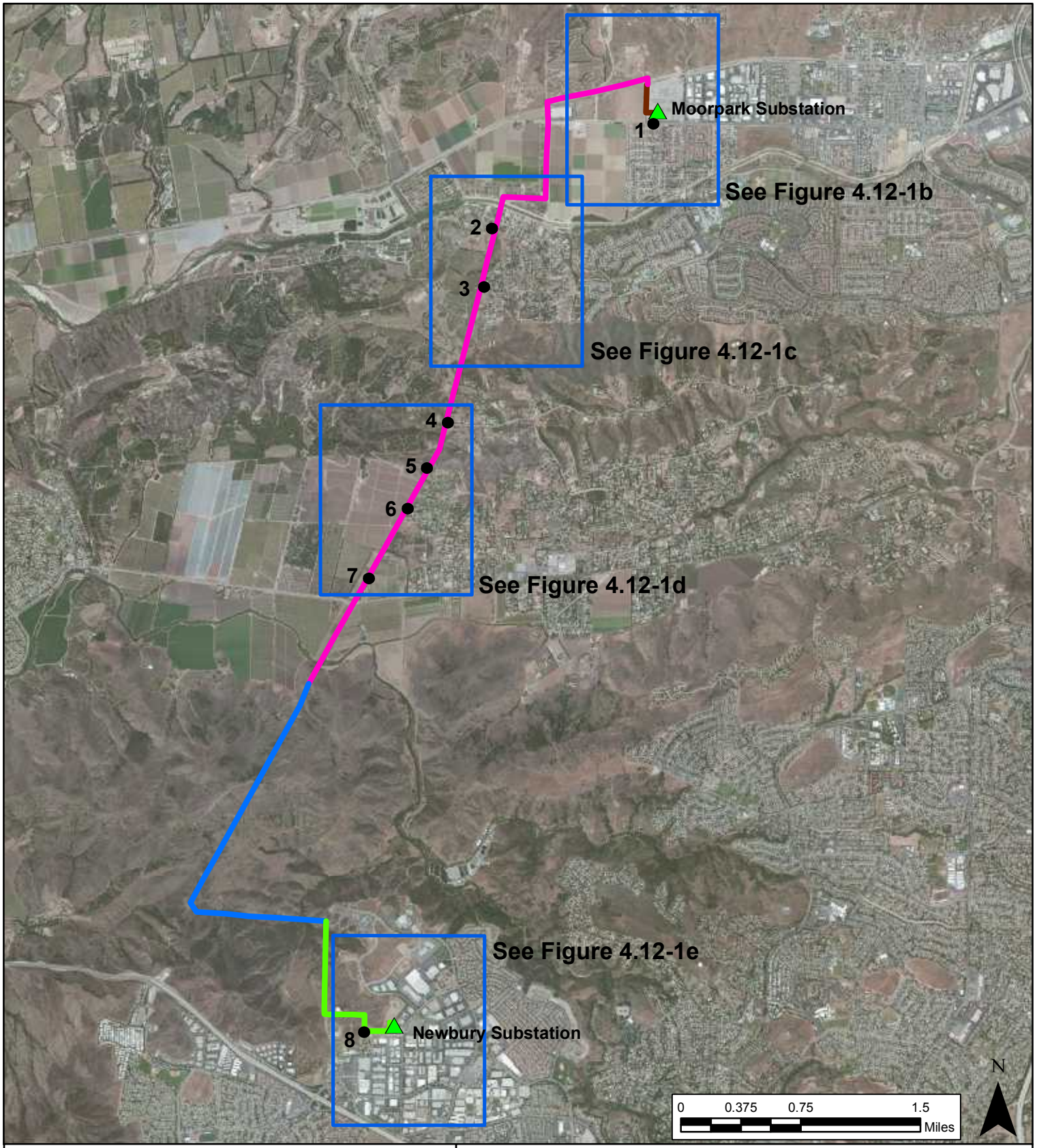
Note:

1 A noise-sensitive land use is a use for which the lower limit of the noise level considered "normally unacceptable" for development because of noise impact is 70 dB CNEL or lower. In identifying land use areas, areas which are undevelopable for noise-sensitive uses because of slope, development restriction, easement, etc., or which are used for non-noise-sensitive components of a multiple-use or mixed-use project, should not be considered noise-sensitive.

City of Thousand Oaks Municipal Code

The City of Thousand Oaks Municipal Code, Title 5, Chapter 21 regulates noise levels throughout the City. The Municipal Code prohibits any person from causing any loud, unnecessary, and unusual noise that disturbs the peace or quiet of any neighborhood, or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area (City of Thousand Oaks 1990).

The City of Thousand Oaks Municipal Code, Title 8, Chapter 11 limits construction hours to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday, unless a permit for work during different hours or days has been issued by the Public Works Director (City of Thousand Oaks 1970).



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NOISE MONITORING LOCATION - PROJECT SECTION 1

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Noise Monitoring Location

Project Sections

Project Section 2

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
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Noise Monitoring Location

Project Sections

Project Section 2

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SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

NOISE MONITORING LOCATION - PROJECT SECTION 4

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4.12-1e

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City of Moorpark General Plan, Noise Element

The Noise Element of the City of Moorpark General Plan includes transportation related land use/noise compatibility standards for new developments; it contains no specific noise level standards applicable to the Project. However, the Noise Element defines the following noise policies:

> Policy N-1.3: "Provide for reduction in noise impacts from non-transportation sources through adoption of a Noise Ordinance, which is intended to protect people from noise generated on adjacent properties."
>
> Policy N-1.4: "Require stationary noise sources to limit noise to levels that do not interfere with adjacent uses."
>
> Implementation N-1.4.1: "The City shall enforce the Municipal Code provisions relating to the time that limitations that construction activity in or adjacent to residential areas may occur in order to reduce the intrusion of noise in the early morning and late evening hours, on weekends and holidays. At the time of development project approval, the City shall ensure, through conditions of approval, that adequate noise control measures at all construction sites are provided (through the provision of mufflers and the physical separation of machinery maintenance areas from adjacent residential uses."

City of Moorpark Municipal Code

The City of Moorpark Municipal Code, Section 17.53.070 states in part:

> "General. No person shall unnecessarily make, continue, or cause to be made or continued, any noise disturbance. Notwithstanding any other provision of this chapter, and in addition thereto, the following acts, and the causing or permitting thereof, are declared to be in violation of this chapter:
>
> …
>
> F. Operating or permitting the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work so as to violate the provisions of Table 1 or Table 2 or Table 2A between weekday (Saturdays and legal holidays observed by the city included) hours of seven (7:00) p.m. and seven (7:00) a.m., or at any time on Sundays, such that the sound there from creates a noise disturbance across a residential or commercial property line, except for emergency work of public service utilities, government agencies, or by temporary use permit issued by the city. (This section shall not apply to the use of domestic power tools or machinery).
>
> …
>
> G. Operating or permitting the operation of any mobile or stationary internal combustion engine powered equipment or machinery that is not equipped with suitable exhaust and air intake silencers in proper working order."

Table 1 Residential Properties--Mobile Equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:		
	Type I Areas Single-Family Residential	Type II Areas Multifamily Residential
Daily, except Sundays and legal holidays 7:00 a.m. to 7:00 p.m.	75 dB(A)	80 dB(A)
Daily, 7:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 dB(A)	65 dB(A)

Table 2A
Business Properties: Mobile Equipment Maximum noise levels for nonscheduled, short-term operation of mobile equipment: Daily, including Sundays and legal holidays observed by the city all hours: maximum of 75 dB(A). Stationary Equipment Maximum noise levels for repetitively scheduled and relatively long-term operation of stationary equipment: Daily, all hours: maximum of 65 dB(A).

The City of Moorpark Municipal Code, Section 17.53.080 defines exterior noise levels limits by receiving land use districts as shown in Table 4.12-5.

Table 4.12-5: City of Moorpark Exterior Noise Limits

Type of Land Use	Time Interval	Allowable Exterior
Single-family and multifamily residential/rural and agricultural zones	10:00 p.m. - 7:00 a.m. 7:00 a.m. - 10:00 p.m.	55 60
Commercial office/neighborhood	10:00 p.m. - 7:00 a.m. 7:00 a.m. - 10:00 p.m.	55 60
General commercial/planned development	10:00 p.m. - 7:00 a.m. 7:00 a.m. - 10:00 p.m.	60 65
Industrial park	Anytime	65
Limited industrial	Anytime	70
Public space	Anytime	70

Section 17.53.080 B. states in part:

> "No person shall operate or cause to be operated, any source of sound at any location within the city or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, either incorporated or unincorporated, to exceed:

1) The noise standard for that land use as specified in above Table for a cumulative period of more than thirty (30) minutes in any hour; or
2) The noise standard for that land use as specified in above Table plus five (5) dB for a cumulative period of more than fifteen (15) minutes in any hour; or
3) The noise standard for that land use as specified in Table 4 plus ten (10) dB for a cumulative period of more than five (5) minutes in any hour; or
4) The noise standard for that land use as specified in above Table plus fifteen (15) dB for a cumulative period of more than one (1) minute in any hour; or
5) The noise standard for that land use as specified in above Table plus twenty (20) dB or the maximum measured ambient level, for any period of time.
6) If the measured ambient level differs from that permissible within any of the first four (4) noise limit categories above, the noise limit for that land use, as specified in above Table, shall be adjusted in five (5) dB increments in each category as appropriate to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth (5th) noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

Section 17.53.080 E. states that "In the event the alleged offensive noise, as judged by the Director of Community Development, contains a steady, audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying informational content, the standard limits set forth in above Table shall be reduced by five (5) dB(A)."

Section 17.53.100 E provides that construction activities are exempt from the above noise limits, provided that the construction activities occur between the hours of 7:00 a.m. to 7:00 p.m. weekdays including Saturday.

4.12.4 Significance Criteria

The significance criteria for assessing the impacts to noise levels come from the CEQA Environmental Checklist. According to the CEQA Appendix G, Section XII – NOISE Checklist, a project causes a potentially significant impact if it would cause:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project

- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels
- For a project within the vicinity of a private airstrip, where the project would expose people residing or working in the project area to excessive noise levels

4.12.5 Impact Analysis, Past Activities

The noise impact of the Project's past construction activities was assessed using the Computer Aided Noise Abatement (CadnaA) program for predicting noise impacts satisfying the above listed CEQA criteria.

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Construction activities within the Project used a variety of equipment. Typical maximum noise levels for construction equipment at 50 feet from the source are shown in Table 4.12-6.

Past construction activities as described in Chapter 3: Project Description included, among other activities, boring to obtain soil and rock cores, removing existing wood poles and replacing them with LWS poles, installing TSPs and foundations, installing conductor, relocating existing distribution and telecommunications facilities, and associated site preparation activities (e.g., road grading and work pad construction). Noise-generating construction activities generally occurred only during daytime hours, Monday through Saturday. Some limited night work occurred in the vicinity of Newbury Substation; SCE obtained a permit for this work from the City of Thousand Oaks. Construction noise contour distances for these activities are summarized in Table 4.12-7 below.

Construction activities conducted Monday through Saturday between the daytime hours of 7:00 a.m. and 7:00 p.m. are exempted from the noise limits established in the City of Moorpark municipal code; the City of Thousand Oaks municipal code limits construction to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. The completed construction operations generally occurred within this time period; work conducted outside this time period was covered under a permit from the City of Thousand Oaks.

The County of Ventura limits temporary construction noise to 75 dBA L_{eq} for durations of up to 3 days. Under the applied seven construction scenarios presented in Table 4.12-6, the modeled 75 dBA L_{eq} noise contour distances range from 132 to 204 feet. No residential structures in Ventura County were located within the 75 dBA L_{eq} noise contour. In addition, the construction activities at each location were conducted and staggered to ensure that the noise generated during construction did not exceed the significance thresholds or durations identified by the County of Ventura noise regulations set forth in the County's Construction Noise Threshold Criteria and Control Plan (Ventura County 2010a).

A helicopter was used to install a single LWS pole in Project Section 4 in the City of Thousand Oaks; this activity occurred during the day, lasted less than four hours, and took place in an area characterized as open space. The type of light-duty helicopter used to install the LWS pole generated an SEL of 80 dBA to 85 dBA for an overflight at 1,000 feet elevation, which corresponds to an hourly L_{eq} of 44 dBA to 49 dBA at a 1,000 foot distance. Given the short duration and timing of the helicopter activity, the fact that it occurred at only one location, and the lack of noise-sensitive receptors in the area, the short-term construction noise impact from this helicopter operation was less than significant.

By timing construction activities to occur between the hours of 7:00 a.m. and 7:00 p.m. (and obtaining necessary permits for work conducted outside these hours), and because of the distance between construction activities and residential structures, past construction activities did not expose persons or generate noise in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, and thus less than significant impacts were realized under this criterion.

Table 4.12-6: Typical Construction Equipment Noise Levels

Equipment	Noise Level (dBA) at 50 feet
Backhoe	80
Concrete mixer	85
Pump truck	82
Crane, Mobile	85
Dozer	85
Excavator	85
Generator	82
Grader	85
Man lift	85
Loader	80
Paver	85
Roller	85
Scraper	85
Trucks	80-84

Source: FHWA 2009

Table 4.12-7: Pole Removal and Installation Noise Contour Distances

Construction Operations	Contour Distance (feet)				
	75 dBA L_{eq}	70 dBA L_{eq}	65 dBA L_{eq}	60 dBA L_{eq}	55 dBA L_{eq}
Conductor Removal	183	327	572	975	1,610
Wood Pole Removal	171	307	537	916	1,517
TSP Foundation Installation	173	309	539	924	1,534
TSP Assembly	134	243	428	739	1,240
TSP Erection	132	239	420	726	1,219
Conductor Installation	204	364	630	1,067	1,757

Note:
The installation of TSPs generates more noise than installation of LWS poles or removal of LSTs. Therefore, because these noise contours are based on TSP installation related noise, they represent a conservative estimate of noise generated during past activities, including LWS pole installation.

Did the project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past construction activities generated groundborne vibration. Sources of vibration included geotech drill rigs, excavators, dump trucks, backhoes, and other general construction equipment. According to the FTA guidelines, a vibration level of 65 VdB is the threshold of perceptibility for humans.[49] The FTA guidelines also state that, for a significant impact to occur, vibration levels must exceed 80 VdB during infrequent events (FTA 2006). Based on the approach set forth in the FTA guidelines, this analysis adopts a threshold of significance of 80 VdB for groundborne vibration impacts.

Vibration impacts associated with construction operations would primarily affect those persons located closest to the TSP and LWS pole installation sites, and those located near conductor removal/replacement locations. Vibration calculations based on the FTA guidelines are provided in Table 4.12-8.

Table 4.12-8: Vibration Source Levels for Typical Construction Equipment

Equipment	Vibration Level at 25 feet (VdB)
Large bulldozer	87
Caisson drilling	87
Loaded trucks	86
Jackhammer	79
Small bulldozer	58

Source: FTA 2011

[49] VdB is equal to 20 times the logarithm of the ratio of the measured particle velocity to a reference particle velocity (usually 10^{-8} m/s).

Past construction activities occurred within approximately 50 to 75 feet of residences in Project Section 4. Screening-level calculations indicate that vibration levels associated with these activities would have attenuated to a level of approximately 78 VdB at the nearest residence given the intervening distance. This analysis shows that vibration levels at all identified sensitive receptors were below the threshold of 80 VdB. Therefore, groundborne vibration impacts associated with past construction activities was less than significant.

Did the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Assessment Summary: No Impact

Construction Impacts

Past construction activities were temporary in nature. As is typical for construction work on linear projects, past work on the Project involved short-duration construction activities at individual sites along the length of the project, resulting in construction duration at any single location lasting no more than a period of days or weeks. As a result, construction did not involve permanent increases in ambient noise levels, and therefore there was no impact under this criterion.

Did the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The existing ambient noise levels in the Project Area range from 42.4 to 74.2 dBA 1-hour L_{eq}, and for purposes of this analysis it is assumed that the ambient noise levels at the time past activities commenced were consistent with these noise levels. As presented in Table 4.12-6, the noise associated with past construction activities exceeded these ambient noise levels in the vicinity of Project activities, and thus resulted in a temporary increase in ambient noise levels. Construction activities at any given site were short term, and thus did not represent a periodic increase in ambient noise levels. Due to the short-term and temporary nature of construction activities, and the limited number of noise sensitive receptors in the area, the increase in ambient noise levels was not substantial, and thus impacts were less than significant.

For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, did the project expose people residing or working in the project area to excessive noise levels?

Assessment Summary: No Impact

Construction Impacts

Past construction activities did not occur in an area within an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, past construction activities did not expose workers to excessive noise levels attributable to a public airport or public use airport, and there was no impact.

For a project within the vicinity of a private airstrip, did the project expose people residing or working in the project area to excessive noise levels?

Assessment Summary: No Impact

Construction Impacts

There are no private airstrips located in the vicinity of the Project. Therefore, the Project did not expose workers to excessive noise levels attributable to a private airstrip, and there was no impact.

4.12.6 Impact Analysis, Future Activities

The noise impact of the Project's future construction and operational activities was assessed using the CadnaA program for predicting noise impacts satisfying the above listed CEQA criteria.

Would the project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Construction activities conducted between the daytime hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday are exempted from the noise limits established in the City of Moorpark municipal code; the City of Thousand Oaks municipal code limits construction to between the hours of 7:00 a.m. and 7:00 p.m Monday through Saturday. Future construction operations would not generally occur outside of these time periods. If future construction activities must occur outside of these time periods, SCE would obtain a permit from the City of Thousand Oaks' Public Works Director or would request a variance from other applicable jurisdictions.

The County of Ventura limits temporary construction noise to 75 dBA L_{eq} for durations of up to three days. Under the applied seven construction scenarios described in Table 4.12-6, the modeled 75 dBA L_{eq} noise contour distances range from 132 to 204 feet. No residential structures in Ventura County are located within the 75 dBA L_{eq} noise contour for any future construction activity; additionally, the construction activities at each location would be conducted and staggered to ensure that the noise generated during construction does not exceed the significance thresholds or durations identified by the County of Ventura noise regulations set forth in the County's Construction Noise Threshold Criteria and Control Plan (Ventura County 2010a).

A light-duty helicopter would be used to string new conductor along portions of Project Section 2 and Project Section 3, and possibly to install marker balls on up to five spans in Project Sections 2, 3 and 4. A light-duty helicopter of the type to be used for these activities would generate an SEL of 80 dBA to 85 dBA for an overflight at 1,000 feet elevation, which corresponds to an hourly L_{eq} of 44 dBA to 49 dBA at a 1,000 foot distance. These helicopter operations would occur for only short periods of time at any given location, and would be limited to daytime working hours (as defined by the applicable jurisdiction in which such activities would occur). Therefore, short-term construction noise impacts from helicopter operations would be less than significant.

By timing construction activities in accordance with the ordinances of the City of Moorpark, City of Thousand Oaks, and Ventura County (and by obtaining necessary permits or variances for work conducted outside of these hours) and by staggering construction activities, future construction activities would not expose persons or generate noise in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, and thus less than significant impacts would be realized under this criterion.

Operation Impacts

New equipment installed at the substations would generate noise similar to that generated by existing components. As presented later in this section, the 'corona' noise associated with the new and reconductored 66 kV subtransmission lines would be less than the ambient noise in the area, and would not exceed any local noise standards.[50] Therefore, the operation of Project infrastructure would not result in noise levels in excess of the noise threshold limits set forth by the County of Ventura, City of Thousand Oaks, or City of Moorpark, and there would be no impacts under this criterion as a result of Project operations.

[50] As shown in Table 4.12-9, the audible noise associated with transmission and subtransmission lines decreases as the line voltage decreases; the audible noise associated with the Project's 66 kV subtransmission lines would be lower than 33.5 dBA, which is less than the ambient noise measured at all locations.

Would the project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Future construction activities would occur within approximately 50 to 75 feet of residences in Project Section 4. Screening-level calculations indicate that vibration levels associated with these activities would attenuate to a level of approximately 78 VdB at the nearest residence given the intervening distance. This analysis shows that vibration levels at all identified sensitive receptors would be below the threshold of 80 VdB. Therefore, groundborne vibration impacts associated with future construction activities would be less than significant.

Operation Impacts

No vibration-generating components would be installed or operated as part of the Project. Operation of the Project generally involves only the use vehicles and bucket trucks during inspection and maintenance activities; these vehicles do not generate perceptible vibrations. Therefore, operation of the Project would not generate groundborne vibrations.

Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Future construction activities would be temporary in nature. As is typical for construction work on linear projects, future work on the Project would involve short-duration construction activities at individual sites along the length of the project, resulting in construction duration at any single location lasting no more than a period of days or weeks. As a result, construction would not involve permanent increases in ambient noise levels, and therefore there would be no impact under this criterion.

Operation Impacts

When a subtransmission line is in operation, an electric field is generated in the air surrounding the conductors, forming a corona. The corona results from the partial breakdown of the electrical insulating properties of the air surrounding the conductors. When the intensity of the electric field at the surface of the conductor exceeds the insulating strength of the surrounding air, a corona discharge occurs at the conductor surface, representing a small dissipation of heat and energy. Some of the energy may dissipate in the form of small local pressure changes that result in audible noise or in radio or television interference. Audible noise generated by corona discharge is characterized as a hissing or crackling sound that may be accompanied by a 120 Hz hum.

Several factors, including conductor voltage, shape and diameter, and surface irregularities such as scratches, nicks, dust, or water drops can affect a conductor's electrical surface gradient and its corona performance. Corona is usually not a design issue for power lines rated at 230 kV and lower because the conductor size selected for subtransmission lines on these projects is of sufficient diameter to lower the localized electrical stress on the air at the conductor surface and would further reduce already low conductor surface gradients so that little or no corona activity would exist under most operating conditions. As such, it is important to point out that the subtransmission lines associated with the Project are 66 kV, significantly lower in voltage than the extra high voltage lines with which corona noise is typically attributed.

The Electric Power Research Institute (EPRI) has studied corona effects (EPRI 1978 and 1987). The typical noise levels for transmission lines with wet conductors are shown in Table 4.12-9.

Table 4.12-9: Transmission and Subtransmission Line Voltage and Audible Noise Levels

Line Voltage (kV)	Audible Noise Level Directly Below the Conductor (dBA)
138	33.5
240	40.4
360	51.0

Notes:
kV = kilovolt
dBA = A-weighted decibels

As shown in Table 4.12-9, the audible noise associated with transmission and subtransmission lines decreases as the line voltage decreases; the audible noise associated with the Project's 66 kV subtransmission lines would be lower than the corona noise associated with the adjacent 220 kV transmission lines. The corona noise associated with the 66 kV subtransmission lines would also be lower than the lowest monitored ambient noise (42.4 dBA) in the Project Area. In addition, SCE plans to install polymer (silicon rubber) insulators. This material is hydrophobic (i.e., repels water), and is able to transfer this hydrophobicity to surface contaminants (e.g., soot, dirt, etc.). This inhibits contaminant build-up on the insulators' surface, which reduces the potential for corona noise to be generated at the pole locations.

New equipment installed at the substations would generate noise similar to that generated by existing components. In addition, operation and maintenance activities as described in Chapter 3: Project Description would be conducted along the length of the Project; these activities would be similar to those currently conducted in the area. Neither the equipment nor the operations and maintenance activities would result in a permanent increase in ambient noise levels.

Because the potential corona noise generated by the 66 kV subtransmission line would be lower than ambient conditions and new equipment installed at the substations would generate noise similar to that generated by existing components, and because noise associated with inspection and maintenance activities would be temporary and transient, operation of the Project would not result in a substantial permanent increase in ambient noise levels, and therefore there would be less than significant impacts under this criterion.

Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The existing ambient noise levels in the Project Area range from 42.4 to 74.2 dBA 1-hour L_{eq}. As presented in Table 4.12-7, the noise associated with future construction activities could exceed these ambient noise levels in the vicinity of Project activities, and thus could result in a temporary increase in ambient noise levels.

Construction at any structure site would not be sustained for more than a few days at a time and would generally occur within the time restrictions identified in local ordinances. Construction activities at any given site would be short-term, and thus would not represent a periodic increase in ambient noise levels. Due to the short-term and temporary nature of construction activities, and the limited number of noise sensitive receptors in the area, the increase in ambient noise levels would not be substantial, and thus impacts would be less than significant.

Operation Impacts

Operations and maintenance activities associated with the Project would include the use of vehicles, and would be similar in nature and frequency to operations and maintenance activities that currently occur along SCE ROWs in the Project Area. In addition, new equipment installed at the substations would generate noise similar to that generated by existing components. Thus, the noise during operation of the Project would be similar to the existing operational noise levels in the Project Area, and there would be no substantial temporary or periodic increases in ambient noise levels. Therefore, there would be a less than significant impact under this criterion.

For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Assessment Summary: No Impact

Construction Impacts

The Project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, future construction activities would not expose workers to excessive noise levels attributable to a public airport or public use airport, and there would be no impact.

Operation Impacts

The Project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, operation of the Project would not expose workers to excessive noise levels attributable to a public airport or public use airport, and there would be no impact.

For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Assessment Summary: No Impact

Construction Impacts

There are no private airstrips located within the vicinity of the Project. Therefore, the Project would not expose workers to excessive noise levels attributable to a private airstrip, and there would be no impact.

Operation Impacts

There are no private airstrips located within the vicinity of the Project. Therefore, the Project would not expose workers to excessive noise levels attributable to a private airstrip, and there would be no impact.

4.12.7 References

American National Standards Institute. 1983. SI.4. Specification for Sound Level Meters.

Beranek, Leo L. 1988. Noise and Vibration Control, Revised Edition. Institute of Noise Control Engineering.

California Department of Transportation (Caltrans). 1998. Technical Noise Supplement. Located at http://www.dot.ca.gov/hq/env/noise/pub/Technical%20Noise%20Supplement.pdf.

City of Thousand Oaks. 1996. General Plan – Noise Element. Located at http://www.toaks.org/civica/filebank/blobdload.asp?BlobID=2003.

City of Thousand Oaks. 2013. Municipal Code, Title 5 - Chapter 21, Noise.

City of Moorpark. 2009. General Plan – Noise Element. Located at http://ci.moorpark.ca.us/moorparkcity/img/cdd_gp_noise_element.pdf.

City of Moorpark. 2013. Municipal Code Section 17.53.080, Exterior noise limits—Sound levels by receiving land use districts.

Electrical Power Research Institute (EPRI). 1987. Transmission Line Reference Book.

Federal Transit Administration (FTA). 2006. Construction Equipment Noise Levels.

Federal Transit Administration. 2006. Transit Noise and Vibration Impact Assessment, Report Number FTA-VA-90-1003-06.

Harris, C.M. 1991. Handbook of Acoustical Measurement and Noise Control. McGraw Hill, New York, NY, 1991.

Raichel, Daniel R. 2000. The Science and Applications of Acoustics.

Ventura County. 2010. Ventura County General Plan – Hazards Appendix, Noise. Located at http://www.ventura.org/rma/planning/pdf/plans/General-Plan-Hazards-Appendix-6-28-11.pdf.

Ventura County. 2010. Construction Noise Threshold Criteria and Control Plan. Located at http://www.ventura.org/rma/planning/pdf/ceqa/Construction_Noise_Thresholds.pdf.

4.13 Population and Housing

This section describes population and housing in the area of the Project. The potential impacts are also discussed.

4.13.1 Environmental Setting

The Project is located within the City of Moorpark, the City of Thousand Oaks, and unincorporated areas of Ventura County.

Past and current population and housing data in this Section was obtained from Census Bureau decadal censuses. Population projections were obtained from the Southern California Association of Governments, which provides forecasts for population and housing to local agencies for the purpose of planning adequate infrastructure and services.

4.13.1.1 Population Profiles

The past and current populations of cities and counties in the Project Area are presented in Table 4.13-1. The City of Thousand Oaks and Ventura County as a whole (including both incorporated and unincorporated areas) both experienced robust growth over the 1980-2010 period, with growth rates of 64 and 56 percent, respectively. The City of Moorpark experienced a very large growth rate of nearly 600 percent over the same period. Unincorporated Ventura County, however, experienced negative population growth (-5 percent) over the same period, largely due to incorporation of formerly unincorporated areas.

Table 4.13-1: Historical Population Data for the Project Area

Year	City of Thousand Oaks	City of Moorpark	Ventura County, Incorporated	Ventura County, Unincorporated
1980	77,072	4,942	529,174	99,957
1990	104,352	25,494	669,016	86,520
2000	117,418	31,415	753,197	93,120
2010	126,683	34,421	823,318	94,937

Source: Census Bureau 1980, 1990, 2000, and 2010 Decadal Censuses
Note: Ventura County, Incorporated includes the population of all incorporated areas (cities) in the county.

Table 4.13-2 provides population forecasts for both cities and incorporated and unincorporated areas of Ventura County. Population growth is projected to be greater in the City of Moorpark and incorporated Ventura County, with rates of greater than eight percent over the 2020-2040 period; growth rates for the City of Thousand Oaks and unincorporated Ventura County are projected to be less than five percent over the same period.

Table 4.13-2: Population Projections for the Project Area

	City of Thousand Oaks	City of Moorpark	Ventura County, Incorporated	Ventura County, Unincorporated
2020	129,700	39,300	889,000	100,500
2035	130,900	41,500	954,000	107,200

Source: Southern California Association of Governments 2012

4.13.1.2 Housing Profiles

Data on the past and current numbers of housing units in the area of the Project are presented in Table 4.13-3. Data on past and current residential rental property vacancy rates are presented in Table 4.13-4.

Short-term lodging is available at numerous hotels and motels located throughout Ventura County, including in the cities of Camarillo, San Buenaventura (Ventura) and Thousand Oaks.

Table 4.13-3: Historical and Current Housing Data in the Project Area

	City of Thousand Oaks		City of Moorpark		Ventura County	
	Total	Occupied	Total	Occupied	Total	Occupied
1990	37,765	36,457	7,915	7,621	228,478	217,298
2000	42,958	41,793	9,094	8,994	251,712	243,234
2010	47,497	45,836	10,738	10,484	281,695	266,920

Source: Census Bureau 1990, 2000, and 2010 Decadal Censuses

Table 4.13-4: Historical and Current Rental Vacancy Rates in the Project Area

	City of Thousand Oaks	City of Moorpark	Ventura County
1990	5.2	7.0	4.9
2000	2.9	1.2	2.6
2010	5.6	2.9	4.8

Source: Census Bureau 1990, 2000, and 2010 Decadal Censuses

4.13.2 Regulatory Setting

There are no applicable regulations for population and housing that apply to the Project. This is due to the fact that the Project would not induce any population growth or impact housing.

4.13.3 Significance Criteria

The significance criteria for assessing the impacts to population and housing come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of new roads or other infrastructure)
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere

4.13.4 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project induce substantial population growth in the area, either directly (by proposing new homes and businesses) or indirectly (through the extension of new roads or other infrastructure)?

Assessment Summary: No Impact

Construction Impacts

The number of workers that were employed to complete the past activities did not directly or indirectly induce population growth in the area. Construction activities were short-term and temporary, and occurred for approximately thirteen months. During peak construction times, SCE had approximately 70 workers per day working. The labor demands of the past activities were met by existing SCE employees and contractors. The small number of positions required during the short construction phase did not directly or indirectly induce any population growth in the area.

The past activities did not indirectly induce an increase in population. The electrical subtransmission infrastructure that was constructed is needed to increase the reliability of existing service; it is not designed to facilitate or induce additional electrical consumption or population growth. In addition, the past activities did not include construction of any new infrastructure such as publicly-accessible roads that could induce population growth.

Therefore, no impacts occurred under this criterion as a result of the past activities.

Did the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Assessment Summary: No Impact

Construction Impacts

The past activities did not displace any existing housing. Project infrastructure was constructed within existing public rights-of-way (ROWs ; both across public ROW and within existing SCE ROWs); there were no residences or housing located within these ROWs. Although residences were and are located near portions of the Project, existing housing was not displaced by past activities. Therefore, the past activities did not displace existing housing, or necessitate the relocation or construction of replacement housing elsewhere, and there was no impact.

Did the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Assessment Summary: No Impact

Construction Impacts

Portions of the ROWs on which past activities occurred were routed near and adjacent to areas that are subdivided for residential development, and which contained occupied housing units. However, there were no occupied housing units within the existing SCE ROW or on any of the access roads that were used during past activities. Therefore, no people were displaced during construction of the Project, and no replacement housing was constructed elsewhere.

4.13.5 Impact Analysis, Future Activities

Would the project induce substantial population growth in the area, either directly (by proposing new homes and businesses) or indirectly (through the extension of new roads or other infrastructure)?

Assessment Summary: No Impact

Construction Impacts

The number of workers that would be employed to construct the Project would not directly or indirectly induce population growth in the area. Construction activities are anticipated be short-term and temporary, and to occur for approximately 10 months.[51] During peak construction times, SCE expects to have approximately 70 laborers per day working.[52] The

[51] The proposed construction schedule does not include delays due to inclement weather and/or stoppages necessary to protect biological resources (e.g., nesting birds).

[52] This is a conservative estimate based on an assumption that all Project activities described in Table 3.2-6b would occur simultaneously.

labor demands of the Project would be met by existing SCE employees or by hiring specialized contractors. The small number of positions required during the short construction phase would not directly or indirectly induce any population growth.

Construction of the Project would not be expected to indirectly induce an increase in population. The electrical subtransmission infrastructure that would be constructed by the Project is needed to increase the reliability of existing service; it is not designed to facilitate or induce additional electrical consumption or population growth. In addition, the Project does not include any new infrastructure such as publicly-accessible roads that could induce population growth.

Therefore, no impacts would occur under this criterion as a result of construction of the Project.

Operation Impacts

Operations and maintenance activities would be conducted by current SCE personnel, and the Project would not likely require the hiring of any additional operations personnel. Therefore, operation of the Project would not directly or indirectly induce any population growth in the area. The Project infrastructure would be unmanned during operations with the exception of routine and emergency maintenance.

The Project is not intended to facilitate or induce additional electrical consumption or population growth. In addition, the Project does not include any new infrastructure such as publicly-accessible roads that could induce population growth. Accordingly, operation of the Project would not induce any population growth in the area.

Therefore, no impacts would occur under this criterion as a result of operation of the Project.

Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Assessment Summary: No Impact

Construction Impacts

Construction of the Project would not displace any existing housing. Project infrastructure would be constructed within existing public ROWs (both across public ROW and within existing SCE ROWs); there are no residences or housing located within these ROWs. Although residences are located near portions of the Project, existing housing would not be displaced by construction of the Project. Therefore, the Project would not displace existing housing, or necessitate the relocation or construction of replacement housing elsewhere, and there would be no impact.

Operation Impacts

Operation and maintenance of the Project would not displace any existing housing. There would not likely be additional workers hired to operate or maintain the Project, and thus it is unlikely there would be an additional demand for housing or impact to the local housing market.

In addition, Project infrastructure would be operated and maintained within existing public ROWs and SCE ROWs; there are no residences or housing located within these ROWs. Therefore, operation and maintenance of the Project would not displace existing housing, or necessitate the relocation or construction of replacement housing elsewhere, and there would be no impact.

Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Assessment Summary: No Impact

Construction Impacts

Portions of the ROWs on which the Project would be constructed are routed near and adjacent to areas that have been subdivided for residential development, and which contain occupied housing units. However, there are no occupied housing units within the existing SCE ROW or on any of the access roads that would be used during construction. Therefore, no people would be displaced during construction of the Project, and no replacement housing would be constructed elsewhere.

Operation Impacts

Portions of the ROWs on which the Project would be constructed are routed near and adjacent to areas that have been subdivided for residential development, and which contain occupied housing units. However, there are no occupied housing units within the existing SCE ROWs or on any of the access roads that would be used during operations. Operation and maintenance activities associated with the Project would occur within existing and new ROWs and on existing access roads. Therefore, no people would be displaced as a result of the operation of the Project, and no replacement housing would be constructed elsewhere.

4.13.6 References

Southern California Association of Governments. 2012. Adopted 2012 RTP Growth Forecast. Located at http://www.scag.ca.gov/forecast/downloads/excel/2012AdoptedGrowthForecast.xls.

US Census Bureau (Census). 2012. Decadal Censuses of Population and Housing. [Web Page]. Located at http://factfinder.census.gov/.

4.14 Public Services

This section describes public services including fire protection, police, public hospitals, schools, and libraries in the area of the Project. The past and potential future impacts to these public services are also discussed.

4.14.1 Environmental Setting

Public services were identified through review of general and comprehensive plans, county and city websites, school district websites, and aerial imagery. Information in this section is organized by public service type and the provider(s) of those services. Information on parks is provided in Section 4.15. Figures 4.14-1a and 4.14-1b display the locations of public services in relation to components of the Project.

4.14.1.1 Fire Services

Fire protection in the area of the Project is provided by the Ventura County Fire Department. The Ventura County Fire Department provides fire protection services for unincorporated areas of Ventura County, the City of Moorpark, and the City of Thousand Oaks. The nearest fire stations to components of the Project are Fire Station 42 (located approximately 1 mile east of Moorpark Substation), Fire Station 40 (located approximately 0.9 mile south of Moorpark Substation), and Fire Station 34 (located approximately 3.9 miles north-northeast of Newbury Substation).

4.14.1.2 Police Services

Law enforcement in the area of the Project is provided by the Ventura County Sheriff's Department. The Ventura County Sheriff's Department provides polices services to unincorporated Ventura County and contract law enforcement services to the City of Thousand Oaks and the City of Moorpark. The Sheriff's Thousand Oaks Station is located 6.5 miles northeast of Newbury Substation, and its Moorpark Station is located approximately 1.5 miles east of Moorpark Substation.

4.14.1.3 Hospitals

The Los Robles Hospital and Medical Center is a 359-bed acute care hospital located less than 3 miles east of Newbury Substation. This is the nearest hospital to any component of the Project.

4.14.1.4 Schools

Public schools in the vicinity of the Project are operated by the Conejo Valley Unified School District and the Moorpark Unified School District. There are also a number of private schools in the area.

4.14.1.4.1 Conejo Valley Unified School District

The Conejo Valley Unified School District operates 17 elementary, 5 middle, 3 comprehensive high, and 2 alternative high schools. Project Section 4, including Newbury Substation, and portions of Project Section 3 are located within the Conejo Valley Unified School District's service area.

4.14.1.4.2 Moorpark Unified School District

The Moorpark Unified School District operates six elementary, two middle, one comprehensive high school, and one alternative high school. Project Section 1 and portions of Project Section 2 are located within the Moorpark Unified School District's service area.

4.14.1.5 Libraries

The City of Thousand Oaks operates two libraries; the Grant R. Brimhall Library is located approximately 4.5 miles east of Newbury Substation, and the Newbury Park Branch Library is located approximately 1 mile south of Newbury Substation.

The City of Moorpark library is located approximately 1.1 miles east-northeast of Moorpark Substation.

Ventura County operates 13 libraries across the county; the nearest branch to any component of the Project is located in Simi Valley.

4.14.2 Regulatory Setting

4.14.2.1 Federal Regulatory Setting

There are no Federal regulations that govern this resource that are applicable to the Project.

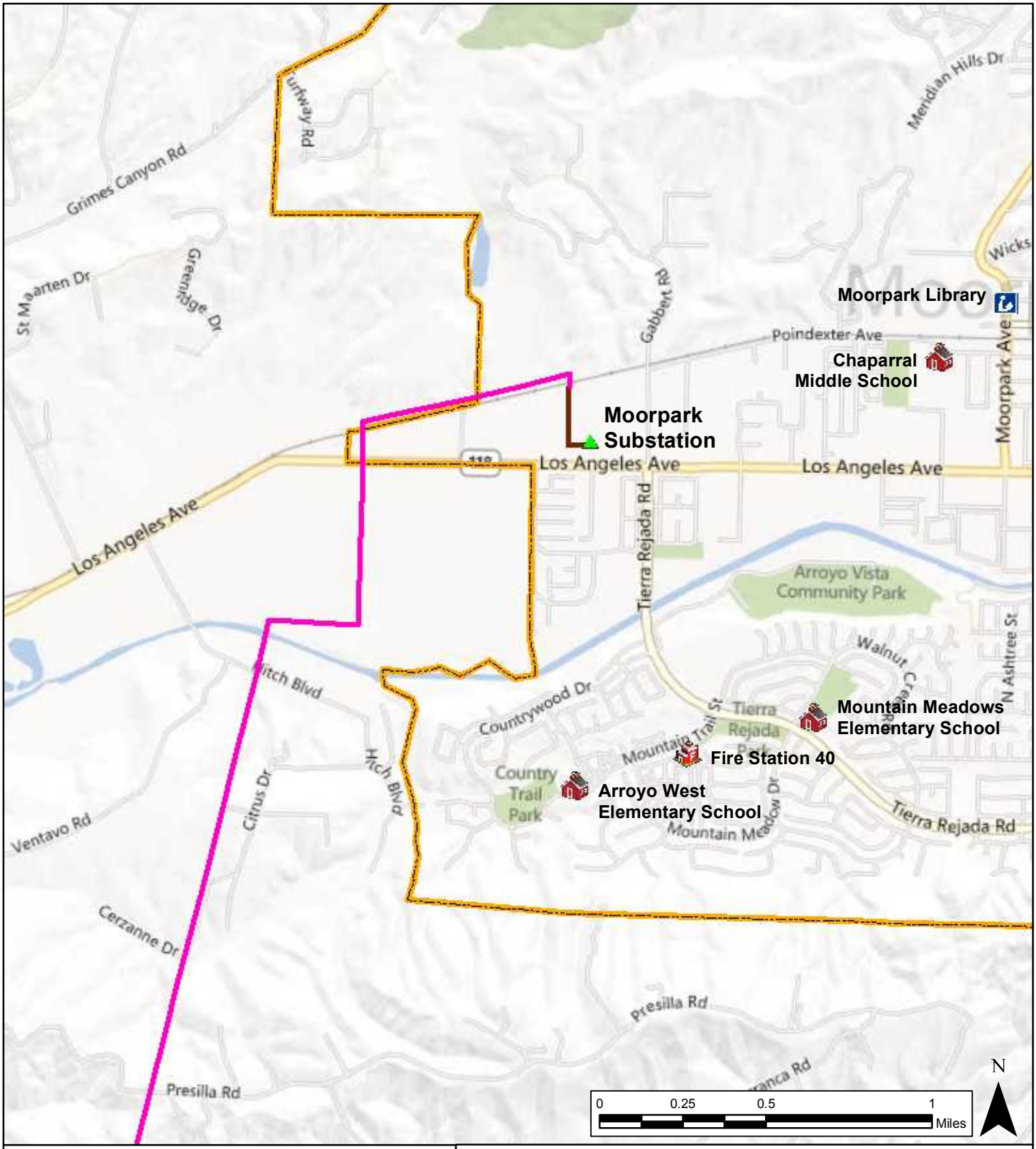
4.14.2.2 State Regulatory Setting

4.14.2.2.1 Fire Code § 902.2.2.1

Fire Code Section 902.2.2.1 requires fire apparatus access roads to have a minimum unobstructed width of 20 feet. Other State regulations are related to health, fire, and building safety, including the California Health Code, the California Fire Code, and the Uniform Building Code.

4.14.2.2.2 Public Resources Code §§ 4292 and 4293

Public Resources Code Section 4292 directs the owner, controller, operator, or maintainer of electrical transmission lines in mountainous land, forest-covered land, brush-covered land, or grass-covered land to maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole; a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer



Fire Station
Library
School
Substation
City Boundaries

Project Sections

Project Section 1
Project Section 2

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PUBLIC SERVICES AND SCHOOLS (NORTH)

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

ARCADIS
Infrastructure · Water · Environment · Buildings

Figure
4.14-1a

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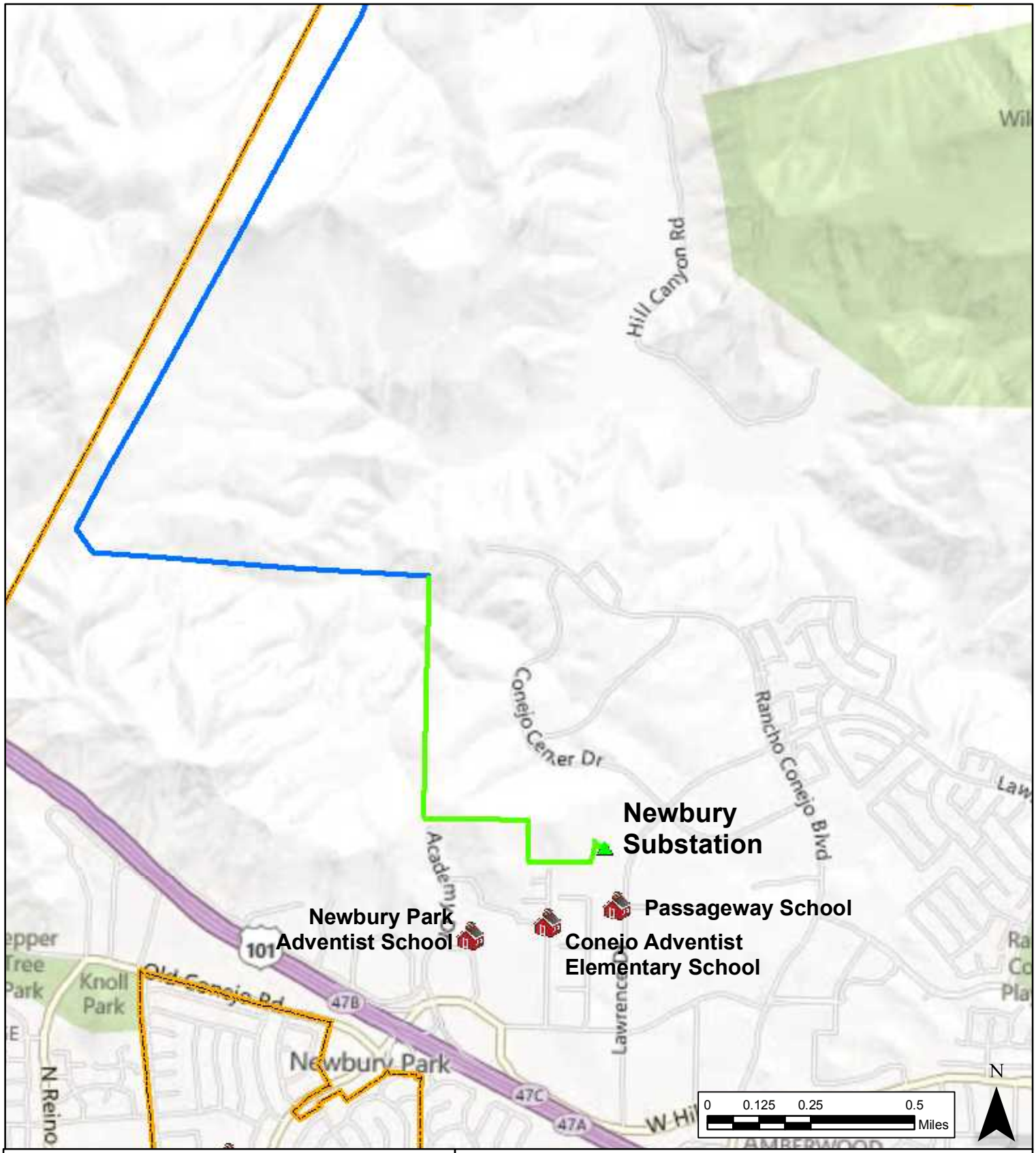

School
Substation
City Boundaries

Project Sections
Project Section 3
Project Section 4

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PUBLIC SERVICES AND SCHOOLS (SOUTH)

SOUTHERN CALIFORNIA EDISON®
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ARCADIS
Infrastructure · Water · Environment · Buildings

Figure
4.14-1b

ARCADIS: SCEMN_013, 03/19/13, R02

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circumference of such pole or tower; and Section 4293 requires the same to maintain a clearance of 4 feet from any line which is operating at 2,400 or more volts, but less than 72,000 volts.

4.14.2.2.3 Title 14 California Code of Regulations §§ 1250-1258

Title 14 California Code of Regulations Sections 1250-1258, Fire Prevention Standards for Electric Utilities provide clearance standards for electric poles, tower firebreaks, and electric conductors.

4.14.2.2.4 CPUC General Order 95

General Order 95, Rules for Overhead Electric Line Construction, covers aspects of design, construction, operation, and maintenance of electrical power lines and fire safety hazards.

4.14.2.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.14.2.3.1 Ventura County General Plan

The Ventura County General Plan contains the following Goals may be relevant to the Project or other development in the area:

4.7.1 Goals

1. Provide for the protection of the public through effective law enforcement and emergency services.
2. Ensure that discretionary development provides adequate private security for the prevention of local crime.

4.7.2 Policies

1. The Sheriff's Department shall continue to review discretionary permits to ensure that an adequate level of law enforcement can be provided.
2. Discretionary development shall be conditioned to provide adequate site security during the construction phase (e.g., licensed security guard and/or fencing around the construction site, and all construction equipment, tools, and appliances to be properly secured and serial numbers recorded for identification purposes).
3. Discretionary development shall be conditioned to provide adequate security lighting (e.g., parking lots to be well lighted with a minimum 1 foot candle of light at ground level, lighting devices to be protected from the elements and constructed of vandal-resistant materials and located high enough to discourage anyone on the ground from tampering with them).

4. Discretionary development shall be conditioned to avoid landscaping which interferes with police surveillance (e.g., landscaping must not cover any exterior door or window, landscaping at entrances and exits or at any parking lot intersection must not block or screen the view of a seated driver from another moving vehicle or pedestrian, trees must not be placed underneath any overhead light fixture which would cause a loss of light at ground level).

4.8.1 Goal

Strive to reduce the loss of life and property by providing effective fire prevention, suppression, and rescue services and facilities.

4.8.2 Policies

1. Discretionary development shall be permitted only in adequate water supply, access, and response time for fire protection can be made available.

4.8.3 Programs

1. The Fire Protection District Bureau of Fire Prevention will continue to review all new development to ensure that an adequate level of fire protection can be provided (Ventura County 2010).

4.14.2.3.2 City of Moorpark General Plan

There are no components of the City of Moorpark General Plan applicable to the Project's impacts to public services.

4.14.2.3.3 City of Thousand Oaks General Plan

There are no components of the City of Thousand Oaks General Plan applicable to the Project's impacts to public services.

4.14.3 Significance Criteria

The significance criteria for assessing the impacts to public services come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project would cause a potentially significant impact if it would:

- 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, or other public facilities

4.14.4 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did 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, or other public facilities?

Assessment Summary: Less Than Significant Impact

Construction Impacts

As discussed in Section 4.13, the past activities did not directly or indirectly induce any population growth, and thus did not create a population growth-triggered increase for police or fire services; an increase in school enrollment; or an increase in the use of libraries, hospitals, parks, or other public facilities that resulted in a lowering of acceptable service ratios, response times, or other performance objectives. Because service ratios, response times, and performance objectives were not reduced to an unacceptable level, past construction activities did not necessitate the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities to maintain acceptable service.

The past construction activities did not require the use of local law enforcement agencies, and thus no incremental demand on law enforcement services as a result of the past activities was realized.

Past activities were undertaken in a high fire hazard area. As presented in Section 4.8, construction activities were conducted according to SCE health and safety protocols and applicable laws and regulations designed to protect workers and the public. Compliance with these protocols ensured that construction activities were conducted in a manner that eliminated the risk of igniting fires, including wildland fires.

During the past activities, existing access roads (which may also function as fire roads in open space areas) were used by construction equipment to access construction sites. To minimize surface disturbances, in some instances drill pads or equipment pad/turnaround areas encompassed access roads that were within SCE's existing rights-of-way (ROWs). Vehicle movements along, and use of, access roads were communicated to and coordinated with the appropriate agencies when applicable. Equipment placed on equipment pad/turnaround areas and drill pads was situated or attended to facilitate adequate emergency

vehicle access should the need have arisen. Therefore, no new facilities were required to maintain response times.

As presented in the above discussion, the past activities did not require a provision for new or physically altered governmental facilities, nor did the past activities cause the need for new or physically altered governmental facilities. Further, the past activities of the Project had less than significant impacts on the maintenance of acceptable service ratios, response times, or other performance objectives for any public service. Therefore, the past activities of the Project had less than significant impacts under this criterion.

4.14.5 Impact Analysis, Future Activities

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, or other public facilities?

Assessment Summary: Less Than Significant Impact

Construction Impacts

As discussed in Section 4.13, future Project activities would not directly or indirectly induce any population growth, and thus these future activities would not create a population growth-triggered increase for police or fire services; an increase in school enrollment; or an increase in the use of libraries, hospitals, parks, or other public facilities that would result in a lowering of acceptable service ratios, response times, or other performance objectives. Because service ratios, response times, and performance objectives would not be reduced to an unacceptable level, future construction activities would not necessitate the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities to maintain acceptable service.

The Project's future activities are unlikely to require the use of local law enforcement agencies. SCE might, as necessary, hire private security personnel to guard construction related staging yards and other Project locations. This would minimize any incremental demand on law enforcement services as a result of Project construction.

The Project's future activities would be constructed in a fire hazard area. As presented in Section 4.8, future activities would be conducted according to SCE health and safety protocols and applicable laws and regulations designed to protect workers and the public. Compliance with these protocols would ensure that future construction activities are conducted in a manner that would reduce the risk of igniting fires, including wildland fires.

During the future construction activities, existing access roads (which may also function as fire roads in open space areas) would be used by construction equipment to access construction sites. To minimize surface disturbances, in some instances drill pads or equipment pad/turnaround areas may encompass access roads that are within SCE's existing

ROW. Vehicle movements along, and use of, access roads would be communicated to and coordinated with appropriate agencies when applicable. Equipment placed on equipment pad/turnaround areas and drill pads would be situated or attended to facilitate adequate emergency vehicle access.

As presented in the above discussion, future Project activities will not require a provision for new or physically altered governmental facilities, nor would such activities cause the need for new or physically altered governmental facilities. Further, future Project activities would have less than significant impacts on the maintenance of acceptable service ratios, response times, or other performance objectives for any public service. Therefore, the future construction activities of the Project would have less than significant impacts under this criterion.

Operation Impacts

Operation and maintenance activities as described in Chapter 3: Project Description would be conducted along the length of the Project. As discussed in Section 4.13, operation of the Project would not directly or indirectly induce any population growth, and thus the Project would not create a population growth-triggered increase for police or fire services; an increase in school enrollment; or an increase in the use of libraries, hospitals, parks, or other public facilities that would result in impacts on the maintenance of acceptable service ratios, response time, or other performance objectives. Because service ratios, response times, and performance objectives would not be reduced to an unacceptable level, future construction activities would not necessitate the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities to maintain acceptable service. Therefore, the operation of the Project would have less than significant impacts under this criterion.[53]

[53] In addition, it should also be noted that maintenance of the access roads may result in a beneficial impact by providing improved firefighting access to relatively remote open space areas in unincorporated Ventura County.

4.14.6 References

City of Moorpark. 2001. City of Moorpark General Plan – 2000-2005 Safety Element. Located at http://ci.moorpark.ca.us/moorparkcity/img/cdd_gp_safety_element.pdf.

City of Moorpark. 2012. Moorpark City Library website. [Web Page]. Located at http://moorparklibrary.org/.

City of Thousand Oaks. 2012. Thousand Oaks Library website. [Web Page]. Located at http://ci.thousand-oaks.ca.us/library/default.asp.

Conejo Valley Unified School District. 2012. Directory of Schools webpage. [Web Page]. Located at http://www.conejo.k12.ca.us/LinkClick.aspx?fileticket=58YUIcjgDUc%3d&tabid=36&mid=5571.

Los Robles Hospital and Medical Center. 2012. About Us webpage. [Web Page]. Located at http://losrobleshospital.com/patients/index.dot.

Moorpark Unified School District. 2012. Schools webpage. [Web Page]. Located at http://www.mrpk.org/Default.aspx?tabid=59.

Ventura County. 2010. Ventura County General Plan. Located at http://www.ventura.org/rma/planning/general_plan/general_plan.html.

Ventura County Fire Department. 2012. Stations website. [Web Page]. Located at http://fire.countyofventura.org/AboutVCFD/Stations/tabid/80/Default.aspx.

Ventura County Sheriff's Office. 2012. Patrol Division website. [Web Page]. Located at http://www.vcsd.org/patrol_services/index.html.

4.15 Recreation

This section describes recreation in the area of the Project. The potential impacts are also discussed.

4.15.1 Environmental Setting

The Project is located in the City of Moorpark, an unincorporated area of Ventura County, and the City of Thousand Oaks. The City of Moorpark Parks, Recreation and Community Services Department manages parks and recreational areas within the city. Public parks and recreational services in the City of Thousand Oaks and some of the surrounding areas of unincorporated Ventura County are operated by the Conejo Recreation and Park District. There are a number of parks and recreational facilities in the vicinity of the Project, as shown on Figures 4.15-1a and 4.15-1b.

4.15.1.1 City of Moorpark

The City of Moorpark Parks, Recreation & Community Services Department currently maintains 18 park sites totaling approximately 160 acres. Eight parks are located within 1 mile of the Project.

4.15.1.2 Conejo Recreation and Park District

The Conejo Recreation and Park District operates 65 parks and recreational facilities in the City of Thousand Oaks and unincorporated Ventura County. On private lands located within the City of Thousand Oaks, a runway for radio controlled airplanes is located adjacent to COSCA.

4.15.1.3 Conejo Open Space Conservation Agency

The Conejo Open Space Conservation Agency (COSCA) is a joint powers agency that was formed between the City of Thousand Oaks and the Conejo Recreation and Park District in 1977 in order to implement the adopted goals of the Open Space and Conservation Elements of the City of Thousand Oaks General Plan. COSCA's primary responsibilities are the acquisition and management of natural open space land. Its mission is to preserve, protect and manage all of the natural resources that exist within the open space system.

Portions of the physical infrastructure associated with the Project would be constructed and operated in existing rights-of-way (ROWs) located within the 3,641 acre Conejo Canyons area in the northwest portion of the City of Thousand Oaks; specifically, this portion of the Project is located within the 1,430-acre Canyons West Open Space Unit.

The Conejo Canyons area contains an extensive network of multi-use trails that are used by hikers, runners, equestrians and mountain bicyclists; part of this network encompasses the roads used to access the SCE easement. The plan area contains approximately 33 miles of existing multi-use trails, with approximately 13 miles of new trails proposed for future

development (Figure 4.15-2). Presently, there are four trailheads and ten neighborhood access points in the Conejo Canyons area; none is located in the vicinity of the SCE ROW. COSCA is proposing three additional trailheads to provide more convenient direct access to the trail system; two of the proposed trailheads are in the vicinity of the SCE ROW.

4.15.2 Regulatory Setting

4.15.2.1 Federal Regulatory Setting

There are no Federal regulations pertaining to the Project and this resource.

4.15.2.2 State Regulatory Setting

There are no State regulations pertaining to the Project and this resource.

4.15.2.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.15.2.3.1 Ventura County General Plan

The Ventura County General Plan contains a number of goals and policies related to parks and recreational areas, including the following:

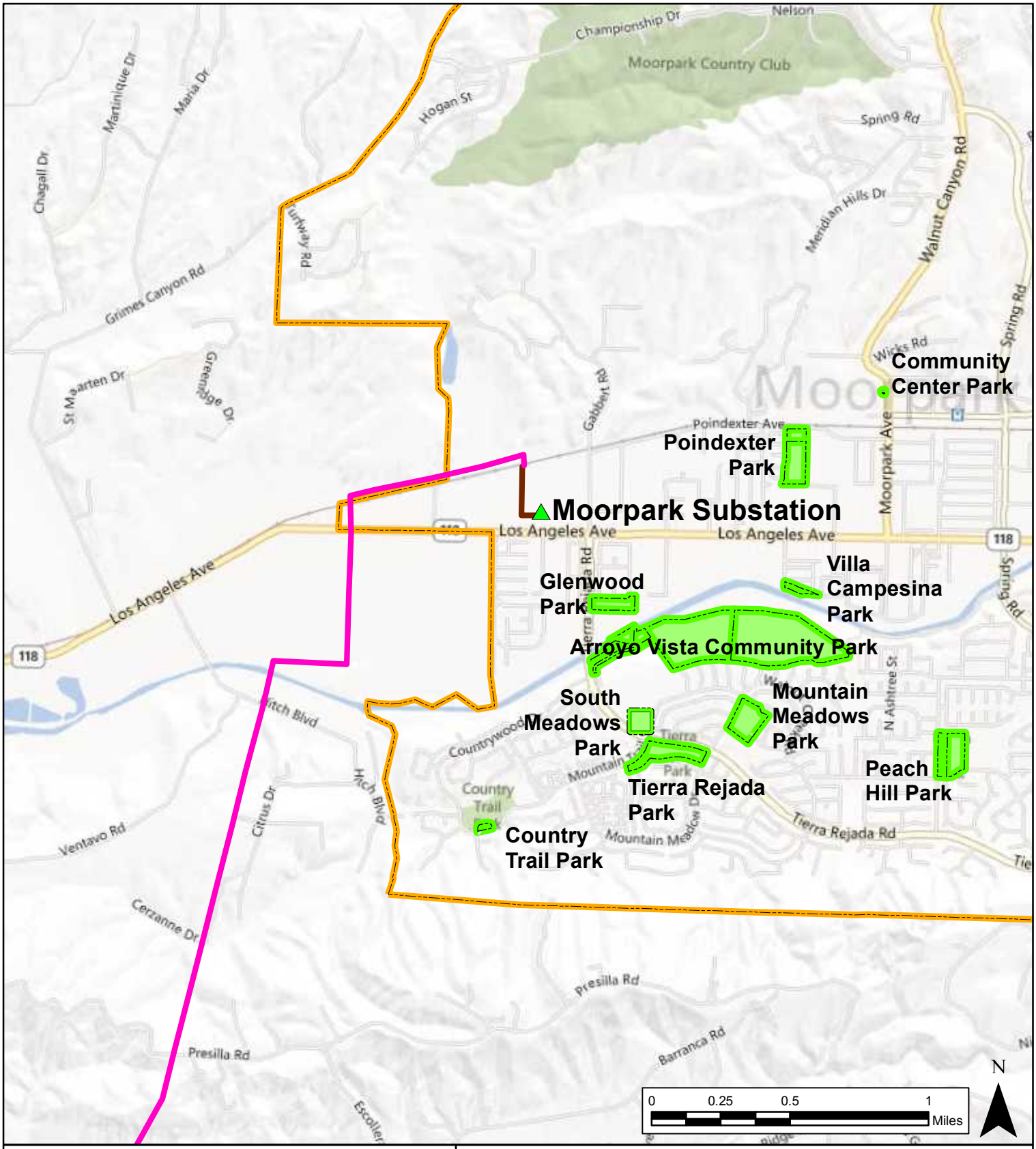
"4.10.1 Goals

…

7. Ensure compatibility between recreation facilities and adjoining land uses."

"4.10.2 Policies

1. The County shall maintain and enforce the local parkland dedication requirements (Quimby Ordinance), to acquire and develop neighborhood and community recreation facilities. Parkland dedication shall be based on a standard of 5 acres of local parkland per 1,000 population, including neighborhood and community parks." (Ventura County 2007a)



SCE Substations
City Boundaries
Parks

Project Sections
Project Section 1
Project Section 2

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

LOCAL PARKS (NORTH)

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Figure
4.15-1a

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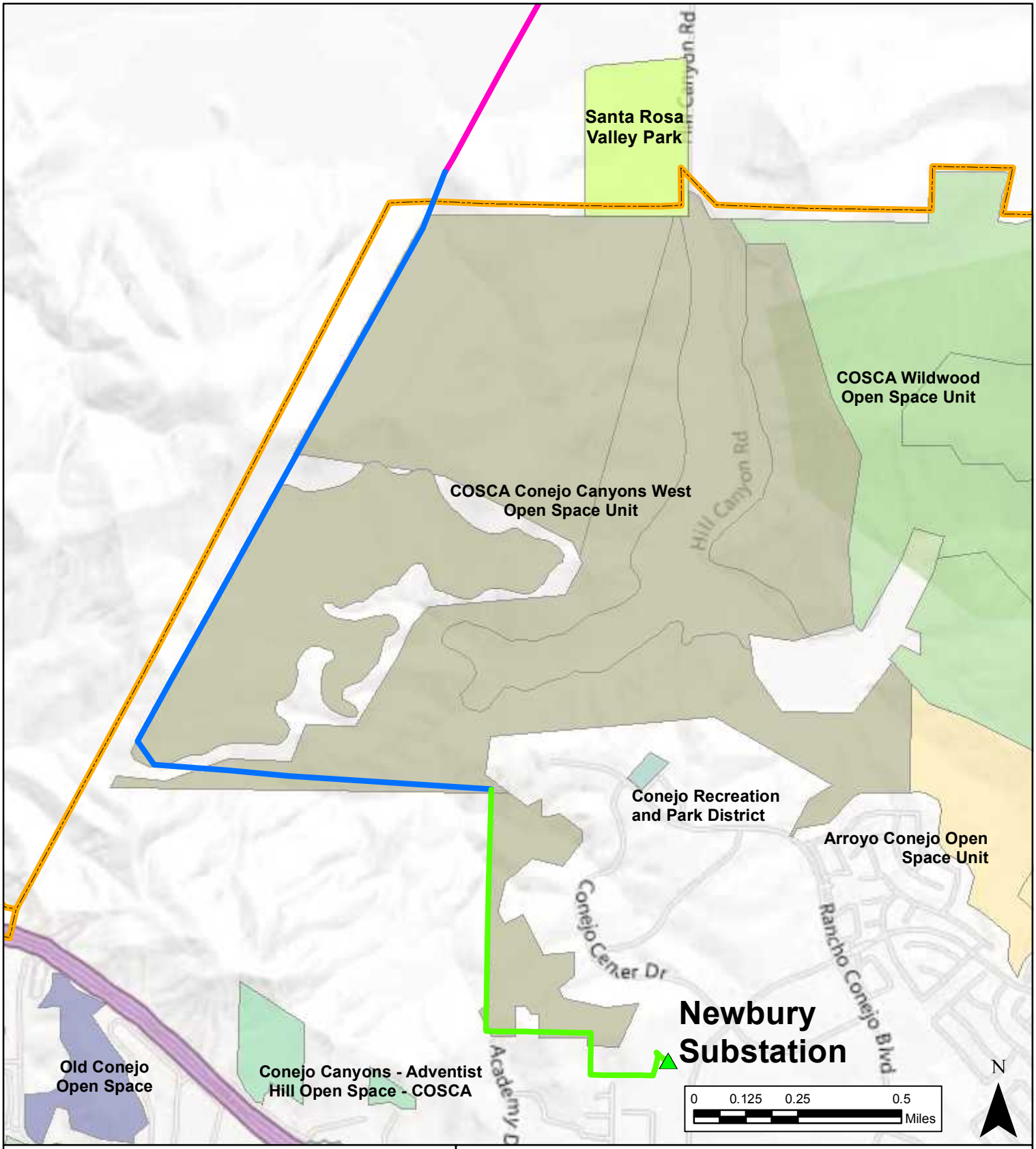

SCE Substations

Project Sections
- Project Section 2
- Project Section 3
- Project Section 4
- City Boundaries

Parks
- Arroyo Conejo Open Space Unit
- Conejo Canyons - Adventist Hill Open Space - COSCA
- Conejo Canyons West Open Space Unit
- Conejo Recreation and Park District
- Knoll Open Space
- Old Conejo Open Space
- Pepper Tree Playfield
- COSCA Wildwood Open Space Unit

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

LOCAL PARKS (SOUTH)

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Figure
4.15-1b

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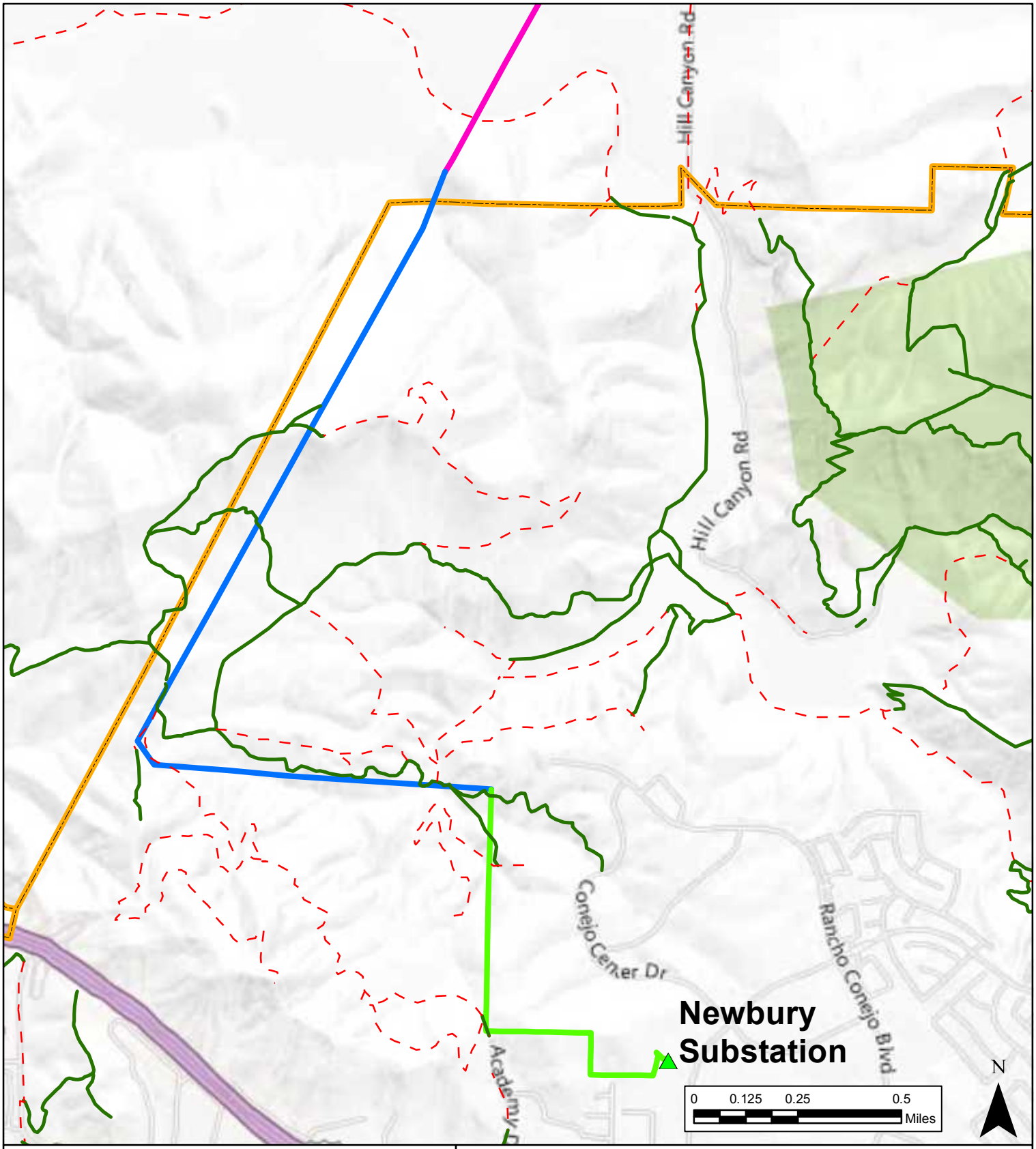

SCE Substations

Project Sections

- Project Section 2
- Project Section 3
- Project Section 4
- City Boundaries

Trails

- Proposed Trails
- Existing Trails

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

EXISTING AND PROPOSED TRAILS NEAR NEWBURY SUBSTATION

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Figure
4.15-2

ARCADIS: SCEMN_084, 03/21/13, R02

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4.15.2.3.2 Conejo Open Space Conservation Agency

COSCA prepared the Conejo Canyons Open Space Management Plan (Management Plan) to provide a comprehensive guide for the long-term management of the Conejo Canyons' unique natural, cultural and scenic resources while providing for compatible passive multi-use, trail-based recreational activities. The Management Plan contains the following Goals and Objectives directly relevant to recreation:

From Section 5.4.1 Facilities:

> "Goal: Provide all user groups with adequate visitor facilities while protecting the natural resources and ensuring the health and safety of the public.
>
> Objectives:
>
> - Maintain facilities and trailheads in good condition so they are accessible and usable by the general public.
> - Provide convenient parking and access to trails and open space by locating trailheads and neighborhood access points around the perimeter of the Conejo Canyons area so each OSU [open space unit] is directly accessible."

From Section 5.4.2 Trails and Emergency Access:

> "Goal: Provide adequate emergency access and sustainable, passive multi-use recreational trails for pedestrians, equestrians and bicyclists.
>
> Objectives:
>
> - Construct trails in accordance with COSCA's trail building standards to accommodate hikers, equestrians and bicyclists.
> - Where feasible, construct trails to accommodate persons who use assistive personal mobility devices.
> - Construct trails to avoid sensitive resources and provide diverse visitor experiences, including routes of varied difficulty, vegetation types and scenic vistas."

The Management Plan acknowledges SCE's existing utility corridor in Section 2.4 as follows:

> "Southern California Edison (SCE) electrical transmission lines and towers are located just beyond and parallel to the western boundary of the plan area. Portions of the access road ROW for the transmission lines traverse the western boundary of the Canyons West OSU. SCE also has local transmission lines and access easements along the southern portion of the Canyons West OSU (Figure 2-8: SCE Easements). Dirt roads provide access through these easements, and some also serve as multipurpose trails. Two minor transmission lines serve the Hill Canyon Treatment Plant. The first runs from the Western Canyon area through the lower Conejo Creek to the plant. The second line runs from the Rancho Conejo Industrial Park down the canyon to the plant."

4.15.2.3.3 City of Moorpark

The City of Moorpark General Plan, Open Space, Conservation, and Recreation Element, contains seven goals and thirty associated policies; of most relevance are the following:

> Goal 2: "Acquire, provide and maintain public parkland for both passive and active use that is equally accessible to the community on a neighborhood, community and regional basis."
>
> Policy 2.5: "Provide recreational/leisure parklands at the standards set in the Moorpark Parks and Recreation Master Plan."

4.15.2.3.4 City of Thousand Oaks

The City of Thousand Oaks General Plan contains a number of goals and policies; of relevance to this section are the following Goals:

- To provide and maintain a system of natural open space and trails.
- To provide and maintain a permanent park and recreational system of sufficient size and quality to serve current and future needs, consonant with community expectations.

4.15.3 Significance Criteria

The significance criteria for assessing the impacts to recreational resources come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- 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
- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment

4.15.4 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility occurred or was accelerated?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The use of parks and recreational facilities is closely tied to population; as population increases, the use of existing parks and recreational facilities can be expected to increase proportionally. Similarly, the loss of existing parks and recreational facilities would result in a concentration of use at remaining parks and facilities.

As presented in Section 4.13, past Project activities did not directly or indirectly induce any population growth during construction. During construction, local parks may have been used by workers during their lunch or break periods; the short duration of construction activities and the small number of construction workers would not have resulted in a significant increase in the use of existing parks or recreational facilities, nor would this infrequent, intermittent use have resulted in a substantial physical deterioration of the facilities.

Numerous multi-use trails and fire roads are located within the Conejo Canyons area; some of these multi-use trails and fire roads were used by SCE as access roads and spur roads to access its subtransmission structures. Past Project activities required the blading and/or grading, where appropriate, of the existing multi-use trails and fire roads used by SCE to access its facilities. During the construction period, recreational use of some segments of these trails was temporarily interrupted to ensure the safety of the public and workers; these interruptions were localized and of a short duration, lasting only as long as the construction activity, and warning signs were placed on the access roads to alert users to the presence of construction equipment. There are many other trails throughout the Conejo Canyons area that were not affected by past Project activities; these trails could have been utilized by any trail users displaced from trails affected by past construction activities. Neither the grading and/or blading of the trails utilized during past construction activities, nor the temporarily-increased use of these trails during construction, resulted in substantial or accelerated physical deterioration of the trails.

The limited increase in the use of parks and recreational facilities by workers during past construction activities and the lack of population growth as a result of past Project activities did not result in either a significant increase in the use of existing parks or recreational facilities or the occurrence or acceleration of substantial physical deterioration to existing parks and recreational facilities. Even while recreational use of existing access and spur roads was temporarily disrupted during construction, other trails were available in close proximity within the Conejo Canyons area. Therefore, less than significant impacts occurred under this criterion as a result of past Project construction activities.

Did the project include recreational facilities or require the construction or expansion of recreational facilities, which might have had an adverse physical effect on the environment?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Within the Management Plan area, the Project includes facilities (access roads) that are also used for recreational purposes. These access and spur roads are identified as multi-purpose trails in the Conejo Canyons Open Space Management Plan. During past Project activities, these existing dirt access roads were graded and bladed, as needed to ensure the safe movement of construction equipment along the SCE ROW. In some cases, short spur roads were rehabilitated or reestablished to provide adequate access to structure installation or removal sites. These spur roads are short and dead-end at the subtransmission structures, and add no or little additional recreational value to the existing multipurpose trail system.

As presented above, the Project's past activities did not result in a population increase and therefore did not require the construction or expansion of any recreational facilities. Interruptions to the recreational use of access roads/multi-purpose trails was temporary, lasting only as long as the short construction period, and did not require the construction or expansion of other recreational facilities to accommodate displaced users.

No adverse physical effect on recreational facilities (including multipurpose trails) were realized from the blading/grading of access roads, and past Project activities did not require the construction of new, or expansion of existing, recreational facilities. Therefore, no impacts occurred under this criterion as a result of past Project activities.

4.15.5 Impact Analysis, Future Activities

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?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The use of parks and recreational facilities is closely tied to population; as population increases, the use of existing parks and recreational facilities can be expected to increase proportionally. Similarly, the loss of existing parks and recreational facilities would result in a concentration of use at remaining parks and facilities.

As presented in Section 4.13, the Project would not directly or indirectly induce any population growth during construction. During construction, local parks may be used by workers during their lunch or break periods; the short duration of construction activities and the small number of construction workers would not result in a significant increase in the use of existing parks or recreational facilities, nor would this infrequent, intermittent use result in a substantial physical deterioration of the facilities.

Numerous multi-use trails and fire roads are located within the Conejo Canyons Open Space area; some of these multi-use trails and fire roads are used by SCE as access roads and spur roads to access its subtransmission infrastructure. Construction of the Project would require the blading and/or grading, where appropriate, of the existing multi-use trails and fire roads used by SCE to access its facilities. During the construction period, recreational use of some segments of these trails would be temporarily interrupted to ensure the safety of the public and workers; these interruptions would be localized and of a short duration, lasting only as long as the construction activity, and warning signs would be placed on the access roads to alert users to the presence of construction equipment. There are many other trails throughout the Conejo Canyons area that would not be affected by future construction activities; these trails could be utilized by any trail users displaced from trails affected by future construction activities. Neither the grading and/or blading of the trails to be utilized during Project construction, nor the temporarily-increased use of these trails during construction, would result in substantial or accelerated physical deterioration of the trails.

The limited increase in the use of parks and recreational facilities by workers during construction and the lack of population growth as a result of the Project would not result in either a significant increase in the use of existing parks or recreational facilities or the occurrence or acceleration of substantial physical deterioration to existing parks and recreational facilities. While recreational use of existing access and spur roads would be temporarily disrupted during construction, other trails are available in close proximity within the Conejo Canyons area. Therefore, less than significant impacts would occur under this criterion as a result of construction of the Project.

Operation Impacts

As presented in Section 4.13, the Project would not directly or indirectly induce any population growth during operations. Operation of the Project would not require additional personnel above current normal staffing levels. During operations, personnel may use local parks during their lunch or break periods; because no additional personnel would be required during operations, use of local parks would represent a continued use, and not a new use.

The Project would not result in the loss of existing parks or recreational facilities or trails during operation. Operation of the Project would include periodic patrols and maintenance of the subtransmission facilities. These operations would require that existing dirt trails in the Conejo Canyons area that provide access to SCE facilities be periodically graded and bladed to ensure the safe movement of operations and maintenance related equipment; the periodic grading and blading operations would be consistent with activities SCE has conducted over time to service the existing subtransmission line. During operations, recreational use of some segments of these trails may be temporarily interrupted to ensure the safety of the public and workers; these interruptions would be localized and of a short duration, lasting only as long as the blading/grading operation or the maintenance activities, and warning signs would be placed on the access roads to alert users to the presence of construction equipment. Displaced users could use the many miles of trails found in the Conejo Canyons area; the temporarily-increased use of these trails is not expected to result in substantial or accelerated physical deterioration of the trails.

Therefore, operation of the Project would not result in either a significant increase in the use of existing parks or recreational facilities or the occurrence or acceleration of substantial physical deterioration to existing parks and recreational facilities. While recreational use of existing access and spur roads would be temporarily disrupted during periodic grading/blading during operations, other trails are available in close proximity within the Conejo Canyons area. Therefore, less than significant impacts would occur under this criterion as a result of construction of the Project.

Would the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Within the Management Plan area, the Project includes facilities (access and spur roads) that are also used for recreational purposes. Some of these access and spur roads are identified as multi-purpose trails in the Conejo Canyons Open Space Management Plan. During construction of the Project, these existing dirt access and spur roads would be graded and bladed, as needed to ensure the safe movement of construction equipment along the SCE easement; as presented in Chapter 3: Project Description, no new access or spur roads would be constructed as part of the future activities.

As presented above, the Project is not expected to result in a population increase and therefore would not require the construction or expansion of any recreational facilities. Interruptions to the recreational use of access roads/multi-purpose trails would be temporary, lasting only as long as the short construction period, and would not require the construction or expansion of other recreational facilities to accommodate displaced users.

No adverse physical effect on recreational facilities (including multipurpose trails) would likely be realized from the blading/grading of access roads, and the Project would not require the construction of new, or expansion of existing, recreational facilities. Therefore, no impacts would occur under this criterion as a result of construction of the Project.

Operation Impacts

Within the Management Plan area, the Project includes facilities (access and spur roads) that are also used for recreational purposes. These access and spur roads are identified as multi-purpose trails in the Conejo Canyons Open Space Management Plan. During operation of the Project, these existing dirt access and spur roads would be graded and bladed, as needed, to ensure the safe movement of operations equipment along the SCE ROW; no new access or spur roads would likely be constructed as part of normal operations activities. Operations would also include periodic maintenance and patrol of the subtransmission facilities utilizing the existing access and spur roads.

As presented above, the Project is not expected to result in a population increase and therefore would not require the construction or expansion of any recreational facilities. Interruptions to the recreational use of access roads/multi-purpose trails would be temporary, lasting only as long as the maintenance or blading/grading work is conducted, and would not require the construction or expansion of other recreational facilities to accommodate displaced users.

No adverse physical effect on recreational facilities (including multipurpose trails) would be realized from the maintenance activities or blading/grading of access roads during operations. Therefore, no impacts would occur under this criterion as a result of operation of the Project.

4.15.6 References

City of Moorpark. 2008. General Plan Map, September 2008. Located at http://ci.moorpark.ca.us/moorparkcity/img/cdd_gp_map_8.5x11.pdf.

Conjeo Open Space Conservation Agency. 2009. Conjeo Canyons Open Space Management Plan, September 29, 2009.

Ventura County. 2010. General Plan Map, April 6, 2010. Located at http://www.ventura.org/rma/planning/pdf/plans/General_Plan_Land-Use_Map.pdf.

Ventura County. 2010. Ventura County General Plan – Goals, Policies and Programs. Amended June 28, 2011. Located at http://www.ventura.org/rma/planning/pdf/plans/Goals-Policies-and-Programs-6-28-11.pdf

4.16 Transportation and Traffic

This section describes transportation and traffic in the area of the Project. The traffic data presented in Section 4.16.1 is used as the baseline for analysis of both past and future activities. The potential impacts to traffic and transportation as a function of the past and future construction activities, and future operation, of the Project are also discussed.

4.16.1 Environmental Setting

Streets and highways serve as the dominant system of transportation in Ventura County, and in the cities and communities within the county. Other transportation systems in the county and its communities include mass transit, bicycle routes, rail service, and air transportation. The discussions in the following sections are focused on geographical areas near components of the Project (e.g., the City of Moorpark and City of Thousand Oaks) as well as areas through which Project related vehicles would travel (e.g., unincorporated portions of Ventura County).

4.16.1.1 Streets and Highways

The Project would be constructed and operated within two existing SCE utility rights-of-way (ROWs) in the southeastern portion of Ventura County. The Project alignment is located between two incorporated cities (the City of Moorpark and the City of Thousand Oaks); State Route (SR-) 23 connects these two cities. Highway 101 (US-101) is a major west-east highway that passes through the City of Thousand Oaks. SR-118 is a west-east highway that passes through the City of Moorpark. Santa Rosa Road is a west-east thoroughfare that bisects the Santa Rosa Valley located between the City of Moorpark and City of Thousand Oaks.

The northern portion of Project Section 2 near Moorpark Substation crosses SR-118; the southern portion of Project Section 2 crosses Santa Rosa Road. No other components of the Project cross a major street or highway. The California Department of Transportation (Caltrans) has primary jurisdiction over SR-118; Santa Rosa Road is maintained by Ventura County. Figure 4.16-1 identifies those locations in Project Section 2 where the Project alignment crosses a street or highway.

Traffic volumes along the highways and at intersections in the vicinity of the Project are shown in Tables 4.16-1 and 4.16-2. The flow of vehicle traffic is frequently described using the level of service (LOS) scale, which is a measurement of operational characteristics of traffic flow on a roadway or at the intersection of roadways, based on traffic volumes and facility type. Traffic operations are assessed using levels ranging from “A” to “F,” with “A” representing the highest (best) level of service in terms of travel speed, delay, maneuverability, driver comfort, and convenience. In general, the following descriptions apply to the qualitative levels described above: “A” – free flow; “B” – reasonably free flow; “C” – stable flow; “D” – approaching unstable flow; “E” – unstable flow; and “F” – forced or breakdown flow (gridlock) (Ventura County 2009).

The 2009 Ventura County Congestion Management Plan (CMP) contains information regarding traffic on State, county, and local roadways in Ventura County. Information regarding traffic flows on State highways and intersections that could be travelled by Project related traffic is presented here:

- SR-23. The Ventura County CMP reports that traffic conditions on the freeway section have improved with the widening of the freeway in 2008. No LOS data is available; the CMP reports that the LOS is "likely OK" on the southern portion of SR-23.
- US-101. From Westlake Boulevard/SR-23 (in the vicinity of the Thousand Oaks Service Center) to the N. Wendy Drive exit (in the vicinity of Newbury Substation), US-101 operates at LOS D, E, or F during both the a.m. and p.m. peak times.
- SR-118. At its junction with SR-23, SR-118 operates at LOS D or E during both the a.m. and p.m. peak times. West of its junction with SR-23 (in the vicinity of Moorpark Substation), SR-118 operates at LOS C and E.
- County of Ventura. All CMP-monitored intersections that may be traversed by Project related vehicles operate at LOS A, B, C or D.
- City of Moorpark. The CMP-monitored intersections that may be used by Project related vehicles operate at LOS A, B, C, or D during both the a.m. and p.m. peak times; the intersection closest to Moorpark Substation operates at LOS B throughout the day.
- City of Thousand Oaks. The CMP-monitored intersections that may be used by Project related vehicles operate at LOS A, B, or C during both the a.m. and p.m. peak times; the intersections closest to Newbury Substation operate at LOS A or B throughout the day.

Table 4.16-1: Highways That May Be Used During Construction And Operations

Roadway	From	To	Annual Average Daily Traffic (vehicles)
US-101	Hampshire Road	N. Wendy Drive	139,000 – 189,000
SR-23	US-101	SR-118	45,000 – 108,100
SR-118	Moorpark Substation	SR-23	17,300 – 77,000

Notes:
1. SR-118 LOS measured at SR-23/SR-118 interchange
Source: Caltrans 2012

Table 4.16-2: CMP-Monitored Intersections That May Be Used During Construction And Operations

Intersection	Vicinity of or en route to…	Current LOS AM Peak	Current LOS PM Peak
Hampshire Road and US-101	Thousand Oaks Service Center	A	C
Borchard Road and US-101	Newbury Substation	C	B
Rancho Conejo Blvd and W. Hillcrest Drive	Newbury Substation	A	B
Tierra Rejada Road and SR-118	Moorpark Substation	B	B
Tierra Rejada Road and SR-23	Moorpark Substation	A-C*	D
Tierra Rejada Road and Moorpark Road	Moorpark Substation	D	D

Note:
* Northbound SR-23 ramps operate at LOS A; southbound SR-23 ramps operate at LOS C.
Source: Ventura County 2009

4.16.1.2 Commercial Traffic

Commercial transportation of goods and materials in the area of the Project is largely accomplished by truck.

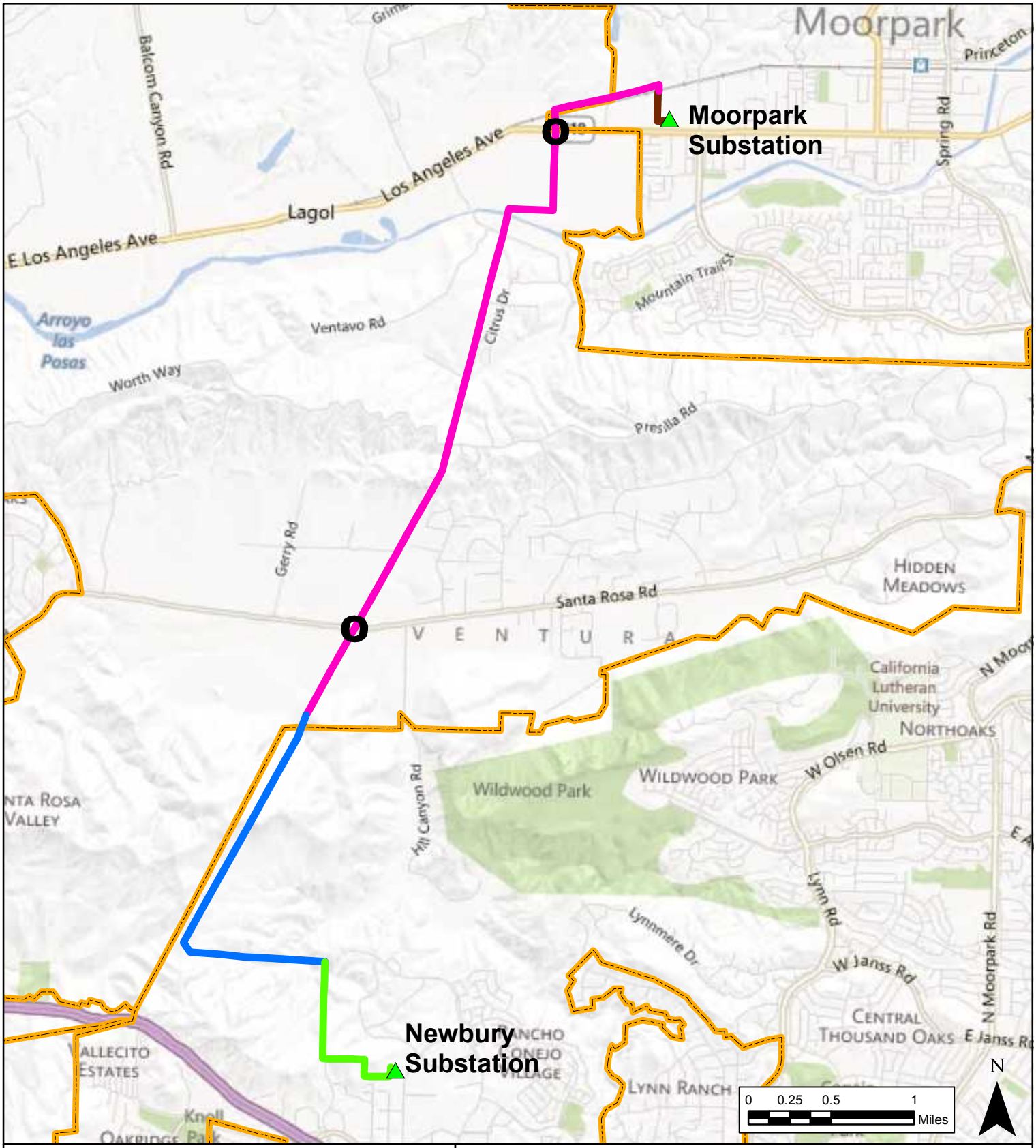
SR-23 and SR-118 are part of Caltrans' truck network and designated for the passage of large trucks. SR-23 and SR-118 have been designated by Caltrans as Terminal Access routes, meaning that large trucks (semi truck/trailer combinations and trucks with double trailers) can travel these roadways. US-101, the primary west-east highway in the area of the Project, is a National Network highway designated for the movement of commercial vehicles. No truck routes are designated by the City of Moorpark or the City of Thousand Oaks.

4.16.1.3 Mass Transit

Mass transit/bus service in the vicinity of the Project is found at the northern and southern ends of the Project in the cities of Moorpark and Thousand Oaks (Figures 4.16-2a and b). The Ventura Intercity Service Transit Authority operates bus service between the cities of San Buenaventura (Ventura) and Thousand Oaks and Moorpark, Moorpark City Transit operates two routes within that city, and Thousand Oaks Transit operates four routes within that city; none of these routes runs adjacent to or across any Project Section. Unscheduled bus services are provided by Thousand Oaks Dial-A-Ride and Moorpark ADA and Senior Dial-A-Ride. Private bus services also operate in the area (Ventura County 2009).

4.16.1.4 Bicycle Routes

Bikeways are found throughout the cities of Moorpark and Thousand Oaks (Figures 4.16-2a and b). These routes range from dedicated paths to shared lanes. No component of the Project crosses a bikeway. The multipurpose trails on COSCA-managed lands through which Project Sections 3 and 4 are routed may be used by mountain bikers.



Road Crossing/ Potential Lane Closure Area
Substation
Project Section 1
Project Section 2
Project Section 3
Project Section 4
City Boundaries

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66kV SUBTRANSMISSION LINE
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

ROAD CROSSINGS

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Figure
4.16-1

ARCADIS: SCEMN_021, 02/04/13, R01

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4.16.1.5 Rail Service

An active rail line is located proximate to the northern side of Moorpark Substation.

Freight rail service is provided by Union Pacific Railroad, which operates an average of up to 13 freight trains on its Coast Main Line each day. These include both through trains (moving through but not stopping in the vicinity of the Project) and trains serving local customers.

Passenger rail service is provided by Metrolink and Amtrak. Metrolink operates six passenger trains daily through the Project Area, and Amtrak operates ten daily Pacific Surfliner trains (with stops in Moorpark) and two Coast Starlight long-distance trains (that do not stop in the Project Area).

4.16.1.6 Air Transportation

There are two airports in the general vicinity of the Project: Camarillo Airport is located approximately 8 miles west of Newbury Substation, and Santa Paula Airport is located approximately 10.5 miles west-northwest of Moorpark Substation. Portions of the ROW in which the Moorpark-Newbury 66 kV Subtransmission Line Project would be constructed and operated are located in an area covered by the departure procedures for runway 08 at Camarillo Airport.

SCE owns and operates a heliport located at Moorpark Substation. Two other privately-operated helipads are located approximately 2.5 miles and 4 miles east of Newbury Substation, respectively.

4.16.2 Regulatory Setting

4.16.2.1 Federal Regulatory Setting

4.16.2.1.1 Hazardous Materials Transportation Act of 1974 (49 U.S.C. § 1801 et seq.)

This Act directs the United States Department of Transportation (USDOT) to establish criteria and regulations regarding safe storage and transportation of hazardous materials. The Hazardous Materials Regulations promulgated by USDOT (49 CFR § 171.1 et seq.) address transportation of hazardous materials, types of materials defined as hazardous, and the marking of vehicles transporting hazardous materials. Additionally, the Motor Carrier Safety Regulations (49 CFR § 390.1 et seq.) specify safety considerations for the transport of hazardous materials over public roadways.

4.16.2.1.2 Federal Aviation Administration Regulations (14 CFR 77.9)

14 CFR 77.9, Construction or alteration requiring notice, states in part: "If requested by the FAA, or if you propose any of the following types of construction or alteration, you must file notice with the FAA…." The Section contains a list of the types of construction or alterations of existing structures for which a notice must be filed with the FAA. The Section

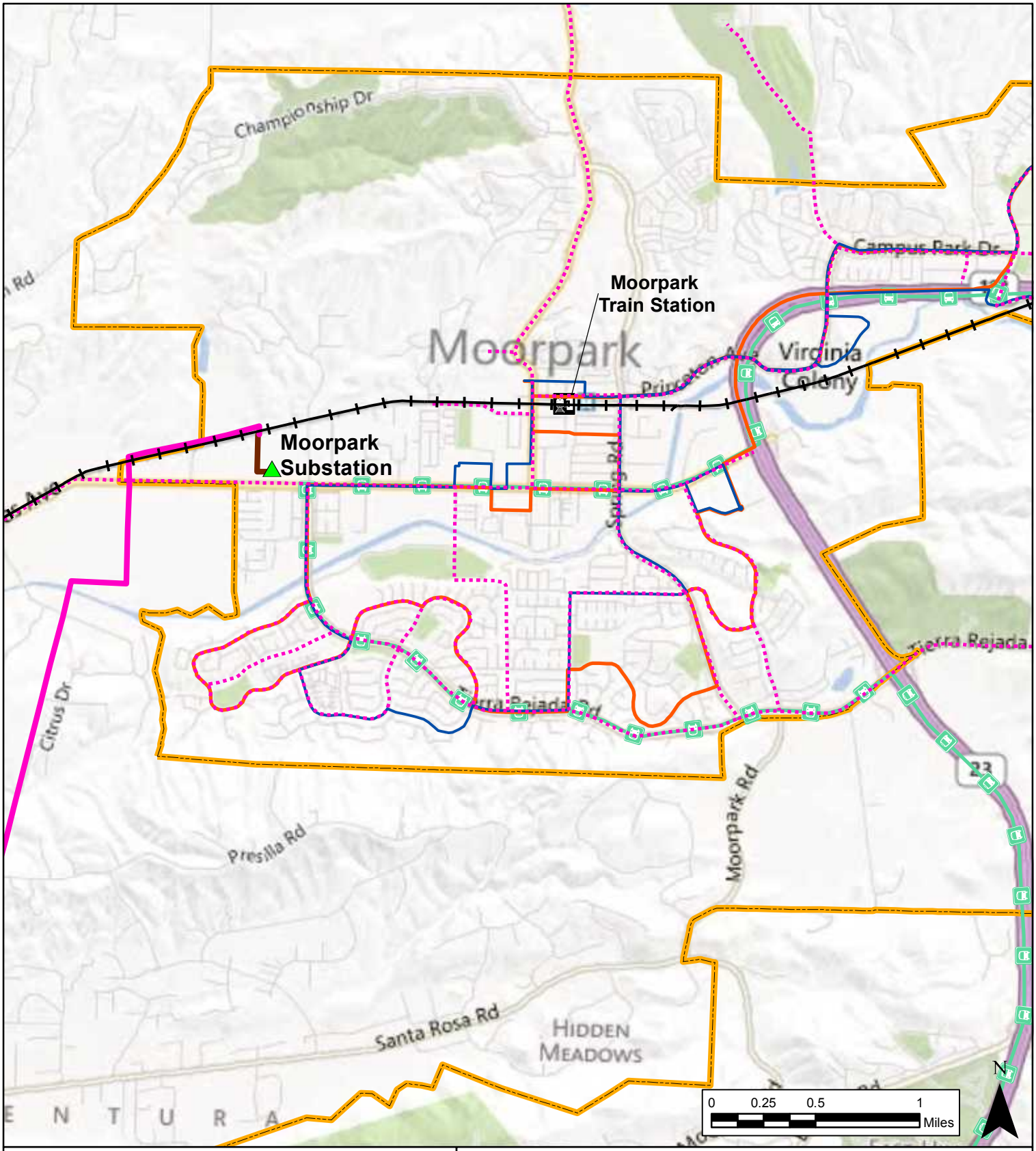
also lists notice exemptions, including exemptions applicable to, among other things, certain objects that would be shielded by existing structures.

4.16.2.2 State Regulatory Setting

4.16.2.2.1 California Department of Transportation Implementation of California Vehicle Code

The California Vehicle Code (CVC) contains statutes pertaining to licensing, size, weight, and load of vehicles operated on highways; safe operation of vehicles; and the transportation of hazardous materials. Caltrans is the administering agency which implements these vehicle related laws through additional regulations and licensing activities. Caltrans manages the State's highway and freeway system, provides inter-city rail services, permits public-use airports and special-use hospital heliports, and works with local agencies to improve mobility.

An encroachment permit must be obtained from a local Caltrans District 7 Office for all proposed activities for placement of encroachments within, under, or over the State highway ROWs. Some examples of work requiring an encroachment permit are: utilities, excavations, and driveways. Only Caltrans has authority to approve and issue permits for activities on Caltrans' ROW. Authority for Caltrans to control encroachments within the State highway ROWs is contained in the Streets and Highways Code Section 660 et seq.



SCE Substations
Railroad
Moorpark Bike Routes
Moorpark City Transit Route 1
Moorpark City Transit Route 2
Moorpark Train Station
VISTA Bus Route

Project Sections
Project Section 1
Project Section 2
City Boundaries

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PUBLIC TRANSPORTATION AND BIKEWAYS, MOORPARK SUBSTATION AREA

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Figure
4.16-2a

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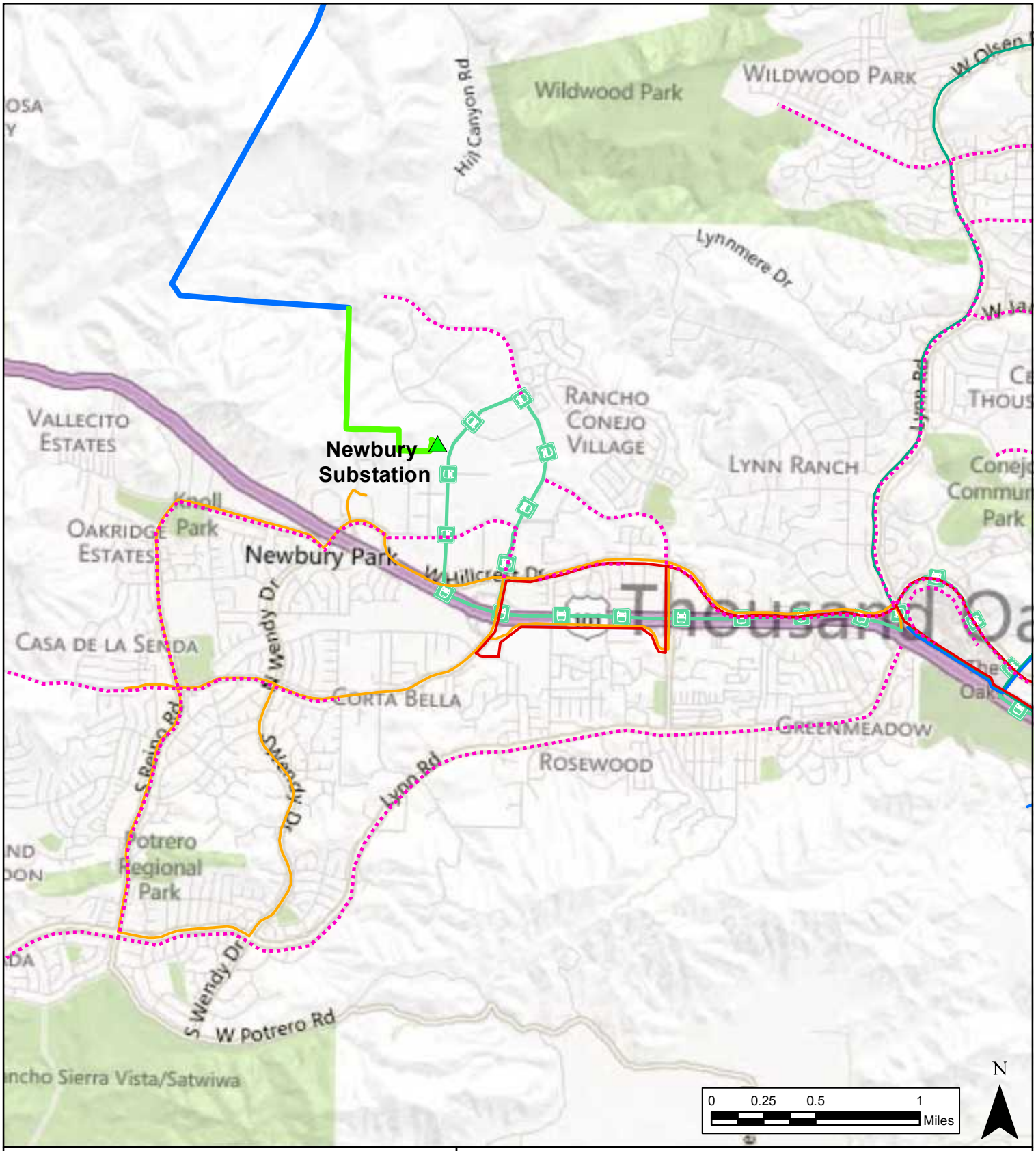

- Thousand Oaks Bike Routes
- Thousand Oaks City Transit Route 1
- Thousand Oaks City Transit Route 2
- Thousand Oaks City Transit Route 3
- Thousand Oaks City Transit Route 4
- VISTA Bus Route
- SCE Substations

Project Sections

- Project Section 3
- Project Section 4

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

PUBLIC TRANSPORTATION AND BIKEWAYS, NEWBURY SUBSTATION AREA

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Figure
4.16-2b

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4.16.2.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.16.2.3.1 Ventura County General Plan

The Ventura County General Plan contains a number of goals and policies related to transportation and traffic:

4.2.1 Goals

1. Facilitate the safe and efficient movement of persons and goods by encouraging the design, construction, and maintenance of an integrated transportation and circulation system consisting of regional and local roads, bus transit, bike paths, ridesharing, rail transit and freight service, airports, and harbors.

2. Facilitate the safe and efficient movement of persons and goods by designing, constructing, and maintaining a Regional Road Network and Local Road Network that is consistent with the county road standards and that will function at an acceptable Level of Service (LOS).

7. Promote the expansion of a safe, efficient, convenient, integrated, and economical community, intercommunity, and countywide bus transit system.

8. Encourage transit providers and the Ventura County Transportation Commission to increase ridership and meet the needs of the commuting public and the special transportation needs of the elderly, school children, low income, physically handicapped, other low mobility groups, and bicyclists.

9. Encourage the use of bicycling and ridesharing (e.g., carpooling, vanpooling, and bus pooling) as a percentage of total employee commute trips throughout the county in order to reduce vehicular trips and miles traveled and consequently vehicular emissions, traffic congestion, energy usage, and ambient noise levels.

10. In cooperation with the ten cities and the Ventura County Transportation Commission, plan a system of bicycle lanes and trails linking all county cities, unincorporated communities, and California State University—Channel Islands.

4.2.2 Policies

3. The minimum acceptable *Level of Service (LOS)* for road segments and intersections within the *Regional Road Network* and *Local Road Network* shall be as follows:

(a) *LOS-'D'* for all *County thoroughfares* and *Federal highways* and *State highways* in the unincorporated area of the county, except as otherwise provided in subparagraph (b)

(b) *LOS-'E'* for SR-33 between the northerly end of the Ojai Freeway and the City of Ojai, Santa Rosa Road, Moorpark Road north of Santa Rosa Road, SR-34 north of the City of Camarillo, and SR-118 between Santa Clara Avenue and the City of Moorpark

(c) *LOS-'C'* for all County-maintained *local roads*

(d) The *LOS* prescribed by the applicable city for all *Federal highways*, *State highways*, *city thoroughfares* and city-maintained *local roads* located within that city, if the city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County (similar to Policies 4.2.2-3 through 4.2.2-6) respecting *development* in the city that would individually or cumulatively affect the *LOS* of *Federal highways*, *State highways*, *County thoroughfares* and County-maintained *local roads* in the unincorporated area of the County.

At any intersection between two roads, each of which has a prescribed minimum acceptable *LOS*, the lower *LOS* of the two shall be the minimum acceptable *LOS* for that intersection. (Ventura County 2011)

4.16.2.3.2 Ventura County Transportation Commission

The Ventura County Transportation Commission (VCTC) is the designated Congestion Management Agency (CMA) for Ventura County responsible for coordinating land use, transportation planning, and air quality concerns associated with traffic congestion. The VCTC has prepared the Ventura County CMP to provide the resources necessary to positively impact traffic congestion throughout Ventura County. Among other things, the Ventura County CMP requires a local agency to prepare and submit a deficiency plan when the LOS on a road segment or at an intersection on the CMP network drops to "F" (Ventura County 2009).

4.16.2.3.3 Ventura County Code of Ordinances, Division 12, Highway Encroachments

Division 12 of the Ventura County Code of Ordinances contains the definitions of encroachments and the procedures for encroaching on a highway. Section 12152 notes that "[a]ll encroachments shall be planned and executed in such a manner that they will not unreasonably interfere with the safe and convenient travel of the general public."

4.16.2.3.4 City of Moorpark

The Circulation Element of the City of Moorpark General Plan, adopted in 1992, addresses the circulation facilities needed to provide adequate roadway capacity, public transit services,

and opportunities for other modes of transportation. The Circulation Element contains seven goals and numerous policies, including:

> Goal 2: Provide a circulation system which supports existing, approved and planned land uses throughout the City while maintaining a desired level of service on all streets and at all intersections.
>
> Policy 2.1: Level of service "C" shall be the system performance objective for traffic volumes on the circulation system. For roadways and interchanges already operating at less than level of service "C", the system performance objective shall be to maintain or improve the current level of service.
>
> Goal 4: Provide a public transportation system which serves the needs of persons living in and/or working in the City of Moorpark.
>
> Policy 4.1: Participation in a public transit system that provides a means of intra-city and inter-city transportation, as a logical alternative to automobile transportation, should be developed or maintained.
>
> Goal 5: Provide a citywide system of safe, efficient and attractive bicycle and pedestrian routes for commuter, school, and recreational use. (City of Moorpark 1992)

4.16.2.3.5 City of Thousand Oaks

The City of Thousand Oaks has prepared a set of general goals and policies as they relate to transportation, including the following Circulation Policies:

- A mass transit system to provide City and area-wide circulation and meet community needs should be maintained and enhanced.
- A variety of transportation modes should be encouraged.
- A City-wide system of pedestrian and bicycle facilities that provide safe, continuous accessibility to all residential, commercial and industrial areas, to the trail system and to the scenic bike route system shall be provided and maintained.
- The City shall maintain a Level of Service C on all roads and at all intersections. Lower levels of service may be tolerated to preserve or enhance landscaping and aesthetic integrity. (City of Thousand Oaks 2012)

4.16.3 Significance Criteria

The significance criteria for assessing the impacts to transportation and traffic come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant

components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit

- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities

4.16.4 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past construction activities of the Project included the movement of light, medium, and heavy-duty vehicles (including oversize vehicles such as cranes) over US-101, SR-23, and SR-118, and local roads maintained by the cities of Moorpark and Thousand Oaks, and Ventura County.

Some project related vehicles and equipment traveled from permanent and temporary staging yards to work sites in the morning, and returned to their points of departure in the evening. Some project equipment was left on-site overnight. The work described in Chapter 3: Project Description generated a maximum of approximately 180 daily vehicle trips across the

breadth of the Project.[54] The actual number of daily vehicle trips may have been lower depending on the daily construction schedule.

The 180 daily vehicle trips is inclusive of each worker making two daily personal vehicle trips (one trip in the morning from home to a staging yards, and one trip in the reverse in the evening, for a total of 140 roundtrips per day); due to the working hours of utility crews, the majority of these personal vehicle trips occurred outside the morning and evening peak hours.

The temporary increase in Project related traffic during construction (assumed maximum of 180 trips per day) accounted for a minimal increase over average daily volumes along the roadways and at the intersections identified in Tables 4.16-1 and 4.16-2.

Past construction activities did not require any permanent or temporary lane closures of public roads. Project related vehicle movements occurred at a number of intersections within the City of Moorpark and the City of Thousand Oaks; these intersections are identified in Table 4.16-2. The small number of Project related vehicle movements, and the timing of those movements, did not result in the lowering of the existing LOS at any intersection.

Based on the number of daily vehicle trips generated during past construction activities, and the fact that no permanent or temporary lane closures on public roads were required, impacts to the performance of the circulation system were less than significant, and therefore did not create any inconsistency or conflict with an applicable plan, ordinance or policy that establishes measures of effectiveness.

Did the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The VCTC has adopted in the Ventura County CMP a minimum LOS standard of "E" for the CMP road network.

The majority of roads and intersections that were used by Project related traffic during past construction activities operated at an LOS of D or better (Tables 4.16-1 and 4.16-2); the exception is US-101, which operated at an LOS of E or F. None of the roads or intersections used during past construction activities is identified in a CMP as experiencing unusual growth in average annual daily traffic volumes.

[54] This conservative accounting is based on an assumption that all activities described in Table 3.2-6a occurred simultaneously.

With the exception of US-101, highways on which Project related traffic traveled operated at or above the minimum acceptable level of service. Traffic counts on these roads indicate that there is, and was, excess capacity available for use that did not cause the LOS of the roadways to drop below the acceptable level.

Table 4.16-3: Average Daily Traffic and LOS Thresholds

LOS	Average Daily Traffic and LOS Thresholds		
	Class I, 6 Lane Highway (SR-118)	8 Lane Freeway (SR-23)	10 Lane Freeway (US-101)
A	29,000	62,000	77,000
B	42,000	95,000	119,000
C	57,000	136,000	169,000
D	70,000	164,000	205,000
E	87,000	176,000	220,000

Source: Ventura County 2005

Comparing the 2011 traffic volume information shown in Table 4.16-1 and data in Table 4.16-3:

- The current traffic count along SR-118 is approximately 77,000, well below the LOS E threshold
- The current traffic count along SR-23 is approximately 109,000, well below the LOS E threshold
- The current traffic count along US-101 is approximately 189,000, which is below the LOS D threshold

Because past construction activities of the Project generated only 180 additional vehicle movements per day, it did not exceed the thresholds of significance for Ventura County.

Given the then-acceptable LOS of roads and intersections, and the small number of trips that were generated during past construction activities, the Project did not alter the existing LOS or interfere with the performance standards of any applicable CMP or other standards established by the applicable jurisdiction. Therefore, less than significant impacts occurred under this criterion as a result of past construction activities.

Did the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Assessment Summary: Less Than Significant Impact

Construction Impacts

All past construction activities were conducted in an existing utility ROW where subtransmission and transmission structures are and have been present; while portions of the ROW are located in an area covered by the departure procedures for Camarillo Airport, no subtransmission or other structures were constructed in a location that would require a

change in the departure procedures, and thus no change in air traffic patterns occurred as a result of past construction activities.

Construction activities resulted in a short-term increase in air traffic levels, as a helicopter was used to install a single LWS pole in Project Section 4. This flight was coordinated with and subject to the regulations of the appropriate Federal authorities, and thus resulted in a less than significant impact to air traffic patterns. Therefore, less than significant impacts occurred under this criterion as a result of past construction activities.

Did the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Assessment Summary: No Impact

Construction Impacts

No incompatible uses or construction or alteration of any public roads were included as part of the past construction activities. Therefore, no impacts occurred under this criterion.

Did the project result in inadequate emergency access?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past Project construction activities did not result in inadequate emergency access. All construction at substations was conducted within the fencelines of the facilities; activities and construction vehicles did not reduce the dimensions of access roads or driveways, or block roads or driveways, and thus did not impair emergency access to substations.

Past subtransmission related construction work did not require any permanent or temporary closure of travel lanes on public roadways, private roads, or driveways. Past construction work did involve the movement of oversize vehicles that could have affected emergency vehicle access to and through the Project Area. To ensure that all construction related activities resulted in less than significant impacts to emergency access, oversize vehicle permits were obtained as applicable.

Vehicle movements along, and use of, access roads were communicated to and coordinated with the appropriate agencies. Equipment placed on equipment pad/turnaround areas and drill pads was situated to facilitate adequate emergency vehicle access should the need have arisen.

Therefore, less than significant impacts occurred under this criterion.

Did the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Past Project construction activities did not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. While the past construction activities occurred over a 13-month period, construction activities in any given location occurred over a short time period. Past construction work was conducted on SCE-owned property and within existing ROWs. SCE obtained encroachment permits from the local jurisdictions and Caltrans, as appropriate, for construction activities that encroached upon any public ROW or easement. Therefore, a less than significant impact occurred under this criterion.

4.16.5 Impact Analysis, Future Activities

Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Future construction activities would include the movement of light, medium, and heavy-duty vehicles (including oversize vehicles such as cranes) over US-101, SR-23, and/or SR-118, and local roads maintained by the cities of Moorpark and Thousand Oaks, and Ventura County.

Project related vehicles and equipment would generally travel from local temporary staging yards or contractor yards to work sites in the morning, returning to their points of departure in the evening. It is estimated that work described in Chapter 3: Project Description would generate a maximum of approximately 180 daily vehicle trips across the breadth of the Project.[55] The actual number of daily vehicle trips may be lower depending on the final construction schedule; the maximum number of daily vehicle trips is used here to conservatively estimate potential impacts.

The 180 daily vehicle trips is inclusive of each worker making two daily personal vehicle trips (one trip in the morning from home to a staging yard, and one trip in the reverse in the evening, for a total of 140 roundtrips per day); due to the working hours of utility and

[55] This is a conservative estimate based on an assumption that all activities described in Table 3.2-6b would occur simultaneously.

construction crews, the majority of these personal vehicle trips would occur outside the morning and evening peak hours.

The temporary increase in Project related traffic during future construction activities (assumed maximum of 180 trips per day) would account for a minimal increase over average daily volumes along the roadways and at the intersections identified in Tables 4.16-1 and 4.16-2.

Project related vehicle movements during future construction activities may occur at a number of intersections within the City of Moorpark and the City of Thousand Oaks, including those identified in Table 4.16-2. The small number of Project related vehicle movements, and the timing of those movements, would not result in the lowering of the existing LOS at any intersection.

Future Project construction activities will require temporary lane closures (e.g., stringing of conductor); closures may be necessary on Santa Rosa Road, Hitch Boulevard and on SR-118 (Figure 4.16-1). Temporary closure of travel lanes could impact the performance of the circulation system, including but not limited to intersections, streets, highways and freeways, railroad tracks, pedestrian and bicycle paths, and mass transit. SCE would obtain encroachment permits from the local jurisdictions, Union Pacific Railroad, and Caltrans, as appropriate, for construction activities that would encroach within any public ROW or easement. In addition, SCE would implement recommendations contained in the California Joint Utility Traffic Control Manual (CJUTCM), including consulting and coordinating with local jurisdictions, to ensure the safe and efficient transit of vehicles, trains, bicyclists, and pedestrians through laydown and work areas.

Based on the number of daily vehicle trips generated by construction, and the implementation of recommendations contained in the CJUTCM, impacts to the performance of the circulation system would be less than significant, and therefore the Project would not create any inconsistency or conflict with an applicable plan, ordinance or policy that establishes measures of effectiveness.

Operation Impacts

Components of the Project would be primarily unstaffed during operations. Electrical equipment would be remotely monitored and controlled by an automated system. However, SCE personnel would visit project components for routine or emergency repair or maintenance purposes; and infrastructure along the Project Sections would be inspected at least once annually. The estimated number of vehicle trips associated with normal operation of the Project would be less than 15 per month; therefore, impacts to the current circulation system would be less than significant and the Project would not create any inconsistency or conflict with an applicable plan, ordinance or policy that establishes measures of effectiveness.

Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Assessment Summary: Less Than Significant Impact

Construction Impacts

The VCTC has adopted in the Ventura County CMP a minimum LOS standard of "E" for the CMP road network.

The majority of roads and intersections that may be used during future construction of the Project currently operate at an LOS of D or better (Tables 4.16-1 and 4.16-2); the exception is US-101, which operates at an LOS of E or F, depending on the time of day. None of the roads or intersections anticipated to be used during future Project construction activities has been identified in the Ventura County CMP as experiencing unusual growth in average annual daily traffic volumes.

With the exception of US-101, highways on which future Project related construction traffic may travel are currently operating at or above the minimum acceptable level of service. Traffic counts on these roads indicate that there is excess capacity available for use that would not trigger the LOS of the roadways to drop below the acceptable level.

Because future Project construction activities would generate approximately 180 additional vehicle movements per day (140 personal vehicle trips, and 40 construction vehicle trips) during peak construction periods, this low volume of incremental additional traffic would not cause an exceedance of any service thresholds established in the Ventura County CMP as presented in Table 4.16-3 above.

Given the currently acceptable LOS of roads and intersections, and the small number of trips that would be generated during future construction activities, the Project is not expected to alter the existing LOS or interfere with the performance standards of the Ventura County CMP or other standards established by the applicable jurisdiction. Therefore, less than significant impacts would occur under this criterion as a result of future construction activities.

Operation Impacts

Components of the Project would be primarily unstaffed during operations. Electrical equipment would be remotely monitored and controlled by an automated system. However, SCE personnel would visit project components for routine or emergency repair or maintenance purposes, and infrastructure along the Project Sections would be inspected at least once annually. The estimated number of vehicle trips associated with normal operation of the Project would be less than 15 per month. Given the small number of trips that would be generated during operations, the Project is not expected to alter an existing LOS or interfere with the performance standards of any applicable CMP or other standards established by the applicable jurisdiction. Therefore, less than significant impacts would occur under this criterion as a result of operation of the Project.

Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Assessment Summary: Less Than Significant Impact

Construction Impacts

All future construction activities would be conducted in an existing utility ROW where subtransmission and transmission structures are and have been present. Portions of the Project are located in an area covered by the departure procedures for Camarillo Airport (CMA). SCE is currently evaluating Project infrastructure with respect to FAA regulations. Pursuant to that evaluation, SCE may notify the FAA regarding the location and characteristics of the TSPs to be installed in this area. If SCE files a notification, the FAA may, at its discretion, amend the existing departure procedures for CMA to provide adequate obstacle clearance. Therefore, although the Project may result in a change in air traffic patterns, this change would not result in a substantial safety risk, and thus impacts would be less than significant.

Construction activities may result in a short-term increase in air traffic levels, as helicopters may be used to install conductor or marker balls or remove old infrastructure. It is anticipated that a total of approximately 24 flight hours may be required over the entirety of the construction period; these flights would be conducted along portions of Project Sections 2 and 3. These flights would be coordinated with and subject to the regulations of the appropriate Federal authorities, and thus would result in a less than significant impact to air traffic patterns.

Therefore, less than significant impacts would occur under this criterion as a result of future construction activities.

Operation Impacts

During operations, very infrequent helicopter overflights of the Project may be conducted to inspect Project infrastructure; these flights would be coordinated with appropriate agencies and conducted in accordance with applicable regulations, and thus would result in a less than significant impact to air traffic levels.

Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Assessment Summary: No Impact

Construction Impacts

No incompatible uses or construction or alteration of any public roads are proposed. Therefore, no impacts would occur under this criterion as a result of the Project.

Operation Impacts

No incompatible uses or construction or alteration of any public roads are proposed. Therefore, no impacts would occur under this criterion as a result of the Project.

Would the project result in inadequate emergency access?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Future construction activities would not result in inadequate emergency access. All construction at substations would be conducted within the fencelines of the facilities; activities and construction vehicles would not reduce the dimensions of access roads or driveways, or block roads or driveways, and thus would not impair emergency access to substations.

Future subtransmission related construction activities in Project Sections 2 and 3 may require temporary closure of travel lanes on public roadways, private roads, and driveways, and would involve the movement of oversize vehicles that could affect emergency vehicle access to and through the Project Area. To ensure that construction related activities result in less than significant impacts to emergency access, SCE would implement recommendations contained in the CJUTCM, including signage, flaggers, and coordination with relevant agencies and emergency responders. Implementation of these measures would provide for efficient and safe transit of emergency vehicles through construction areas. SCE would also obtain the appropriate permits from the local jurisdictions, UPRR and Caltrans, as applicable, for construction activities that would encroach upon any public ROW or easement.

Vehicle movements along, and use of, access roads would be communicated to and coordinated with the appropriate agencies as necessary. Equipment placed on equipment pad/turnaround areas and drill pads would be situated or attended to facilitate adequate emergency vehicle access.

Therefore, less than significant impacts would occur under this criterion.

Operation Impacts

Operation of the Project would not result in inadequate emergency access. As presented in Chapter 3: Project Description, operations related activities at substations are conducted periodically, and generally require only small crews and the operation of light-duty vehicles and bucket trucks. All operations related activities at substations would continue to be conducted within the fencelines of the facilities; activities would not reduce the dimensions of access roads or driveways or block roads or driveways, and vehicles would be parked on the substation property so that driveways and access roads are not blocked. Thus, operations activities at substations would not result in inadequate emergency access.

Operations related work along the subtransmission lines would continue to include inspections, maintenance, and repair of facilities. Operations related work would be conducted within SCE's existing ROW, and accessed via the public roads and the access and spur roads on public and private lands used during construction. The majority of this work would not occur along public roadways, private roads or driveways. Operations related work may require infrequent temporary closure of travel lanes, railroad tracks and oversize vehicle trips that could disrupt emergency vehicle access to and through the Project Area. In order to ensure that all operations related activities result in less than significant impacts to

emergency access, SCE would implement recommendations contained in the CJUTCM, including signage, flaggers, and coordination with relevant agencies and emergency responders, to provide efficient and safe transit of emergency vehicles through areas where operations related work is being conducted. SCE would, as appropriate, obtain encroachment permits for activities that would encroach upon a public ROW or easement.

Vehicle movements along, and use of, access roads would be communicated to and coordinated with the appropriate agencies. Equipment placed on equipment pad/turnaround areas and drill pads would be situated or attended to facilitate adequate emergency vehicle access should the need arise.

Therefore, less than significant impacts would occur under this criterion.

Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Assessment Summary: Less Than Significant Impact

Construction Impacts

Future Project construction activities would not conflict with adopted policies, plans, or programs regarding railroad, public transit, bicycle, or pedestrian facilities. While the future construction schedule is 10 months in duration, construction activities in any given location would occur over a short time period, and would largely be conducted in rural areas with no public transit service, bicycle or pedestrian facilities.[56] Future construction activities conducted in populated areas with public transit service, rail service or bicycle or pedestrian facilities include equipment installation at Moorpark Substation and Newbury Substation, stringing of conductor in the vicinity of the two substations, and installation of subtransmission structures and wire at Newbury Substation. Work in these areas would be conducted on SCE-owned property, within existing public utility easements, or in a public ROW. SCE would obtain encroachment permits from the local jurisdictions, UPRR and Caltrans, as appropriate, for future construction activities that would encroach upon any public ROW or easement. In cases where future construction work may require temporary closure of travel lanes or oversize vehicle trips that could disrupt public transit, rail service, bicycle, or pedestrian traffic, SCE would implement recommendations contained in the CJUTCM, including signage, flaggers, and coordination with relevant agencies, to ensure the safety of pedestrians and bicyclists and reduce any performance impacts to less than significant levels.

Operation Impacts

Operation of the Project would involve the routine and emergency inspection and as-needed maintenance and repair of project components, some of which are located adjacent to or near public transit routes or bicycle or pedestrian facilities. Should operations related activities be

[56] The proposed construction schedule does not include delays due to inclement weather and/or stoppages necessary to protect biological resources (e.g., nesting birds).

planned that could decrease the performance or safety of such services or facilities, SCE would obtain appropriate permits from the local jurisdictions, UPRR and Caltrans, as applicable, for operations activities that would encroach upon any public ROW or easement, and would implement recommendations contained in the CJUTCM. As discussed above, this would ensure the safety of pedestrians and bicyclists, and would reduce any performance impacts to less than significant levels.

4.16.6 References

Caltrans. 2010. California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2003 Edition, including Revisions 1 and 2, as amended for use in California). Adopted January 21, 2010. Located at http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/pdf/camutcd2010/Part0.pdf

City of Moorpark. 1992. General Plan – Circulation Element. Located at http://ci.moorpark.ca.us/cgi-bin/htmlos.exe/04451.2.17821535996500022329.

City of Thousand Oaks. 2012. Thousand Oaks General Plan – Goals and Policies. Located at http://www.toaks.org/government/depts/community/planning/general/goals.asp.

Ventura County. 2005. Final Subsequent Environmental Impact Report for Focused General Plan Update and Related Amendments to the Non-Coastal Zoning Ordinance and Zone Change ZN05-0008. Located at http://www.ventura.org/rma/planning/pdf/plans/SEIR_for_GPU.pdf.

Ventura County. 2009. Congestion Management Plan Update. Located at http://www.goventura.org/?q=congestion-management-program-cmp.

Ventura County. 2011. Ventura County General Plan. Located at http://www.ventura.org/rma/planning/general_plan/general_plan.html.

4.17 Utilities and Service Systems

This section describes the utilities and service systems in the area of the Project. The regulatory setting and potential impacts to these systems are also discussed.

4.17.1 Environmental Setting

The activities related to the Project would be conducted within the City of Moorpark, the City of Thousand Oaks, and portions of unincorporated Ventura County. Electric service is provided by Southern California Edison; natural gas service is provided by Southern California Gas Company.

The areas around Moorpark Substation and Newbury Substation are served by water and wastewater treatment facilities. Some portions of unincorporated Ventura County traversed by the Project are not served by a centralized water or wastewater system; residences in these rural areas are served by well water and septic systems.

Solid waste facilities and water and wastewater services are described in the following subsections; the discussions are divided according to the type of utility or service system.

4.17.1.1 Solid Waste Facilities/Landfills

The Simi Valley Landfill and Recycling Center, operated by Waste Management of California, Inc., would receive solid waste associated with the Project. Located northwest of the City of Simi Valley in unincorporated Ventura County, the Simi Valley Landfill and Recycling Center (SVLRC) is a fully permitted, non-hazardous municipal solid waste landfill and recycling facility.

The SVLRC provides approximately 60 percent of Ventura County's daily refuse disposal needs, and 75 percent of all tons accepted at the SVLRC originate in Ventura County. The SVLRC has a permitted capacity of 119.6 million cubic yards; it is projected to reach capacity in 2052. The SVLRC is permitted to accept up to 9,250 tons per day (6,000 tons per day of municipal solid waste, and 3,000 tons of other materials) (CalRecycle 2012).

Residential collection services are provided by Waste Management Inc. and Moorpark Rubbish Disposal in the City of Moorpark, by Waste Management Inc. in the City of Thousand Oaks, and by Waste Management Inc. and E.J. Harrison and Sons, Inc. in unincorporated areas of Ventura County. Eleven authorized providers service commercial entities in unincorporated Ventura County.

4.17.1.2 Water Supply

Ventura County Waterworks District No. 1 serves the City of Moorpark. In fiscal year 2010, the District supplied a total of approximately 11,714 acre-feet (AF) of water, 22 percent of which came from local sources (including 2,165 AF of groundwater and 388 AF of recycled water) and 78 percent of which was imported (9,161 AF). Domestic, commercial, industrial, and fire protection customers consume approximately 77 percent of water provided by this

District. The District projects water demand will remain relatively constant over the next 25 years due to minimal growth combined with water conservation efforts (Ventura County Waterworks District No. 1 2011).

The California American Water Company serves the City of Thousand Oaks. In 2010, the Company supplied 14,852 AF; all of the water served in the Ventura County service district is imported through the State Water Project and purchased from the Calleguas Municipal Water District (CMWD). The California American Water Company has a contract with the CMWD that provides the right to purchase all of the potable water required to meet demand in the service area. There is no maximum or minimum water purchase amount specified in the contract with CMWD (California American Water Company 2010).

The Camrosa Water District serves the portion of unincorporated Ventura County where the Project is located. The Camrosa Water District encompasses an area of about 31 square miles in the southern portion of Ventura County. The District is surrounded by the cities of Camarillo, Simi Valley, Moorpark and Thousand Oaks. In 2010, the Camrosa Water District supplied 15,025 AF, although the total water supply available to Camrosa Water District was approximately 19,561 AF. The current sources of water supply for the customers and properties within the Camrosa Water District service area are a complex mix of public and private sources including imported State Water Project water, public and private wells in three groundwater basins, surface water diverted from Conejo Creek and recycled water from two wastewater treatment facilities (Camrosa Water District 2010).

4.17.1.3 Wastewater

Ventura County Waterworks District No. 1 provides wastewater service within the District's service area. Sewage is collected by the District and treated at the Moorpark Wastewater Treatment Plant, which has an average day capacity of 5.0 million gallons per day (mgd). Current flows to the plant average just over 2.21 mgd (Ventura County Waterworks District No. 1 2011).

The Hill Canyon Wastewater Treatment Plant (HCTP) provides wastewater treatment for the City of Thousand Oaks. HCTP is a 14 mgd capacity advanced tertiary wastewater treatment plant. HCTP currently treats an average of 9.5 mgd of wastewater generated from its domestic, commercial, and industrial customers.

The unincorporated areas of Ventura County in the Santa Rosa Valley area are not served by a centralized wastewater provider.

The Los Angeles Regional Water Quality Control Board (Los Angeles RWQCB) has jurisdiction for Ventura County. Regional Water Quality Control Boards regulate wastewater discharges to surface water (e.g., rivers, ocean, etc.) and to groundwater (via land). The Boards also regulate stormwater discharges from construction, industrial, and municipal activities; discharges from irrigated agriculture; dredge and fill activities; the alteration of any Federal water body under the 401 certification program; and other activities with practices that could degrade water quality. A component of the Boards' regulation of

wastewater discharges to surface water is the establishment and enforcement of treatment requirements for water treatment plants.

4.17.2 Regulatory Setting

4.17.2.1 Federal Regulatory Setting

4.17.2.1.1 Federal Clean Water Act (33 U.S.C. § 1251 et seq.)

The Clean Water Act (CWA; 33 U.S.C. § 1251 et seq.) is the primary Federal law in the United States governing the protection of water quality through the goals of eliminating water pollution and providing for standards of water quality necessary for human sports and recreation.

4.17.2.2 State Regulatory Setting

4.17.2.2.1 California Health and Safety Code § 25150.7(d)(1)

Where treated wood is developed as a waste product, the California Health and Safety Code requires such treated wood to be disposed of in either a Class I hazardous waste landfill or in a composite-lined portion of a solid waste landfill that meets RWQCB-specified requirements.

4.17.2.2.2 California Integrated Waste Management Act (Public Resources Code § 40050 et seq.)

Enacted in 1989, the California Integrated Waste Management Act established a new approach to managing California's waste stream, the centerpiece of which mandated goals of 25 percent diversion of each city's and county's waste from disposal by 1995, and 50 percent diversion in 2000, along with a process to ensure environmentally safe disposal of waste that could not be diverted. The Act requires city and county governments to be responsible for planning and monitoring solid waste management and recycling efforts.

4.17.2.3 Local Regulatory Setting

As discussed in Section 4.0, the following local regulations are included for informational purposes only.

4.17.2.3.1 Ventura County General Plan

The Ventura County General Plan, Section 4.5, Public Utilities recognizes the importance of ensuring compatibility between utilities and the general scenic qualities of the County. The following goals and policies may apply to public utility siting:

4.5.1 Goal

Promote the efficient distribution of public utility facilities and transmission lines to assure that public utilities are adequate to service existing and projected land uses, avoid hazards and are compatible with the natural and human resources.

4.5.2 Policies

1. New gas, electric, cable television and telephone utility transmission lines shall use or parallel existing utility ROWs where feasible and avoid scenic areas when not in conflict with the rules and regulations of the California Public Utilities Commission. When such areas cannot be avoided, transmission lines should be designed and located in a manner to minimize their visual impact.

2. All transmission lines should be located and constructed in a manner which minimizes disruption of natural vegetation and agricultural activities and avoids unnecessary grading of slopes when not in conflict with the rules and regulations of the California Public Utilities Commission.

4.17.2.3.2 Ventura County Source Reduction and Recycling Element

The Source Reduction and Recycling Element (SRRE) is a component of the Ventura County General Plan. The SRRE is implemented by regulations contained within Article 3 (Solid Waste Programs for Unincorporated Areas) of Chapter 7 (Regulation of Solid Waste Storage, Collection, Disposal, Transfer, Resource Recovery, and Environmental Health Permits and Fees) of the Ventura County Code of Ordinances.

4.17.3 Significance Criteria

The significance criteria for assessing the impacts to public services come from the CEQA Environmental Checklist. According to the CEQA Environmental Checklist, a project causes a potentially significant impact if the project:

- Exceeds wastewater treatment requirements of the applicable Regional Water Quality Control Board
- Requires or results in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects

- Requires or results in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Does not have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed
- Results in the determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments
- Is served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs
- Does not comply with federal, state, and local statutes and regulations related to solid waste

4.17.4 Impact Analysis, Past Activities

While the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line that was installed on the LWS poles installed in Project Section 4 is operational, the operation of this line has not changed as a result of the replacement of wood poles with LWS poles, and therefore operations related impacts are not addressed in the Past Activities section. Additionally, operations related impacts associated with past construction activities would be similar to those that would be realized from operation of the full Project, the entirety of which are discussed under Future Activities.

Did the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Assessment Summary: No Impact

Construction Impacts

Past Project activities did not exceed wastewater treatment requirements of the wastewater treatment plants serving the Project.

During the past activities, small volumes of domestic wastewater were generated during construction activity at the substations; this wastewater did not exceed wastewater treatment requirements of the Los Angeles RWQCB. Domestic wastewater was the only wastewater that was generated during construction of the Project, and the additional volume of wastewater generated at the substations during past activities was minimal and did not cause an exceedance of wastewater treatment requirements.

For subtransmission related work along the Project Sections, portable toilets were provided on-site for workers during the construction phase according to California Occupational Safety and Health Act requirements; the portable toilets were serviced by a licensed contractor who disposed of the waste off site in accordance with applicable requirements.

Therefore, no exceedances of wastewater treatment requirements were realized during past Project construction activities.

Did the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which caused significant environmental effects?

Assessment Summary: No Impact

Construction Impacts

Past construction activities of the Project did not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. This is because only small volumes of wastewater were generated by the Project during past construction activities, and because only small volumes of water were required for dust control during the short past construction period (see Chapter 3: Project Description). Therefore, no impacts occurred under this criterion as a result of past activities.

Did the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which caused significant environmental effects?

Assessment Summary: No Impact

Construction Impacts

Past construction activities did not require the development of large-scale impermeable surfaces that increased the amount of stormwater discharge from the site that required construction of new off site stormwater drainage facilities or expansion of existing facilities; the only impermeable surfaces installed as part of the past construction activities were 33 TSP foundations installed over an approximately 6-linear mile area, and new concrete footings installed as part of the substation work. These new impermeable surfaces encompass an area of less than 1,700 square feet. Note also that during past construction activities, because the Project disturbed a surface area greater than 1 acre, SCE obtained coverage under the Construction General Permit. As part of compliance with the Construction General Permit, SCE prepared a stormwater pollution prevention plan (SWPPP) and implemented best management practices (BMPs) as discussed in Section 4.9. Some of these BMPs served the purpose of regulating the amount of stormwater discharged at past construction work sites.

Did the project have sufficient water supplies available to serve the project from existing entitlements and resources, or were new or expanded entitlements needed?

Assessment Summary: No Impact

Construction Impacts

Sufficient water supplies from existing entitlements and resources were available to serve the past construction activities; no new or expanded entitlements were needed. SCE utilized

water to support construction activities, including for minimizing emissions of fugitive dust and mixing concrete. Depending on the work location, the water used during the past construction activities was obtained from Ventura County Waterworks District No. 1, the California American Water Company, or the Camrosa Water District. As presented in the Environmental Setting discussion, water surpluses are present in the area of the Project for each of these providers. Due to the small volume of water that was used (see Chapter 3: Project Description), and the short duration over which water was consumed, the past construction activities did not require new or expanded entitlements.

Did the project result in the determination by the wastewater treatment provider which served the project that it did not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Assessment Summary: No Impact

Construction Impacts

Past Project activities generated only small incremental volumes of domestic wastewater from the substations and from portable toilets that were provided on-site for workers during the construction phase according to California Occupational Safety and Health Act requirements. The portable toilets were serviced by a licensed contractor who retrieved wastewater and disposed of it off site in accordance with applicable requirements.

Given the substantial amount of existing unused treatment capacity remaining at the wastewater treatment plants that served the substations, and given that only small volumes of sanitary wastewater were generated by the construction of the Project, no impacts occurred under this criterion as a result of past Project activities.

Was the project served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?

Assessment Summary: No Impact

Construction Impacts

Small volumes of construction related waste and removed infrastructure components required disposal during past Project construction activities. This waste included wood power poles replaced during construction; short lengths of conductor or wire; excavated materials; and miscellaneous construction materials (e.g., pallets, strapping, packaging, etc.). SCE recycled all materials where feasible; materials that could not be recycled were disposed of in accordance with all applicable Federal, State, and local statutes and regulations. All treated wood poles removed for the Project were returned to the staging yard, and either reused by SCE, returned to the manufacturer, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of a Regional Water Quality Control Board (RWQCB)-certified municipal landfill. The existing capacity available at the landfills that serve the Project are adequate to accommodate the small volume of waste generated during the past construction activities.

Due to the small volume of construction related waste that was generated, and the millions of cubic yards of available capacity at the SVLRC that serves the Project Area, no impacts occurred under this criterion.

Did the project comply with federal, state, and local statutes and regulations related to solid waste?

Assessment Summary: No Impact

Construction Impacts

All solid waste generated by the Project during past activities was handled in accordance with all applicable Federal, State, and local statutes and regulations. Depending on the condition of each pole, all treated wood poles removed as part of the Project were, or are in the process of being, reused, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of an RWQCB-certified municipal landfill. Therefore, no impacts occurred under this criterion as a result of past construction activities.

4.17.5 Impact Analysis, Future Activities

Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Assessment Summary: No Impact

Construction Impacts

Future Project construction activities would not exceed wastewater treatment requirements of the wastewater treatment plants serving the Project. Currently, small volumes of domestic wastewater are generated at the substations; this wastewater does not exceed wastewater treatment requirements of the Los Angeles RWQCB. Additional minor amounts of domestic wastewater would be the only wastewater generated during future construction activities. Because the additional volume of wastewater generated at the substations during future construction activities would be minimal, it would not exceed wastewater treatment requirements.

For future subtransmission related work along the Project Sections, portable toilets would be provided on-site for workers during the construction phase as necessary and in accordance with California Occupational Safety and Health Act requirements; the portable toilets would be serviced by a licensed contractor who would dispose of the waste off site in accordance with applicable requirements.

Therefore, no exceedances of wastewater treatment requirements would be realized during future construction activities.

Operation Impacts

Components of the Project would be primarily unstaffed during operations. Electrical equipment would be remotely monitored and controlled by an automated system. However, SCE personnel would visit Project components for routine and emergency inspection and to repair or maintain the infrastructure along the Project Sections. Inspections would occur at least once annually. These operational activities would be slightly higher in number, but similar in scope, to current operational activities. The volume of wastewater discharged from the substations during future operational activities would be similar to the currently-discharged volumes. Because the currently-discharged volumes do not exceed treatment requirements, operation of the Project would not exceed wastewater treatment requirements set forth by the RWQCB.

Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Assessment Summary: No Impact

Construction Impacts

Future construction activities of the Project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Only small volumes of wastewater would be generated by the Project during future construction activities, and only small volumes of water would be required for dust control during the short future construction period (see Chapter 3: Project Description). The wastewater treatment facilities that would serve the Project have a substantial amount of remaining capacity available to accommodate these small volumes of water and/or wastewater. Therefore, no new water or wastewater treatment facilities would have to be constructed, and no impacts would occur under this criterion as a result of future construction activities.

Operation Impacts

Operation of the Project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Operation of the Project would consume water volumes and generate wastewater volumes generally equivalent to those currently generated by operation of the existing subtransmission system. Therefore, because only small volumes of wastewater would be generated by the Project during operations, and because only small volumes of water would be required for continued landscape irrigation at substations (no new or additional landscaping would be developed as part of the Project), no impacts would occur under this criterion.

Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Assessment Summary: No Impact

Construction Impacts

Future construction activities would not involve the development of large-scale impermeable surfaces that would increase the amount of stormwater discharge from the site that would require construction of new offsite stormwater drainage facilities or expansion of existing facilities. During future construction, the Project would disturb a surface area greater than 1 acre. Therefore, SCE would comply with the Construction General Permit. As part of compliance with the Construction General Permit, SCE would prepare one or more SWPPP(s), as appropriate, and implement BMPs as discussed in Section 4.9. Some of these BMPs would serve the purpose of regulating the amount of stormwater discharged at construction work sites.

Operation Impacts

During operation of the Project, stormwater drainage patterns would be similar to those under current conditions. As a result, Project operations would not require the construction of new stormwater drainage facilities or expansion of existing facilities in the area.

Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed?

Assessment Summary: No Impact

Construction Impacts

Sufficient water supplies from existing entitlements and resources are available to serve the future construction activities; no new or expanded entitlements would be needed. SCE would utilize water to support future construction activities, including for minimizing emissions of fugitive dust and mixing concrete. The water used during the future construction activities would be obtained from Ventura County Waterworks District No. 1, the California American Water Company, or the Camrosa Water District, and each of these water purveyors has sufficient excess supply capacity to accommodate the small water volumes required for future construction activities. Due to the excess supply capacity of each potential purveyor, and the small volume of water that would be used over the short construction period, the future construction activities would not require new or expanded entitlements.

Operation Impacts

Operation of the Project would entail the maintenance and operation of electric subtransmission facilities. No new landscaping at the substations is included in the Project, and thus no additional water would be required during operations for landscaping. Water consumption for domestic use at the substations during operations would not increase above the small volume used currently at the substations.

Maintenance and operation of the Project may occasionally require minimal amounts of water for washing insulators. The volume of water necessary for these operations would be slightly greater than the volume currently associated with operation of the existing subtransmission system. However, these volumes of water would be small, and sufficient water supplies are available to serve the Project; therefore, no impacts would occur under this criterion as a result of the Project.

Would the project result in the determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Assessment Summary: No Impact

Construction Impacts

Future construction activities would generate only small incremental volumes of domestic wastewater from the substations and from portable toilets that would be provided for workers during the construction phase according to California Occupational Health Act of 1973 (Lab. Code §§ 6300 et seq.) requirements; these portable toilets would be serviced by a licensed contractor who would dispose of the waste off site in accordance with applicable requirements.

Given unused treatment capacity at the treatment plants currently serving the substations, and that only small volumes of sanitary wastewater would be generated by the future construction activities of the Project, no impacts would occur under this criterion.

Operation Impacts

Operation of the Project would generate volumes of wastewater roughly equivalent to, albeit slightly larger than, those generated by operation of the existing subtransmission system due to the operation of the new length of subtransmission line. Given unused treatment capacity at the treatment plants currently serving the substations, and that only small volumes of sanitary wastewater would be generated during operations, no impacts would occur under this criterion as a result of the Project.

Would the project be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?

Assessment Summary: No Impact

Construction Impacts

Small volumes of construction related waste and removed infrastructure components will require disposal during future construction activities. This waste may include wood power poles replaced during construction, conductor or wire, excavated materials, slurry, concrete from removed LST footings, and miscellaneous construction materials (pallets, strapping, packaging, etc.). SCE would recycle all materials as appropriate; materials that cannot be recycled would be disposed of in accordance with all applicable Federal, State, and local statutes and regulations. All treated wood poles removed for the Project would be returned to the staging yard, and either reused by SCE, returned to the manufacturer, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of a RWQCB-certified municipal landfill. The existing capacity available at the landfills that would serve the Project is adequate to accommodate the small volume of waste expected to be generated during the future construction activities.

Due to the small volume of construction related waste that may be generated during future activities, and the millions of cubic yards of remaining capacity at the Simi Valley Landfill and Recycling Center that would serve the Project, no impacts would occur under this criterion as a result of future construction activities.

Operation Impacts

Typically, only small volumes of solid waste (e.g., material packaging), and conductor and insulators replaced over time, are generated during routine maintenance activities; the operation of the Project would result in a slight increase in the volume of solid waste typically generated due to operation of the new length of subtransmission line. SCE would recycle all materials as appropriate; materials that cannot be recycled would be disposed of in accordance with all applicable Federal, State, and local statutes and regulations. The existing capacity available at the Simi Valley Landfill and Recycling Center that would serve the Project is adequate to accommodate the very small volume of waste expected to be generated during the operation of the Project. Due to the small volumes of operation related waste that may be generated, and the available capacity at the landfills, no impacts would occur under this criterion as a result of the Project

Would the project not comply with federal, state, and local statutes and regulations related to solid waste?

Assessment Summary: No Impact

Construction Impacts

All solid waste generated by the Project during future construction activities would be handled in accordance with all applicable Federal, State, and local statutes and regulations. All treated wood poles removed for the Project would be returned to the staging yard, and either reused by SCE, returned to the manufacturer, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of a Regional Water Quality Control Board (RWQCB)-certified municipal landfill. Therefore, no impacts would occur under this criterion as a result of future Project construction activities.

Operation Impacts

The operation of the Project would consist of routine maintenance and emergency repairs. These activities are not expected to generate solid waste, however any solid waste generated by the Project during operations would be handled in accordance with all applicable Federal, State, and local statutes and regulations. Therefore, no impacts would occur under this criterion as a result of the Project.

4.17.6 References

California American Water Company. 2010. 2010 Urban Water Management Plan for the Southern Division - Ventura County District. Located at http://awrusa.com/files/Venturapercent20Countypercent202010percent20UWMPpercent20Finalpercent20Draft.pdf.

Camrosa Water District. 2010. Urban Water Management Plan. Located at http://www.camrosa.com/documents/UWMPpercent20Finalpercent20Compiledpercent201percent20-percent20allpercent20appendicespercent20butpercent20SRGMP.pdf.

City of Thousand Oaks. 2000. General Plan. Located at http://www.ci.thousandoaks.ca.us/city_hall/depts/community/planning/general/default.asp.

Ventura County Waterworks District No. 1. 2011. Urban Water Management Plan. Located at http://portal.countyofventura.org/portal/page/portal/PUBLIC_WORKS/WaterSanitation/currentProjectInformation/2010percent20UWMP_Report_0.pdf.

4.18 Cumulative Impacts

CEQA requires lead agencies to consider the cumulative impacts of proposals under their review. Section 15355 of the CEQA Guidelines defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." A cumulative impact "consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." (Section 15130(a)(1).) The cumulative impacts analysis "would examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects." (Section 15130(b)(3).)

In conducting a cumulative impacts analysis, impacts are referenced to the temporal span and spatial areas in which the Project could cause impacts. Accordingly, a discussion of cumulative impacts must include either: (1) a list of past, present, and probable future projects, including, if necessary, those outside the lead agency's control; or (2) a summary of projections contained in an adopted general plan or related planning document, or in a prior certified EIR, which described or evaluated regional or area-wide conditions contributing to the cumulative impact, provided that such documents are referenced and made available for public inspection at a specified location (Section 15130(b)(1).) A "probable future project" is defined to include approved projects that have not yet been constructed; projects that are currently under construction; projects requiring an agency approval for an application that has been received at the time a Notice of Preparation is released; and projects that have been budgeted, planned, or included as a later phase of a previously approved project (Section 15130(b)(1)(B)(2).)

The cumulative impact analysis for the Project includes a review of past, present, and probable future projects (referred to as Other Projects) generally within 1 mile of the Project alignment. This 1-mile boundary was chosen to identify those projects whose impacts could potentially combine with those of the Project, and thus where a cumulatively considerable impact could result.

Projects were identified by conducting internet research and contacting utilities and local agencies, including Ventura County, the City of Moorpark, the City of Thousand Oaks, and Caltrans.

Table 4.18-1 lists the projects that are generally located within 1 mile of the Project and that could affect the same resources (these projects are shown on Figure 4.18-1). Table 4.18-1 describes the projects, their locations, and estimated construction schedules. Where construction schedules are unavailable or uncertain, the cumulative impact analysis conservatively assumes that construction would coincide with that of the Project. The projects identified are associated with private developers, Southern California Edison, and local agencies.

4.18.1 Significance Criteria

The CEQA Environmental Checklist provides significance criteria for assessing the cumulative impacts of the Project. A project causes a potentially significant cumulative impact if:

- The project has impacts that are individually limited, but cumulatively considerable, where "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 Other Projects.

4.18.2 Impact Assessment

The following section discusses the potential cumulative impacts of the Project for those resource areas where the Project may have a potential impact. Those resource areas include: Aesthetics, Agriculture and Forestry Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use, Noise, Public Services, Recreation, and Transportation and Traffic.

This section does not evaluate cumulative impacts where the Project would have no impacts and therefore no contribution to cumulative impacts. Based on the evaluation presented in Chapter 4: Environmental Impact Assessment Summary, the Project would have no impacts on Land Use, Mineral Resources, Population and Housing, and Utilities and Service Systems. For example, because the Project would have no impacts on population or housing, there would be no cumulative population or housing related effects in conjunction with the Other Projects.

4.18.2.1 Aesthetics

Cumulative Assessment Summary: Less than Significant Impact

The geographic scope of the cumulative impact analysis for aesthetic impacts includes the viewsheds that may be affected by the Project, including views from public areas. This analysis does not include views from a Designated State Scenic Highways, as the nearest such highway is located more than 30 miles distant from the Project.

Because there are no designated scenic vistas in the vicinity of the Project, the Project would not contribute to a cumulative impact on scenic vistas. No portion of the Project is located within or adjacent to a Designated State Scenic Highway. Therefore, construction and operation activities would not damage a scenic resource within a Designated State Scenic Highway.

Project construction and operation activities would generally be conducted during the day, and thus would not be a source of substantial light that would affect nighttime views. Subtransmission Project components would either be non-specular (the majority of the conductor to be installed) or would be constructed of a dull gray galvanized steel that would weather over time (subtransmission TSPs and LWS poles), and thus would not be a source of glare.

As presented in Section 4.1, construction and operation of the Project would not substantially degrade the visual character or quality of the surrounding area. Project construction would result in temporary impacts to the existing visual character and quality of each construction site due to the presence of equipment, materials, and work crews. These changes would be temporary; therefore, construction related impacts would be less than significant. Operation of the Project would introduce incremental, long-term changes to the visual character of the surrounding area; however, due to, among other things, the presence of existing electrical utility infrastructure in the area, these changes would not constitute a significant impact.

Due to the remote location of most Project infrastructure, little of the development associated with the Other Projects would be located within the same viewsheds as Project infrastructure. As a result, the visual character and quality of the Project's sites and surrounding areas are not likely to be substantially affected by the Project and Other Projects. Therefore, the Project's incremental, less than significant impacts would not be cumulatively considerable.

4.18.2.2 Agriculture and Forestry Resources

Cumulative Assessment Summary: Less than Significant Impact

The geographical area evaluated for cumulative impacts to agriculture and forestry resources includes the geographic area in the immediate vicinity of the Project components.

As presented in Section 4.2, construction and operation of the Project would not conflict with existing zoning for agricultural use, forest or timberlands, or a Williamson Act contract; and would not involve other changes to the existing environment in a manner that would result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use. Therefore, the Project would have no cumulative effects for these criteria.

Construction and operation of the Project would, as presented in Section 4.2, result in the permanent conversion of approximately 3.35 acres of lands identified as Important Farmland due to subtransmission TSP installation. These conversions would represent a loss of 0.0032 percent of the approximately 104,695 acres of Important Farmland identified in Ventura County. The Project would also result in the permanent disturbance of 5.31 acres of forest lands. The conversion of this small amount of farmland would not contribute to a cumulatively considerable impact to agricultural lands in Ventura County, and the permanent disturbance of 5.31 acres of forest lands would not contribute to a cumulatively considerable impact to the loss or conversion of forest land in Ventura County.

4.18.2.3 Air Quality

Cumulative Assessment Summary: Less than Significant Impact

The geographical area evaluated for cumulative impacts to air quality includes the geographic boundaries of the Ventura County Air Pollution Control District (VCAPCD).

As presented in Section 4.3, neither construction emissions nor operations related emissions are expected to substantially contribute to regional emissions, and the Project would not conflict with or obstruct implementation of the applicable air quality plans. The VCAPCD has not adopted air quality significance thresholds for construction impacts; however, the VCAPCD does recommend that certain measures be implemented to offset construction related emissions above certain levels. SCE's construction practices would incorporate measures recommended by VCAPCD. Therefore, construction of the Project would not violate an air quality standard or contribute substantially to an existing or projected air quality violation.

Construction of the Project would result in the emission of oxides of nitrogen (NO_x) and reactive organic gases (ROG) at levels that could potentially exceed levels established by the VCAPCD. SCE practices, including minimizing equipment idling time and maintaining equipment engines in good condition and in proper tune as per manufacturers' specifications, would reduce emissions of ROG and NO_x. It is anticipated that if construction activities associated with the Other Projects would exceed the levels established by the VCAPCD, those Other Projects would implement measures contained in the VCAPCD Ventura County Air Quality Assessment Guidelines to reduce air emissions. Therefore, the Project would not contribute to a cumulatively considerable net increase of a criteria pollutant.

Pollutant emissions would be distributed temporally over the construction period, and distributed spatially across the Project Area. As a result, and because of the low population density in the immediate vicinity of the Project, the Project would not expose sensitive receptors to substantial pollutant concentrations or expose a substantial number of people to objectionable odors. Because impacts from the Project would be less than significant, and because the less than significant impacts from Project activities would not combine with impacts from Other Projects due to the geographic separation between Project activities and those of the Other Projects, the Project's contribution to a cumulative impact would not be cumulatively considerable and would be less than significant.

Operation of the Project would not differ substantially in scope or scale from current operation activities along the existing SCE ROW or at the substations. The emissions associated with Project operation activities would represent a very small fraction of the regional emission inventories and (with or without regard to Other Projects in the area) would not be expected to substantially contribute to a violation of an air quality standard or contribute substantially to an existing or projected air quality violation; to result in a cumulatively considerable net increase of a criteria pollutant; to expose sensitive receptors to substantial pollutant concentrations; or to expose significant numbers of people to objectionable odors. Therefore, cumulative impacts associated with operation of the Project would not be cumulatively considerable and would be less than significant.

4.18.2.4 Biological Resources

Cumulative Assessment Summary: Less than Significant Impact

The geographic context for the analysis of cumulative impacts associated with biological resources varies depending upon the considered species or resource, but the analysis typically includes areas within 1 mile of the Project's components and alternatives. The geographic context for the analysis of cumulative impacts to the biological resources addressed in Section 4.4, including special status plants and wildlife and their habitats, wildlife corridors, jurisdictional waters, and critical habitat.

As a result of conducting surveys for the species and marking and avoiding areas where those species are identified, Project construction would have only localized and less than significant impacts to listed plant species. The large majority of Other Projects are located on previously-disturbed lands in suburbanized areas; if any of the Other Projects is conducted in an area where listed plant species are identified, it would be expected to comply with applicable regulations designed to protect listed plant species, and therefore would also be projected to have less than significant impacts. Thus, the less than significant impacts from the Project and Other Projects would not be cumulatively considerable.

Project construction would have less than significant impacts to special-status and other wildlife species, and impacts would be localized and temporary. The large majority of Other Projects are located on previously-disturbed lands in suburbanized areas that do not provide suitable habitat for special-status and other wildlife; none of the Other Projects are located in critical habitat for any species. If any of the Other Projects is conducted in an area where special-status or other wildlife species are identified, it would be expected to comply with applicable regulations designed to protect such species, and therefore would also be projected to have less than significant impacts. Thus, the less than significant impacts from the Project and Other Projects would not be cumulatively considerable.

Periodic operation activities at and along facilities and access roads would not result in a significant impact on plant or wildlife species. Operation activities would be periodic, infrequent, and performed as needed, and would be conducted on previously-disturbed areas. Therefore, the contribution of operation activities to a cumulative impact would not be cumulatively considerable and would be less than significant.

Project construction would not affect riparian habitat, and therefore the Project would have no contribution to a cumulative impact associated with riparian biology or habitat.

Project construction and operation activities would have no direct or indirect impacts on wetlands as defined by Section 404 of the Federal Clean Water Act, and therefore the Project would have no contribution to a cumulative impact.

Neither the Project nor any of the Other Projects are located in a wildlife movement corridor as identified by the County of Ventura; therefore, the Project would have no contribution to a cumulative impact to wildlife migration through this corridor. Construction and operation activities may result in temporary changes in wildlife movement due to construction noise

and human presence. However, these impacts would be localized, temporary, and less than significant. The Other Projects would have a limited potential to affect species movement as they are largely in-fill type developments in currently-developed areas, or are located adjacent to existing infrastructure (highways, major roadways) that typically limit wildlife movement. None of the Other Projects includes new highways, levees, or other major infrastructure that would significantly interfere with wildlife movement. Given the physical separation of the Project and Other Projects, the Project's contribution to a cumulative impact would not be cumulatively considerable and would be less than significant.

Project construction and operation activities would not conflict with local policies or ordinances protecting biological resources, including trees. Like the Project, Other Projects would be expected to comply with local policies, ordinances, and the conditions of applicable permits. Therefore, the Project's contribution to a cumulative impact would not be cumulatively considerable and would be less than significant.

No Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or State habitat conservation plans exist for the Project Area. Therefore, the Project would not contribute to a cumulative impact involving conflicts with such plans.

4.18.2.5 Cultural Resources

Cumulative Assessment Summary: Less than Significant Impact

As presented in Section 4.5, the Project is designed to avoid and minimize impacts to cultural resources by surveying to identify sites and by implementing worker awareness training; this would result in less than significant impacts to cultural resources as a result of construction and operation of the Project. Impacts to paleontological resources would be less than significant due to the low sensitivity of underlying geologic structures and worker training regarding paleontological resources protection.

The potential impacts to cultural and paleontological resources as a result of Other Projects are unknown at this time. However, the incremental and less than significant impacts of the Project would not cause a significant cumulative impact on cultural resources. Additionally, there is no existing significant cumulative impact to which the incremental, less than significant impacts of the Project could contribute. Therefore, the Project's incremental, less than significant impacts would not be cumulatively considerable.

4.18.2.6 Geology and Soils

Cumulative Assessment Summary: Less than Significant Impact

Geological hazards are generally site-specific and depend on localized geologic and soil conditions. The geographic scope of potential cumulative geological and soils impacts is limited to the immediate vicinity around each Project construction and infrastructure site. As a result, such impacts are not typically additive or cumulative in nature. In addition, like the Project, the Other Projects in the area would be expected to comply with applicable laws, regulations, ordinances, and permits, and would be expected to implement BMPs and

SWPPPs where applicable. Due to the geographic separation between Project activities and those of the Other Projects, the Project's incremental, less than significant impacts would not be cumulatively considerable.

4.18.2.7 Greenhouse Gas Emissions

Cumulative Assessment Summary: Less than Significant Impact

The geographical context for greenhouse gas (GHG) and climate change effects includes the earth's atmosphere. GHGs released to the atmosphere generally have no effect locally but are correlated with rising global temperatures.

As presented in Section 4.7, Project construction would result in emissions of GHGs from on-site construction equipment and off site worker trips. Over the entire construction period of the Project, approximately 2,222 metric tons of carbon equivalent ($MTCO_2e$) would be emitted. GHG construction emissions from the Project amortized over 30 years is approximately 74 $MTCO_2e$. The estimated annual emissions of GHG from Project equipment are 6 $MTCO_2e$, primarily from sulfur hexafluoride (SF_6) emissions (see Appendix E, Air Quality Calculations, for details). As explained in Section 4.7, operation related emissions would be equivalent to emissions associated with current operation activities. Both the 74 $MTCO_2e$ emissions associated with Project construction and the 6 $MTCO_2e$ emissions associated with Project operation activities would be well below the 10,000 $MTCO_2e$ threshold of significance recommended by VCAPCD. Therefore, the Project would not generate, either directly or indirectly, GHG emissions that would have a significant impact on the environment. As a result, the Project's contribution to cumulative impacts would not be cumulatively considerable and would be less than significant.

As presented in Section 4.7, GHG emissions from construction and operation of the Project would fall well below the thresholds of significance. With implementation of SCE's existing SF_6 Gas Management Guidelines, SF_6 emissions from the Project would be expected to meet the regulatory requirements, and thus would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, the Project would not conflict with an applicable plan, policy, or regulation and would not contribute to cumulative impacts resulting from an Other Project's conflict with such plans, policies, or regulations in any cumulatively considerable manner.

4.18.2.8 Hazards and Hazardous Materials

Cumulative Assessment Summary: Less than Significant Impact

The geographic scope for hazardous materials includes areas near Project sites that could be affected by a release of hazardous materials, including schools within 0.25 mile. Impacts from such releases are usually site-specific and localized. The geographic scope also includes areas affected by the Other Projects listed in Table 4.18-1 including down-gradient air, water bodies, groundwater, and areas subject to wildland fire hazards. Material delivery routes are also included to account for the potential impacts from a traffic accident related spill.

There is no existing significant adverse cumulative condition relating to hazards and hazardous materials in the vicinity of the Project, and the incremental and less than significant impacts of the Project would not cause a significant adverse cumulative impact.

The Project would not be constructed or operated on a site listed as a hazardous materials site pursuant to Section 65962.5; would not be constructed or operated within an airport land use plan area, or within the vicinity of, or within 2 miles of, a public airport, public use airport, or private airstrip; and would not interfere with an adopted emergency response plan or emergency evacuation plan, and therefore would not contribute to a hazards related cumulative impact.

Project construction could result in less than significant impacts associated with the transport, use, disposal, or foreseeable upset of, or accidents involving, hazardous materials during construction. Like the Project, Other Projects would be expected to implement BMPs and adhere to all applicable laws and regulations to reduce to less than significant the potential impacts from hazards, including impacts associated with emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. As a result, the Project's contribution to such impacts would not be cumulatively considerable and cumulative impacts would be less than significant.

The potential for igniting vegetation during construction of the Project would be minimized as described in Section 4.8. Those Other Projects that are located in Moderate, High, or Very High Fire Hazard Severity Zones would be expected to institute similar precautions and to follow all applicable regulations related to fire prevention. Because construction of the Project would have a less than significant impact to risk of loss, injury, or death involving wildland fires, the Project's contribution to a cumulative impact would not be cumulatively considerable and would be less than significant.

Operation activities would entail the transportation, use, and handling of the same hazardous materials as during construction; however, operations activities would require fewer vehicles and would use smaller quantities less of these materials. Therefore, the Project's incremental, less than significant impacts would not be cumulatively considerable.

4.18.2.9 Hydrology and Water Quality

Cumulative Assessment Summary: Less than Significant Impact

The geographic context for the cumulative impacts associated with hydrology and water quality consists of the Calleguas Creek watershed, including the Las Posas Arroyo, Lower Conejo Arroyo, and Upper Conejo Arroyo. It also includes the underlying groundwater basins.

A substantial body of law (including Federal, State, and local water quality regulations) governs this resource area. Compliance with all of these laws, as applicable, would avoid or substantially reduce the environmental impacts associated with the Project and those associated with Other Projects.

As presented in Section 4.9, the Project presents no impacts related to groundwater withdrawals or risk associated with tsunamis or seiches, and only incremental, less than significant impacts related to water quality standards, flooding and flood hazards, alteration of drainage patterns, and stormwater drainage systems; many of these potential incremental impacts are negligible (i.e., impacts to groundwater) or specific to the immediate vicinity of the construction and operation locations (i.e., alteration of drainage patterns). The Project (and likely the Other Projects) would, comply with the Construction General Permit, obtain certification under Section 401 of the Clean Water Act, and/or comply with waste discharge requirements; associated required measures would effectively control erosion, sedimentation, and pollutant runoff during construction. Due to the geographic separation between Project activities and those of the Other Projects, the small and localized potential impacts that may result from the Project and Other Projects given the large watershed and groundwater basins in the area, and the minimization of potential impacts resulting from compliance with applicable laws and regulations, the Project's incremental, less than significant impacts would not be cumulatively considerable.

4.18.2.10 Noise

Cumulative Assessment Summary: Less than Significant Impact

Noise and vibration impacts are localized such that the geographic area in which cumulative impacts may occur is limited to the immediate vicinity of construction and operation activities.

The Project is not located within an airport land use plan, or within 2 miles of a public airport or public use airport. Therefore, neither construction nor operation of the Project would contribute to a cumulative impact involving resident or worker exposure to airport noise.

Construction would not result in permanent increases in ambient noise levels and would not contribute to a cumulative impact related to permanent noise increases. Construction of the Project would result in temporary increases in ambient noise levels during the construction period. However, noise from construction of the Project would not exceed thresholds in Ventura County, the City of Moorpark, or the City of Thousand Oaks. The Project would not generate excessive groundborne vibration or noise, and any vibration or groundborne noise that is generated would attenuate within a short distance. None of the Other Projects would be conducted within close proximity of the Project, and therefore the Project's contribution to a cumulative impact would not be cumulatively considerable and would be less than significant.

Operation activities of the Project would differ only slightly in scope or scale from current operation activities conducted in the existing SCE ROW or at the substations. Noise from operation activities would not exceed noise thresholds in Ventura County, the City of Moorpark, or the City of Thousand Oaks.

Even with potential corona noise, the noise associated with operation of the 66 kV subtransmission lines is expected to be less than 33.5 dBA, which is the ambient noise level in the area, and would comply with noise regulations. The Project would not replace or

install vibration-generating components, and use of light-duty vehicles and other vehicles during inspection and maintenance activities would not generate perceptible vibrations. The noise generated by new equipment installed at the substations would be similar to that generated by existing components. In addition, the Project would not require a substantial increase in operation activities. Because only minor changes in Project operation activities and the frequency of such activities would occur, and because the locations of these activities do not overlap geographically with Other Projects, the Project's incremental, less than significant impacts would not be cumulatively considerable.

4.18.2.11 Public Services

Cumulative Assessment Summary: Less than Significant Impact

The geographic scope for cumulative impacts on public services encompasses the local jurisdictions providing public services including Ventura County, the City of Moorpark, and the City of Thousand Oaks.

Neither Project construction nor operation would result in an increased demand for police or fire services; an increase in school enrollment; or an increase in the use of libraries, hospitals, parks or other public facilities to the point where additional services would have to be provided. Therefore, the Project would have no contribution to a cumulative impact.

In combination with the fact that construction activities would be of short duration and operation activities would be infrequent and of short duration, implementation of traffic control measures would ensure that the Project does not impact performance objectives for fire and police protection, even considering the effects of Other Projects. Like the Project, Other Projects would be expected to implement traffic control measures where feasible while maintaining appropriate access for emergency response vehicles. Therefore, the Project's incremental, less than significant impacts would not be cumulatively considerable.

4.18.2.12 Transportation and Traffic

Cumulative Assessment Summary: Less than Significant Impact

The geographic scope for cumulative transportation and traffic impacts includes the regional and local roadways that may be used to access the Project or that could otherwise be impacted by vehicle movements associated with construction or operation activities. The geographic scope also includes the bus routes and pedestrian and bike paths in the area.

Construction and operation activities of the Project would result in less than significant impacts to the level of service and congestion on roadways and to public transport, bicycle, and pedestrian travel. Lane closures would be coordinated with local jurisdictions and Caltrans, as applicable, and would have temporary, less than significant impacts on traffic and transportation given the range of other thoroughfares that would remain available. Given the small construction crews and geographic scope of the Project, the Project would have less than cumulatively considerable impacts on freeways, local streets, and intersections, and on

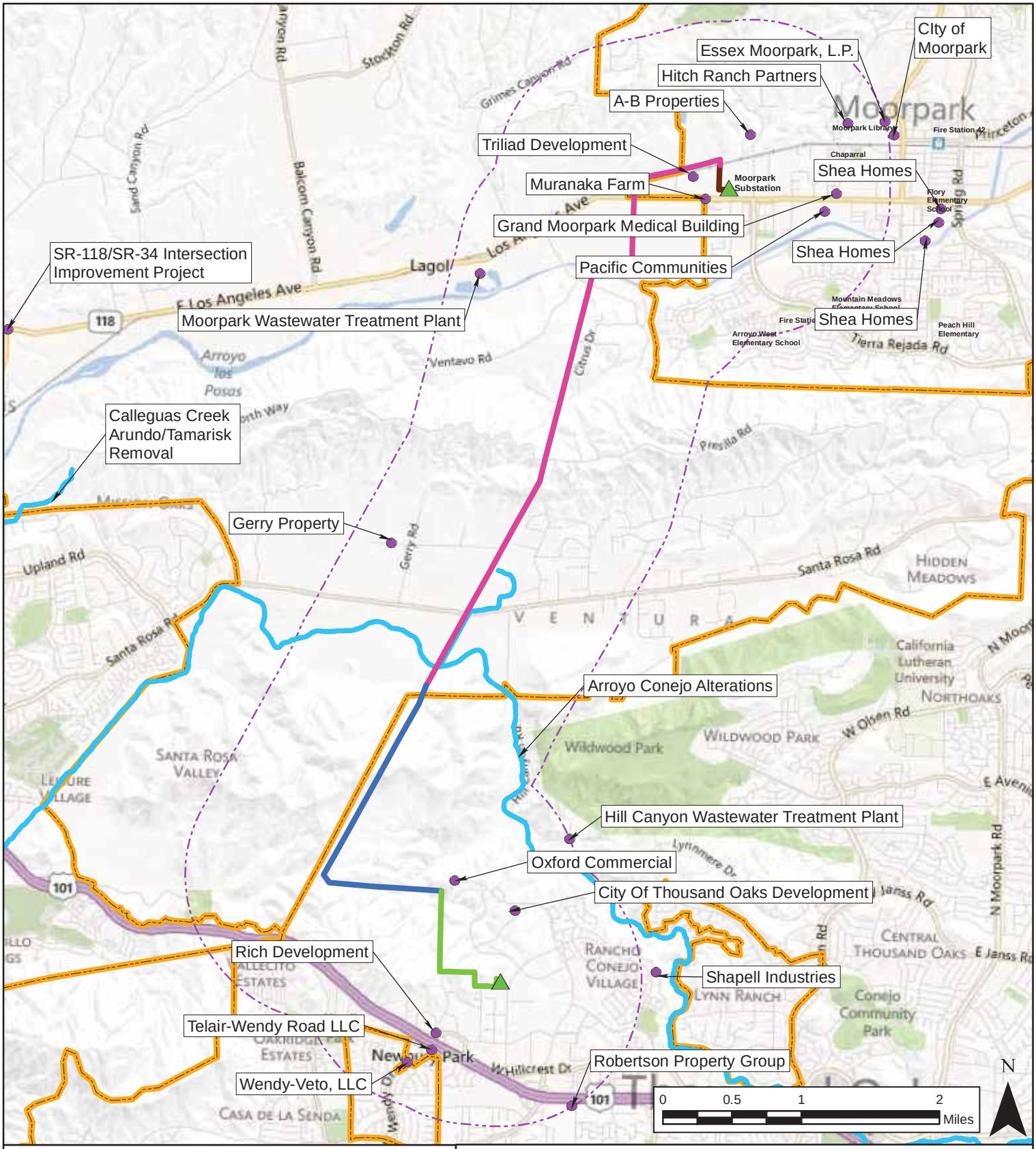
pedestrian or bicycle paths or mass transit; and would not contribute to or conflict with an applicable congestion management program.

SCE is currently evaluating Project infrastructure with respect to FAA regulations. Pursuant to that evaluation, SCE may notify the FAA regarding the location and characteristics of the TSPs to be installed in this area. As noted above, if SCE files a notification, the FAA may at its discretion, amend the existing departure procedures for CMA to provide adequate obstacle clearance. It is not anticipated that any such amendment would result in a substantial safety risk. Additionally, the Other Projects are not anticipated to require amendments to existing departure procedures, and thus cumulative impacts would be less than significant.

Helicopter operations would be conducted in accordance with FAA regulations, and therefore the Project would not result in cumulative impacts to air traffic patterns, including either an increase in traffic levels or a change in their location that results in substantial safety risks.

The Project would not introduce incompatible uses or design features such as changes to public roads. Therefore, the Project would not contribute to a cumulative impact involving hazards due to a design feature or incompatible uses.

In combination with the fact that construction activities would be of short duration and operation activities would be infrequent and of short duration, implementation of traffic control measures would ensure that the Project does not result in inadequate emergency access, even considering the effects of Other Projects. Like the Project, Other Projects would be expected to implement traffic control measures where feasible. Therefore, the Project's incremental, less than significant impacts would not be cumulatively considerable.



Substation
Cumulative Projects
Cumulative Projects
City Boundaries
1 Mile Buffer Sections and Substations

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

CUMULATIVE PROJECTS

SOUTHERN CALIFORNIA EDISON
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ARCADIS

Figure
4.18-1

ARCADIS: SCEMN_085, 03/20/13, R03

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Table 4.18-1: Other Projects Within One Mile of the Project

Project / (Applicant/Developer)	Project Description	Location	Construction Schedule*
Ventura County			
Ken and JoAnne Gerry	Conditional Use Permit (CUP); Case No. LU11-0124 for "Agricultural Promotional Uses" and for "Festivals, Animal Shows, and Similar Events, Temporary Outdoor".	9015 Rosita Road, near the intersection of Gerry Road and Santa Rosa Road	Project proposed as of January 2012 Project review period: October 16, 2012 through November 5, 2012
Muranaka Farm	Remove fill and restore ~17.73 acres of active flood plain	SR-118, west of North Buttercreek Road	NOE 11/21/2012
Arroyo Conejo	Alteration of Arroyo Conejo (including the Arroyo Conejo North and South Fork) and Olsen and Waverly Channel		NOE 9/18/2012
City of Moorpark, Residential Projects—Approved			
Pacific Communities	284 Single Family Residences / 40 Acres	South of Los Angeles Avenue and East of Maureen Lane	Approved, Not yet under construction (January 2010)
Pacific Communities	157 Single Family Residences 300 Attached Condos / 37.09 acres	South of Los Angeles Avenue and East of Maureen Lane	Permitting in Progress (April 2010, July 2010, October 2010, January 2011, April 2011, July 2011, October 2011)
Hitch Ranch Partners	755 Single and Multi-Family Residences / 281 acres	North of Union Pacific Railroad Tracks and West of Terminus of Casey Road	EIR & Specific Plan in Process (January 2010, April 2010, July 2010, October 2010, January 2011, April 2011, July 2011, October 2011)
Shea Homes	77 Detached and Duplex Condominiums / 9 acres	South of Los Angeles Avenue at Millard Street	Under Construction (January 2010, April 2010, July 2010, October 2010, January 2011)
Shea Homes	102 Detached and Duplex Condominiums / 15 acres	South of Los Angeles Avenue Between Spring Road and Fremont Street	Approved, Not Yet Under Construction (January 2010) Approved, Not Yet Under Construction (RPD Expired) (April 2010, July 2010, October 2010))

Table 4.18-1: Other Projects Within One Mile of the Project

Project / (Applicant/Developer)	Project Description	Location	Construction Schedule*
Shea Homes	99 Detached and Duplex Condominiums / 15 acres	South of Los Angeles Avenue Between Spring Road and Fremont Street	Approved, Not Yet Under Construction (RPD Expired) (January 2011, April 2011) Approved, Not Yet Under Construction (July 2011) Approved, Not Yet Under Construction (RPD In Process) (October 2011)
Essex Moorpark, L.P.	200 Apartment Residences / 11 acres	South of Casey Road and West of Walnut Canyon Road	Approved, Not Yet Under Construction (January 2010, April 2010, July 2010, October 2010, January 2011) Approved, Not Yet Under Construction (RPD Expired) (April 2011, July 2011, October 2011)
City of Moorpark, Commercial Projects			
Grand Moorpark	76,000 Sq. Ft. Medical Office Building / 4 Acres	635 W. Los Angeles Avenue	Approved, Not Yet Under Construction; CPD Expired (January 2010, April 2010) Approved, Not Yet Under Construction (July 2010, October 2010, January 2011, April 2011) Approved, Not Yet Under Construction; CPD Expired (July 2011) Approved, Not Yet Under Construction (October 2011)
City of Moorpark, Industrial Projects			
Patriot Commerce Center	350,000 sq. ft. Office/Industrial Park / 33 acres	West of SR-23, East of Miller Parkway, South of Moorpark Marketplace	Under Construction (January 2010, April 2010, July 2010, October 2010, January 2011, April 2011, July 2011, October 2011)

Table 4.18-1: Other Projects Within One Mile of the Project

Project / (Applicant/Developer)	Project Description	Location	Construction Schedule*
A-B Properties	17 Lots / 36 acres	North on Union Pacific Railroad Tracks, West of Gabbert Road	Grading Underway, No Building Plans Filed (January 2010, April 2010, July 2010, October 2010, January 2011, April 2011, July 2011, October 2011)
Triliad Development	Motion Picture Studio Complex / 37 acres	Los Angeles Avenue West of SCE Substation	Permitting in Process (January 2010, April 2010, July 2010, October 2010, January 2011, April 2011, July 2011) Approved (October 2011)
City of Moorpark, Public Projects			
City of Moorpark	2,000 sq. ft. City Hall/Civic Center Complex	83 West High Street	Site Planning Underway (January 2010, April 2010, July 2010, October 2010, January 2011, April 2011, July 2011, October 2011) NOP 4/7/2011
City of Thousand Oaks, Residential Projects – Approved			
City of Thousand Oaks	Construct Affordable Housing Project	Conejo Center Dr. at West End of Conejo Spectrum St.	Proposed (as of January 2010)
Shapell Industries	Construct Single-Family Dwellings in Approved Subdivision	Northside of Lawrence Drive, 1000 feet west of Camino Dos Rios	Under Construction (as of January 2010) Construction Complete (as of April 2011)
City of Thousand Oaks, Commercial Projects—Proposed			
Haaland Group	Construct New Lockheed Federal Credit Union	1005 Broadbeck Dr.	Proposed (as of January 2010) CEQA Exempt (as of March 2010)
Rich Development	Construct New Commercial Center including Lowe's and two restaurants	Camino Dos Rios, Wendy Dr., and Grande Vista	Proposed (March 2010) Approved (March 2011)
Oxford Commercial	Construct 3-Story Commercial Condo Building / 2.78 acres; 50 acres dedicated to open space	Terminus of Grande Vista Dr.	Approved (as of January 2010)
Robertson Property Group	Modify Commercial from Theater to Department Store and Restaurant to Retail	Southwest Corner of Newbury Rd. and Kelly Rd.	Under Construction (as of January 2010)

Table 4.18-1: Other Projects Within One Mile of the Project

Project / (Applicant/Developer)	Project Description	Location	Construction Schedule*
Telair-Wendy Road LLC	Construct Medical and Commercial Offices	Northwest Corner of Old Conejo Rd. and Wendy Dr.	Under Construction (as of January 2010) Construction Complete (as of May 2010)
Wendy-Veto LLC	Renovate Shopping Center	701 N. Wendy Dr.	Under Construction (as of January 2010) Construction Complete (as of April 2011)
City of Thousand Oaks, Public Projects			
City of Thousand Oaks	Appropriative Water Right and petition to change the place of use and purpose of use of treated wastewater discharged from its Hill Canyon Wastewater Treatment Plant	Hill Canyon Wastewater Treatment Plant	NOD 5/18/2012
Caltrans District 7			
SR 118/SR 34 Intersection Improvement Project	Improve SR-118/SR-34 Intersection	SR-118/SR-34 Intersection	Currently underway
Ventura County Resource Conservation District			
Ventura County Resource Conservation District	Calleguas Creek Watershed Arundo/Tamarisk Removal Program	Calleguas Creek	NOD 4/4/2012
CPUC			
Sunesys/Moorpark Unified School District	Installation of 3.14 miles of aerial fiber on existing structures and 7.28 miles of underground fiber (trenching)		NOE 2/10/2012
Southern California Edison			
Moorpark Substation	Install phasor measurement unit	Moorpark Substation	2012
Pharmacy Substation	Design substation getaway	Pharmacy Substation	2013
Moorpark Substation	Replace line protection on Pardee No. 2 line	Moorpark Substation	2014
Moorpark Substation	Replace line protection on Pardee No. 3 line	Moorpark Substation	2014
Moorpark Substation	Replace 150 capacitor units per set, associated PTs, and CB and switcher with sync close CB (No. 2 and No. 3 66 kV capacitors)	Moorpark Substation	2015
Moorpark Substation	Install new physical access control system	Moorpark Substation	2015

Table 4.18-1: Other Projects Within One Mile of the Project

Project / (Applicant/Developer)	Project Description	Location	Construction Schedule*
Newbury Substation	Determine need for work inside the fence when replacing cable from switch position on rack for Johnboy 16 kV circuit out of Newbury Substation	Newbury Substation	2015
Pharmacy Substation	USAT to iDirect SatCom Conversion	Pharmacy Substation	2016
Moorpark Substation	Replace circuit breaker ('A' bus)	Moorpark Substation	2018
Moorpark Substation	Replace circuit breaker ('C'bus)	Moorpark Substation	2018
Moorpark Substation	Replace line protection on Santa Clara No. 2 line	Moorpark Substation	2018
Moorpark Substation	Transfer Royal Substation from Moorpark 'C' to Moorpark 'A' bus section	Moorpark Substation	2018
Moorpark Substation	Replace three 66 kV circuit breakers	Moorpark Substation	2018
Moorpark Substation	Replace ten 220 kV LBFB relays	Moorpark Substation	2018
Moorpark Substation	Replace one set of 220 kV disconnects associated with Position 9 including ground disconnect	Moorpark Substation	2018
Moorpark Substation	Add 28.8 MVAR of capacitors	Moorpark Substation	2021
Newbury Substation	Add one 16 kV circuit for a total of 10	Newbury Substation	2022
Southern California Gas Company			
No projects subject to CEQA in vicinity of Moorpark-Newbury 66 kV Subtransmission Line Project			
Ventura County Waterworks District No. 1			
No projects in vicinity of Moorpark-Newbury 66 kV Subtransmission Line Project			

Table 4.18-1: Other Projects Within One Mile of the Project

Project / (Applicant/Developer)	Project Description	Location	Construction Schedule*
Ventura County Waterworks District No. 19			
Moorpark Wastewater Treatment Plant Reclaimed Water Distribution System Phase II and III	The MWTP and proposed reclaimed water pipeline route is within unincorporated Ventura County, whereas the proposed tank site is located within the City of Moorpark. The tank site is ~3/4 acre in size, located on a 1.83 acre parcel owned by the District. The proposed project is the construction and operation of the second (II) and third (III) phases of the MWTP reclaimed water distribution system. Phase II would include a 1.5 MG welded-steel, above-ground reclaimed water tank to be constructed at an existing graded site located north of Championship Drive at the Moorpark Country Club Estates, and 3,000 linear feet of 16 inch pipe in Los Angeles Avenue and 12 inch pipe in Hitch Boulevard. Phase III would include the construction of an additional 10,000 linear ft of 8 inch and 12 inch reclaimed water line. The Phase III pipeline is intended to follow the alignments of existing potable water mains.	Various (see Figure 6.1-1)	NOD 3/9/2011

Notes:
TBD = to be determined

5.0 DETAILED DISCUSSION OF SIGNIFICANT IMPACTS

In accordance with the "Working Draft Proponent's Environmental Assessment (PEA) Checklist for Transmission Line and Substation Projects" issued by the California Public Utilities Commission (CPUC) on November 24, 2008, and Section 15126.2 of the California Environmental Quality Act (CEQA) Guidelines, this section:

1. Discusses the applicant proposed measures (APMs) that the Southern California Edison Company (SCE) is proposing in order to avoid, minimize, or mitigate potentially significant effects.
2. Summarizes the Project alternatives and provides an explanation as to why they were not chosen as the Project
3. Describes any growth-inducing impacts associated with the Proposed Project.
4. Identifies the measures that SCE incorporated into the Proposed Project would consider to address greenhouse gas (GHG) emissions.
5. Affirms that the Proposed Project would not have the potential to result in significant environmental effects.

5.1 Applicant Proposed Measures

The Moorpark-Newbury 66 kV Subtransmission Line Project (Project) implemented project features during the past construction effort that were designed to avoid, minimize, and/or ensure that potential environmental impacts were avoided or remained at a less than significant level; these features would also be implemented during future construction activities. These project features are presented in Section 3.9.

Therefore, because SCE implemented these project features during past construction activities, and plans to repeat these features in future construction, SCE is not proposing additional, separate APMs and no APMs are provided here.

5.2 Description of Project Alternatives and Impact Analysis

This section compares the construction and operation of the Project with several alternatives. Section 15126.6 (d) of the CEQA Guidelines requires that an environmental impact report (EIR) include "sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the [P]roposed [P]roject." Although a PEA document is not an EIR, this section summarizes the relative impact of each alternative to the preferred alternative for each CEQA environmental issue area.

As discussed in Chapter 2.0: Project Purpose and Need and Objectives, the Project Objectives include:

- Add 66 kV subtransmission line capacity to meet forecasted electrical demand while providing long-term, safe and reliable electrical service in the ENA.
- Maintain sufficient voltage at the 66 kV substation buses during normal and abnormal system conditions.
- Provide greater operational flexibility to transfer load between 66 kV subtransmission lines and substations serving the ENA.
- Maintain and improve system reliability within the ENA.
- Utilize existing facilities constructed to date for the Project to minimize environmental impacts and shorten the construction schedule.
- Utilize existing rights-of-way (ROW) and manage existing ROW in a prudent manner in expectation of possible future needs.
- Design and construct the project in conformance with SCE's applicable engineering, design, and construction standards for substation, transmission, subtransmission, and distribution system projects.

5.2.1 System Alternatives Screening Methodology

CEQA and the CEQA Guidelines (Section 15126.6(a)) require consideration of a reasonable range of alternatives to a project, or to the location of a project, which would feasibly attain most of the Project Objectives but would avoid or substantially lessen any of the significant effects of the project. CEQA Guidelines Section 15126.6 (d) requires that sufficient information about each alternative be included to allow meaningful evaluation, analysis, and comparison with the project. In addition, CEQA Guidelines Section 15126.6 (e) requires the evaluation of a "no project" alternative to compare the impacts of approving the project with the impacts of not approving the project (No Project Alternative).

SCE first evaluates whether the existing electrical infrastructure can be modified to meet the Project Objectives (see Chapter 2.0: Project Purpose and Need and Objectives). If not, then SCE evaluates what new infrastructure is required (System Alternatives) in order to meet the Project Objectives. The following sections describe the methodology for screening System Alternatives. Alternatives developed by these methodologies are then screened for their ability to meet the Project Objectives. The section concludes with a brief description of the System Alternative retained for full analysis in this PEA.

The development of System Alternatives consists of the four-step process summarized below:

Step 1. Perform technical engineering analyses to determine whether modifying electrical equipment at existing facilities could accommodate the forecasted peak electrical demand.

Step 2. If the forecasted electrical demand cannot be accommodated by modifying existing electrical facilities, then develop System Alternatives that include upgrades and considerations of construction of new facilities.

Step 3. Evaluate each System Alternative in consideration of the following criteria:

- The extent to which the System Alternative would substantially meet the forecasted electrical demand; and
- The feasibility of a System Alternative, considering capacity limits, the ability to upgrade the system on existing sites, and economic viability

Step 4. If a System Alternative is not feasible, eliminate it from further consideration. If feasible, the System Alternative is retained for full analysis in the PEA, as required by CPUC General Order (GO) 131-D.

If it is determined that new electrical infrastructure upgrades or additions are required, then System Alternatives are considered as described later in this section.

To meet the need in the ENA, SCE considered the following System Alternatives:

- System Alternative 1 (the Project): Construct a new Moorpark-Newbury 66 kV Subtransmission Line
- System Alternative 2: Reconductor the overhead Moorpark-Newbury tap on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line, and reconductor the majority of the Newbury-Thousand Oaks 66 kV Subtransmission Line to increase capacity
- No Project Alternatives

5.2.2 System Alternative 1: Construct the new Moorpark-Newbury 66 kV Subtransmission Line

To increase the capacity and avoid the projected overload on the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line as well as providing a means of maintaining adequate voltage on the Newbury Substation 66 kV bus during abnormal conditions, System Alternative 1 consists of construction of the new Moorpark-Newbury 66 kV Subtransmission Line. The new 66 kV subtransmission line would be rated at approximately 1,090 A during a normal system configuration and would provide additional capacity to serve the ENA and address the projected 66 kV subtransmission line overload. In addition to providing adequate capacity to the ENA, the new Moorpark-Newbury 66 kV Subtransmission Line would also provide additional long term reliability to serve the ENA.

In the event of a fault on one of the two existing source lines feeding Newbury Substation, the new Moorpark-Newbury 66 kV Subtransmission Line would provide an additional source line to serve the ENA. In addition, the new Moorpark-Newbury 66 kV Subtransmission Line would provide operational flexibility as this new third source line would be available to carry additional load to ensure continued service to the ENA should one of the other two source lines be de-energized for maintenance or in the event of a fault on the line. The components of System Alternative 1 would be as follows:

- Construction of approximately 1,200 feet of new underground 66 kV subtransmission line entirely within Moorpark Substation.
- Construction of approximately 5 miles of the new Moorpark-Newbury 66 kV Subtransmission Line on new TSPs on the south and east sides of SCE's existing Moorpark-Ormond Beach 220 kV ROW.
- Construction of approximately 3 miles of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW. Existing single-circuit lattice steel towers (LSTs) would be replaced with new TSPs; the TSPs would be double-circuited, carrying both the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the new Moorpark-Newbury 66 kV Subtransmission Line. The existing single-circuit Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line in this section would be reconstructed and reconductored to accommodate the installation of the new Moorpark-Newbury 66 kV Subtransmission Line.
- Construction of approximately 1 mile of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW into Newbury Substation. Existing single-circuit wood poles would be replaced with new lightweight steel (LWS) poles; within Newbury Substation, four wood poles would be replaced with four TSPs. The existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line would be reconstructed and transferred to the new LWS poles and TSPs in a double-circuit configuration to accommodate the new Moorpark-Newbury 66 kV Subtransmission Line.
- Construction of new 66 kV subtransmission line positions and associated infrastructure within Moorpark Substation and Newbury Substation to facilitate the termination of the new Moorpark-Newbury 66 kV Subtransmission Line.
- Transfer of existing distribution circuitry and telecommunication facilities to new subtransmission poles as necessary.

5.2.2.1 System Alternative 1 Benefits

System Alternative 1 presents the following benefits:

- System Alternative 1 would add approximately 1,090 A of new 66 kV subtransmission line capacity to serve the ENA, which would be sufficient to avoid any projected overloads on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line during normal operating system conditions for the long term.
- System Alternative 1 would address a forecasted voltage drop of 5.18% that would exceed the acceptable 5% limit on the Newbury Substation 66 kV bus during abnormal system conditions from the loss of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line under peak demand for the long term.
- System Alternative 1 would enhance operational flexibility within the existing Moorpark 66 kV Subtransmission System by adding a third 66 kV subtransmission source line serving Newbury Substation. This third source line would be available to carry additional load to ensure continued service to the ENA should one of the other two source lines serving Newbury Substation be de-energized for maintenance or other switching needs.
- System Alternative 1 would enhance reliability by adding an additional 66 kV subtransmission source line to Newbury Substation for continued reliable service in the event of an abnormal system situation (for example a fault or a planned outage).
- System Alternative 1 would also completely utilize the existing infrastructure installed to date for the Project, thus shortening the construction schedule and minimizing environmental impacts.

5.2.3 System Alternative 2: Reconductor the Overhead Moorpark-Newbury Tap on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line, and Reconductor the Majority of the Newbury-Thousand Oaks 66 kV Subtransmission Line to Increase Capacity

System Alternative 2 would include the following components:

- Reconductor a portion (approximately 7.3 miles) of the existing Moorpark-Newbury tap on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line between Moorpark Substation and Newbury Substation with higher capacity conductors.
- Reconductor the majority (approximately 12.6 miles) of the Newbury-Thousand Oaks 66 kV Subtransmission Line between Newbury Substation and Thousand Oaks Substation with higher capacity conductors.
- Replace, as necessary, existing 66 kV subtransmission structures to accommodate the larger conductors and meet SCE's standards.

- Modify relay protection and substation equipment at Moorpark Substation, Thousand Oaks Substation, and Newbury Substation.

5.2.3.1 System Alternative 2 Benefits

System Alternative 2 presents the following benefits:

- System Alternative 2 would add approximately 170 A of new 66 kV subtransmission line capacity between Moorpark Substation and Newbury Substation in the Moorpark 66 kV Subtransmission System serving the ENA, which would be sufficient to avoid any projected overloads during normal operating system conditions.
- System Alternative 2 would temporarily address a forecasted voltage drop in excess of the acceptable 5% limit at Newbury Substation likely for approximately four years.

5.2.4 No Project Alternatives

SCE also evaluated two No Project Alternatives:

- No Action
- No Action with Infrastructure Removal

5.2.4.1 No Action Project Alternative

Under the No Action Project Alternative, no action would be taken, and in particular no further construction or modification to the existing electrical system would be undertaken, and none of the infrastructure installed during past construction activities would be removed.

5.2.4.2 No Action With Infrastructure Removal Project Alternative

Under the No Action With Infrastructure Removal Project Alternative, no action would be taken to complete the Project, and all infrastructure previously installed as part of the Project would be removed. In addition, poles of dimensions similar to the original infrastructure would be installed to replace those previously installed during past construction, and the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line would be relocated to these new poles.

The infrastructure to be removed would include:

- 22 TSPs (pole locations 1-22);
- The base section of the TSP at pole location 23;
- 30 TSP foundations ranging from 17 to 46 feet in depth and with diameters ranging from 6 to 8 feet(pole locations 1-25 and 33-37);
- The slurry from three foundation holes ranging from 17 to 46 feet in depth and with diameters ranging from 6 to 8 feet (pole locations 29-31);
- 27 LWS poles and the portions of the newly installed Moorpark-Newbury 66 kV Subtransmission Line 954 SAC conductors currently installed on those LWS poles.
- The infrastructure installed at Moorpark Substation and Newbury Substation as described in Sections 3.5.4.1.1 and 3.5.4.1.2.

The removal of this infrastructure would be accomplished as follows:

- **TSP removal.** For each TSP to be removed, an adjacent work area would be required. TSP removal activities would use the existing, previously disturbed work areas established in 2010 and 2011 for TSP installation; these existing work areas would be re-graded and/or cleared of vegetation as required to provide a reasonably level and vegetation-free surface for structure removal. A crane would be positioned near the TSP. A cable from the crane would be attached to the top of the TSP, and then the crane would lift the top section of the TSP from the base section. After removal of the top section, the cable from the crane would be attached to the base section, and the base section would be unbolted from the concrete foundation and removed. The top and base sections would then be loaded on a trailer and taken to a storage site and stored until a suitable project is identified for their use or SCE determines the best course of action is to recycle the steel.
- **Foundation removal.** TSP foundation removal typically involves removing the foundation to approximately 2 feet below ground. However, if required, the entire foundation could be removed. Removal of the TSP foundations would likely be accomplished by breaking the concrete using jack hammers or a concrete breaker mounted on an excavator or similar vehicle. The broken concrete, bolts, and rebar would likely be removed from the foundation hole by an excavator or by hand. After removal, the resulting hole would be filled with soil, compacted, and smoothed to match the surrounding grade. Removed foundation materials would be properly disposed in accordance with applicable laws.
- **Slurry removal.** Slurry removal typically involves removing the slurry to approximately 2 feet below ground. However, if required, the entirety of the slurry could be removed. The slurry would be broken up using an auger, jack hammers, or a concrete breaker mounted on an excavator or similar vehicle. The broken pieces of slurry would be removed from the foundation hole. After removal of the slurry, the resulting hole would be filled with soil, compacted, and smoothed to match the surrounding grade. Removed slurry would be properly disposed in accordance with applicable laws.

5.2.5 System Alternatives Analysis and Rationale for Evaluation or Elimination of Alternatives

5.2.5.1 System Alternative 1

System Alternative 1 (the Project) would address the forecasted 66 kV subtransmission line overload during normal system conditions as well as the forecasted voltage drop during an abnormal system event at Newbury Substation by adding approximately 1,090 A of new line capacity to the Moorpark 66 kV Subtransmission System in order to serve the ENA. This addition of 1,090 A would provide the most additional capacity of any of the System Alternatives considered by SCE and would be considered a long-term and more complete solution. This Alternative would provide over five times the capacity as System Alternative 2. System Alternative 2 is likely to only remedy the voltage drop concern for a few years, by which time demand in the ENA has the potential to increase to the point where additional voltage drop concerns appear. System Alternative 2 would also provide only a limited solution from a line capacity perspective as the overload under normal conditions is likely to return within a few years, even with System Alternative 2 in service. In contrast, System Alternative 1 would provide a much longer-term solution by virtue of the substantial amount of additional capacity it would provide.

System Alternative 1 also would provide greater operational flexibility by creating a third 66 kV subtransmission line into the Newbury Substation. Having three source lines into Newbury Substation provides greater operating flexibility within the Moorpark 66 kV Subtransmission System to ensure continuity of service during planned and unplanned outages because three lines provide more options for switching than two lines. This would facilitate scheduling of maintenance outages as well as provide increased options of switching during emergency events.

The additional source line to Newbury Substation associated with System Alternative 1 would also provide an additional subtransmission path for continued reliable service in the event of an abnormal system situation (such as a fault or a planned outage). A third line would reduce the amount of transient voltage drop seen by customers during fault conditions at the Newbury Substation 66 kV bus as well as steady state voltage drop during abnormal events during peak conditions.

System Alternative 1 would also completely utilize the infrastructure installed to date to shorten the construction schedule and minimize environmental impacts. For these reasons, System Alternative 1 was retained for analysis in the PEA.

5.2.5.2 System Alternative 2

Although System Alternative 2 adds capacity to the Moorpark-Newbury tap of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line, and would address a forecasted voltage drop in excess of the acceptable 5% limit at the Newbury Substation 66 kV bus for a few years, this alternative would be less preferable for a number of reasons. For example:

- The reconductoring of the Moorpark-Newbury tap of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line would increase the capacity by approximately 170 A, which is substantially less than the 1090 A associated with System Alternative 1. It is anticipated that this additional 170 A would only be sufficient to accommodate future load growth for a few years, and ultimately a third 66 kV subtransmission line from Moorpark Substation to Newbury Substation (such as that proposed as System Alternative 1) would still be required.
- System Alternative 2 is likely to provide a short-term correction of the exceedance of the 5% voltage drop limit, as compared to System Alternative 1, which is anticipated to provide greater relief for a much longer period of time.
- System Alternative 2 would not completely utilize the infrastructure installed to date or shorten the construction schedule. Given that the length of reconductoring involved is almost twice that as under System Alternative 1, it is assumed that environmental impacts could be greater than System Alternative 1.

For these reasons, System Alternative 2 was eliminated, and is not analyzed in the PEA.

5.2.5.3 No Project Alternatives

Although work was initiated on the Project as described further in Chapter 3.0: Project Description, the Project is not fully completed. Some minor benefits not related to the Project Objectives have been achieved to date from the replacement of older facilities with newer facilities.[57] Despite the fact that structures on the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line have been replaced, without completion of the entire Project, the work performed to date has not resulted in an increase to the overall 66 kV subtransmission line capacity or the ability to address a forecasted voltage drop in excess of the acceptable 5% limit. Therefore, neither of the No Project Alternatives would meet the Project's Objectives, and if forecasted overloads were to occur, SCE could potentially drop load in the ENA.

Similarly, the No Action With Infrastructure Removal Project Alternative would not meet the Project's Project Objectives, and if forecasted overloads were to occur, SCE could potentially drop load in the ENA.

[57] Please refer to Section 2.2 for a description of the Project Objectives to be achieved by the Project. The minor benefits realized by replacement of older facilities with newer facilities include the increased lifespan of the newly-installed LWS poles, which are resistant to pest and bird damage. These new poles are expected to maintain or improve the reliability of the electrical system.

For these reasons, both the No Action Project Alternative and No Action With Infrastructure Removal Project Alternative were eliminated and are not analyzed in the PEA.

5.2.6 Subtransmission Line Route Alternatives

In 2005, SCE initiated the planning for the Moorpark-Newbury 66 kilovolt (kV) Subtransmission Line Project (Project). As presented in Chapter 1.0: PEA Summary, the Project began under the assumption that it was exempt from CPUC permitting pursuant to GO 131-D Section III.B.1.g.[58] For this reason, and because the Project was designed by SCE to be constructed entirely within existing utility easements or on SCE properties (consistent with the Garamendi Principles[59]), SCE did not prepare a PEA or other environmental analysis of routing alternatives. However, for purposes of this PEA, Chapter 5.0: Detailed Discussion of Significant Alternatives provides a discussion of a reasonable range of alternatives given the existing setting. The Subtranmission Line Route Alternatives evaluated in further detail are shown in Figure 5.2-1 and listed below:

- Subtransmission Line Route Alternative 1, Construct New and Reconstruct Existing 66 kV Facilities Within Existing Utility ROW on the South and East Sides of Moorpark-Ormond Beach 220 kV Corridor
- Subtransmission Line Route Alternative 2, Locate Portion of New 66 kV Subtransmission Line on the West Side of Moorpark-Ormond Beach 220 kV Corridor
- Subtransmission Line Route Alternative 3, Construct New 66 kV Subtransmission Line in Existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW and in New ROW

[58] GO 131-D Section III.B.1.g states: "Power line facilities or substations to be located in an existing franchise, road-widening setback easement, or public utility easement; or in a utility corridor designated, precisely mapped and officially adopted pursuant to law by federal, state, or local agencies for which a final Negative Declaration or EIR finds no significant unavoidable environmental impacts."

[59] Senate Bill 2431, Chapter 1457, Statutes of 1988 (State Legislature finds that transmission facilities should be located within existing ROW where technically and economically justifiable).

5.2.6.1 Subtransmission Line Route Alternative 1, Construct New and Reconstruct Existing 66 kV Facilities within Existing Utility ROW on the South and East Sides of Moorpark-Ormond Beach 220 kV Corridor

Subtransmission Line Route Alternative 1 is located between SCE's Moorpark Substation and Newbury Substation within a portion of SCE's existing Moorpark-Ormond Beach 220 kV Transmission Line ROW (to the south and east of the existing 220 kV structures) and within a portion of SCE's existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW, and includes the following major components:

- Construction of approximately 1,200 feet of new underground 66 kV subtransmission line entirely within Moorpark Substation.
- Construction of approximately 5 miles of the new Moorpark-Newbury 66 kV Subtransmission Line on new TSPs on the south and east sides of SCE's existing Moorpark-Ormond Beach 220 kV ROW.
- Construction of approximately 3 miles of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW. Existing single-circuit lattice steel towers (LSTs) would be replaced with new TSPs; the TSPs would be double-circuited, carrying both the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the new Moorpark-Newbury 66 kV Subtransmission Line. The existing single-circuit Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line in this section would be reconstructed and reconductored to accommodate the installation of the new Moorpark-Newbury 66 kV Subtransmission Line.
- Construction of approximately 1 mile of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW into Newbury Substation. Existing single-circuit wood poles would be replaced with new lightweight steel (LWS) poles; within Newbury Substation, four wood poles would be replaced with four TSPs. The existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line would be reconstructed and transferred to the new LWS poles and TSPs in a double-circuit configuration to accommodate the new Moorpark-Newbury 66 kV Subtransmission Line.
- Construction of new 66 kV subtransmission line positions and associated infrastructure within Moorpark Substation and Newbury Substation to facilitate the termination of the new Moorpark-Newbury 66 kV Subtransmission Line.
- Transfer of existing distribution circuitry and telecommunication facilities to new subtransmission poles as necessary.

5.2.6.2 Subtransmission Line Route Alternative 2, Locate Portion of New 66 kV Subtransmission Line on the West Side of Moorpark-Ormond Beach 220 kV Corridor

Subtransmission Line Route Alternative 2 was developed from information contained in protest letters to AL 2272-E. All work in Project Sections 3 and 4 included in Subtransmission Line Route Alternative 2 is the same as for Subtransmission Line Route Alternative 1. Subtransmission Line Route Alternative 2 involves locating a portion of the new Moorpark-Newbury 66 kV Subtransmission Line on the west side of the Moorpark-Ormond Beach 220 kV Transmission Line ROW instead of on the east side of the ROW, as proposed by SCE. In all other respects, lengths and directions would be similar to those described in Subtransmission Line Route Alternative 1.[60] In addition, SCE would remove portions of the infrastructure installed during past construction activities that would not be needed for Alternative 2.

5.2.6.3 Subtransmission Line Route Alternative 3, Construct New 66 kV Subtransmission Line in Existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW and in New ROW

A number of protest letters to AL 2272-E requested SCE consider a new circuit alternative that could be constructed "in the existing…66 kV corridor…approximately 1800 feet to the west of the current proposed" route located in the Moorpark-Ormond Beach 220 kV Transmission Line ROW.[61] This suggestion is incorporated as Subtransmission Line Route Alternative 3 in this PEA.

Subtransmission Line Route Alternative 3 would involve constructing a new pole line on the south side of SR-118, replacing wood poles with new LWS poles in the Moorpark-Newbury-

[60] Note, other iterations of Subtransmission Line Route Alternative 2 were described in protest letters. These iterations included: (a) temporarily locating the new 66 kV subtransmission line to the west side of the Moorpark-Ormond Beach 220 kV ROW until such time that SCE needs the ROW for future system expansion (at which time the protests envisioned SCE would then relocate the 66 kV subtransmission line to the SCE- proposed location on the east side of the ROW); and (b) undergrounding the portion of the new 66 kV subtransmission line in the Santa Rosa Valley portion of the Moorpark-Ormond Beach 220 kV ROW. However, constructing the line on the west side, and later relocating the line back to the east side, particularly as the "temporary" relocation to the west side presents numerous potential engineering and maintenance challenges as discussed in this PEA, is not a reasonable option given the likely cost, as well as the potential additional environmental impacts that such duplicative and repetitive work would cause. In addition, undergrounding would present engineering challenges given the steep terrain on either side of the Valley, and would require additional ground disturbance. The CPUC ruled in Decision (D.) 08-12-023 (SCE's El Casco System Project), that "there is a serious question of reasonableness of undergrounding to benefit one community at the expense of all of SCE's ratepayers, especially since there are no technical or other requirements that would make this an appropriate project for undergrounding." In D.08-12-023, the CPUC also noted that with respect to requests that a proposed subtransmission line be undergrounded, such "arguments would apply to any community adjacent to a subtransmission line, and it would be prohibitively expensive to require underground construction for every subsequent subtransmission line."

[61] SCE assumes that the 66 kV corridor referred to by the protesters is where the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line is located.

Pharmacy 66 kV Subtransmission Line ROW between SR-118 and Project Section 3, and adding a second circuit to those new LWS poles to carry the new Moorpark-Newbury 66 kV Subtransmission Line (Figure 5.2-1). Subtranmission Line Route Alternative 3 may require acquisition of new ROW along the south side of SR-118. All work in Project Sections 3 and 4 included in Subtransmission Line Route Alternative 3 is the same as for Subtransmission Line Route Alternative 1. In addition, SCE would remove portions of the infrastructure installed during past construction activities that would not be needed for Alternative 3.

5.2.7 Subtransmission Line Route Alternatives Analysis and Rationale for Evaluation or Elimination of Alternatives

Subtransmission Line Route Alternatives 1, 2 and 3 all would meet the Purpose and Need of the Project. However, only Subtransmission Line Route Alternative 1 most completely achieves the Project Objectives for the Project and avoids the technical, environmental, and reliability impacts and challenges (both present and future) associated with the other Subtransmission Line Route Alternatives. Both Subtransmission Line Route Alternatives 2 and 3 would require the purchase and installation of new infrastructure, as well as removal of existing infrastructure previously installed as part of the Project. These two alternatives also would generate unnecessary additional environmental impacts and construction inefficiencies as they would not utilize the entirety of the infrastructure that has already been installed in Project Sections 2, 3 and 4. Therefore, Subtransmission Line Route Alternatives 2 and 3 would not achieve as many of the Project Objectives as Alternative 1.

Further, neither Subtransmission Line Route Alternative 2 nor Subtransmission Line Route Alternative 3 could be constructed according to SCE's typical engineering and construction practices. First, Subtransmission Line Route Alternative 2 would require two unnecessary subtransmission line crossings under existing transmission lines, which is counter to typical engineering practices and CPUC General Order (GO) 95, Section III, Rule 31.3, Conflicts and Crossings. Additionally, Subtransmission Line Route Alternative 2 could result in clearance issues with the existing 220 kV transmission lines. In order to maintain required clearances, 220 kV towers may need to be replaced with taller structures, or the new 66 kV subtransmission line placed underground through the proposed crossings in the ROW to mitigate clearance issues (any of which could also create additional unforeseen environmental impacts). Further, Subtransmission Line Route Alternative 3 would require subtransmission lines being placed on both sides of SR-118, which is counter to SCE's current practice/planning efforts and CPUC GO 95, Section III, Rule 31.3. This would be necessary because the existing 66 kV poles located on the north side of SR-118 are currently double-circuit 66 kV circuits

Constructing within an existing ROW, while also preserving space within that ROW for potential future facilities (as would be the case if Subtransmission Line Route Alternative 1 were developed), is consistent with the policy of the CPUC, as reflected in the Garamendi Principles, which encourage use of existing ROW when construction of new lines is required. Collocating electric facilities in the same ROW maximizes the use of utility property and easements and minimizes the potential environmental impacts that could be caused if each line were to be constructed in a separate ROW. As discussed above, Subtransmission Line

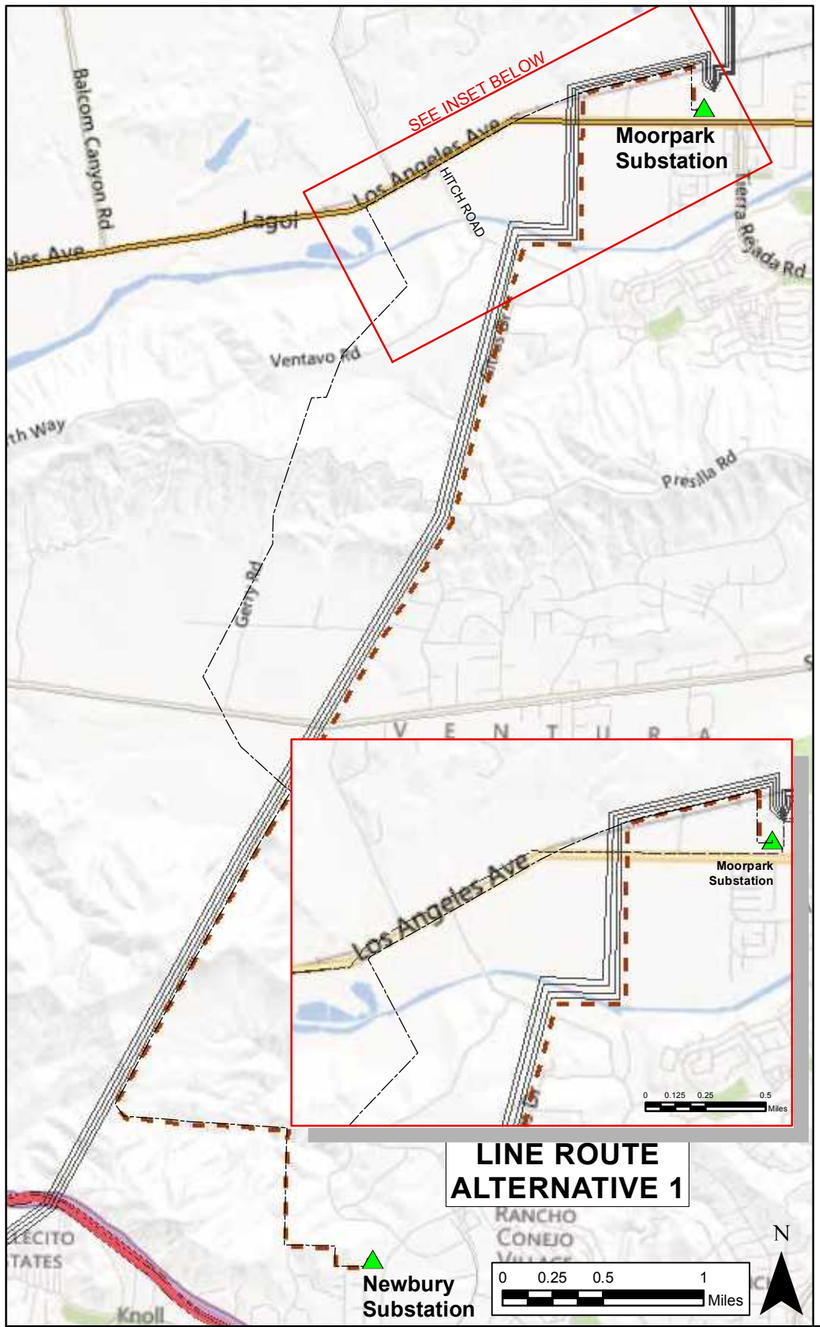
Route Alternative 2 would not be consistent with these principles because it would inhibit further use of the existing Moorpark-Ormond Beach 220 kV Corridor. Similarly, Subtransmission Line Route Alternative 3 would not be consistent with these principles because it would potentially require SCE to obtain new ROW along the south side of SR-118 from Caltrans.

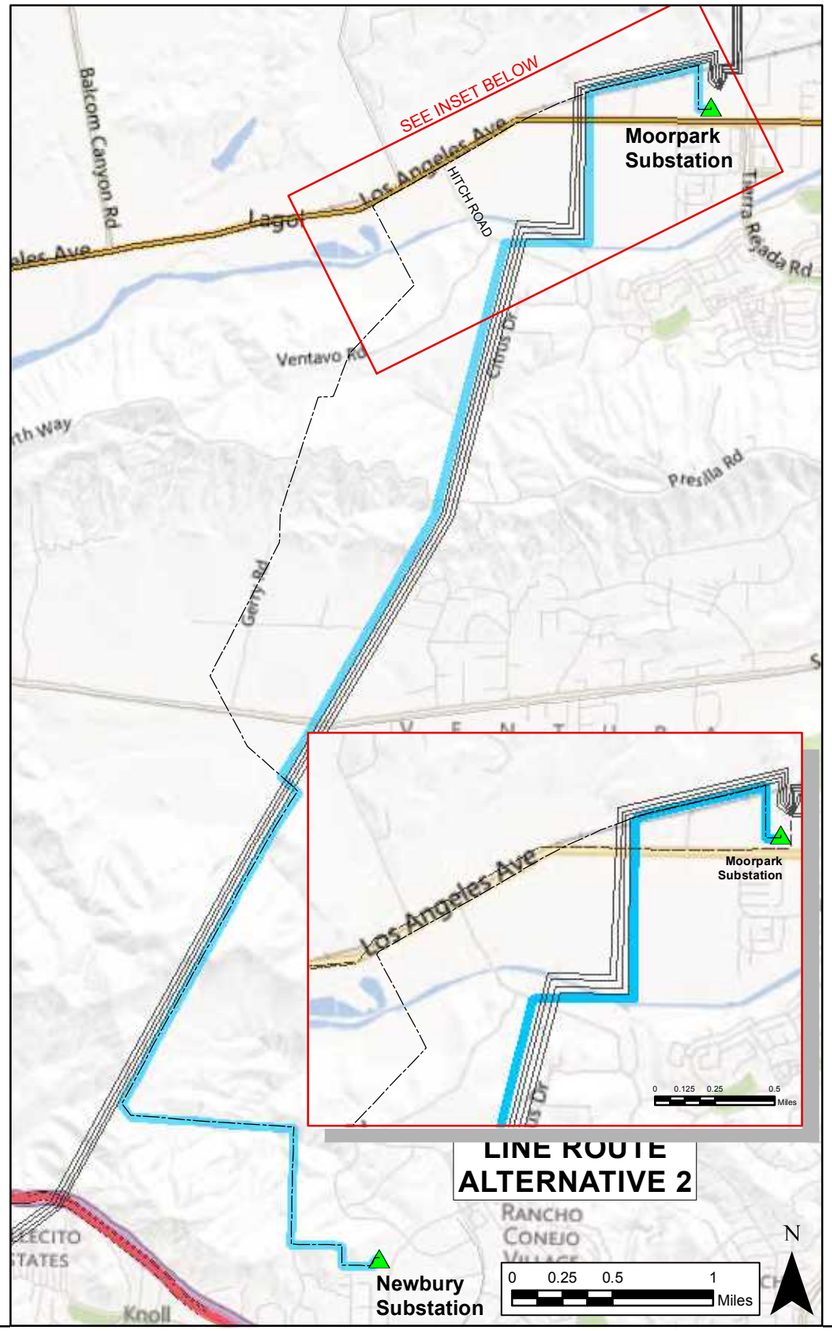
For these reasons, Subtransmission Line Route Alternative 1 was retained for analysis in the PEA, and Subtransmission Line Route Alternative 2 and Subtransmission Line Route Alternative 3 were eliminated and are not analyzed in the PEA.

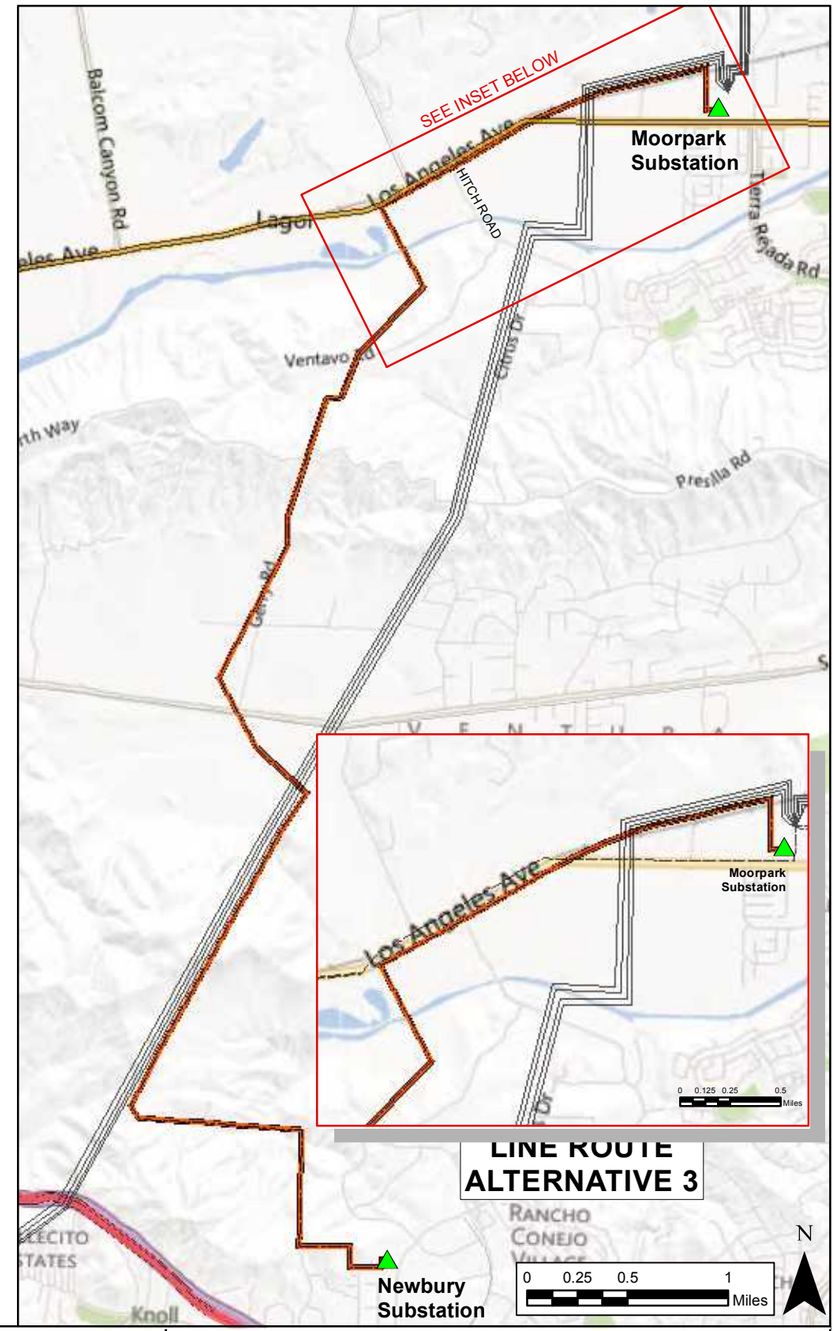
5.2.8 Alternatives Analysis Conclusion

As presented in the above discussions, System Alternative 2, both No Project Alternatives, and Subtransmission Line Route Alternatives 2 and 3 would not meet the Project Objectives of the Project as completely as System Alternative 1 and Subtransmission Line Route Alternative 1 which, combined, represent the Project as described in Chapter 3.0: Project Description.

Section 15126.6, subdivision (a) and (f)(2)(A) of the CEQA Guidelines does not require review of alternatives when a project will not result in significant environmental impacts after mitigation. No significant impacts have been identified that could result from the implementation of System Alternative 1 and Subtransmission Line Route Alternative 1 (combined, the Project as described in Chapter 3.0: Project Description). Therefore, consistent with Section 15126.6, subdivision (a) and (f)(2)(A), no detailed environmental assessment of System Alternative 2, both No Project Alternatives, and Subtransmission Line Route Alternatives 2 and 3 was conducted.







- Substation
- 220 kV Transmission Lines
- Subtransmission Lines
- Project Subtransmission Lines
- Line Route Alternative 2
- Line Route Alternative 3
- Freeways
- Highways
- Major Roads

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VENTURA COUNTY, CALIFORNIA
PROPONENT'S ENVIRONMENTAL ASSESSMENT

ALTERNATIVE SUBTRANSMISSION LINE ROUTES

SOUTHERN CALIFORNIA EDISON®
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ARCADIS
Infrastructure · Water · Environment · Buildings

Figure
5.2-1

ARCADIS: SCEMN_059, 10/09/13, R06

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5.3 Growth-Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines states that environmental documents should "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly in the surrounding environment..."

A project could be considered to have growth-inducing effects if it:

- Either directly or indirectly fosters economic or population growth or the construction of additional housing in the surrounding area
- Removes obstacles to population growth
- Requires the construction of new community facilities that could cause significant environmental effects
- Encourages and facilitates other activities that could significantly affect the environment, either individually or cumulatively

An EIR must describe any growth-inducing impacts of a proposed project including "the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment" (Pub. Resources Code § 21100(b)(5); CEQA Guidelines §§ 15126(d), 15126.2(d)). Examples of projects that are growth-inducing are the expansion of urban services into a previously unserved or under-served area, the creation or extension of transportation links, and the removal of major obstacles to growth. It is important to note that these direct forms of growth have secondary effects including expanding the size of local markets and attracting additional economic activity to the area.

Typically, the growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population above what is assumed in local and regional land use plans, or in projections made by regional planning authorities. Significant growth-inducing impacts could also occur if the project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies.

Would the project foster economic or population growth, either directly or indirectly, in the surrounding environment?

Assessment Summary: No Impact

The purpose of the Project is to address forecasted overloads on the Moorpark-Newbury tap of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line. In addition, the Project also addresses reliability and operational flexibility in the ENA. The Project is not designed to provide new electrical service that might foster or induce economic growth.

The Project would not result in population growth through direct or indirect employment of workers needed to construct and operate the facilities. The construction labor demands of the Project would be met by existing SCE employees or by hiring contractors. The small number of positions required during the short future construction period would not directly or indirectly induce population growth in the area.

Operation activities would typically be conducted by current SCE personnel or its contractors, and the Project would not require the hiring of additional operations personnel. Therefore, operational activities of the Project would not directly or indirectly induce population growth in the area. The Project infrastructure generally would be unmanned during operation with the exception of some occasional activities such as routine maintenance.

Adequate infrastructure and services, including hotels and motels, can be found in the City of Thousand Oaks, City of Camarillo, City of San Buenaventura (Ventura) and other localities to meet the needs of temporary workers; the short-term construction period would not result in the relocation of workers. Therefore, construction of the Project would not increase the local population, adversely affect the housing market, or induce economic or population growth by creating new opportunities for local industry or commerce.

Would the project cause an increase in population that could further tax existing community service facilities (i.e., schools, hospitals, fire, police, etc.)?

Assessment Summary: No Impact

As presented in Section 4.13, the small number of positions required during the short construction phase would not directly nor indirectly induce any population growth. Additionally, operations and maintenance activities would be conducted by current SCE personnel, and the Project would not require the hiring of any additional operations personnel. Therefore, neither construction nor operation of the Project would directly or indirectly cause an increase in population, and no impacts would occur under this criterion.

Would the project remove obstacles to population growth?

Assessment Summary: No Impact

The purpose of the Project is to address forecasted overloads on the Moorpark-Newbury tap of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line. In addition, the Project also addresses reliability and operational flexibility in the ENA. The Project is not designed to provide new electrical service to areas that are currently unserved.

Growth in Ventura County, the City of Moorpark, and the City of Thousand Oaks is planned and regulated by applicable local general plans and planning and zoning ordinances. The provision of electricity is generally not considered an obstacle to growth nor does the availability of electrical capacity by itself normally ensure or encourage growth. Other factors such as economic conditions, land availability, population trends, availability of water supply or sewer services, and local planning policies have a more direct effect on growth.

The Project would not remove obstacles to population growth. Therefore, no impacts would occur under this criterion as a result of the Project.

Would the project encourage or facilitate other activities that would cause population growth that could significantly affect the environment, either individually or cumulatively?

Assessment Summary: No Impact

The purpose of the Project is to address forecasted overloads on the Moorpark-Newbury tap of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line. In addition, the Project also addresses reliability and operational flexibility in the ENA. The Project has not been designed to, and would not, encourage or facilitate other activities that would encourage or facilitate other activities that would cause population growth that could significantly affect the environment, either individually or cumulatively. Therefore, there would be no impact under this criterion.

5.4 Suggested Applicant Proposed Measures to Address Greenhouse Gas Emissions

Since 2010, GHGs have been incorporated into the CEQA Guidelines Appendix G checklist as an additional environmental issue area. Potential GHG impacts resulting from the Project are discussed within Section 4.7 of this PEA.

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6.0 Other Process-Related Data Needs

In accordance with the requirements of the California Public Utilities Commission's (CPUC's) "Working Draft Proponent's Environmental Assessment (PEA) Checklist for Transmission Line and Substation Projects" dated November 2008 (PEA Checklist), and CPUC General Order 131-D, a list that includes all parcels within 300 feet of any component of the Moorpark-Newbury 66 kV Subtransmission Line Project was prepared and is provided below. The list includes the Assessor's Parcel Number, owner mailing address, and the physical address of each property within the 300-foot radius. Because the Project involved prior proceedings on SCE's Advice Letter 2272-E, also included in this Chapter is a list of persons who were involved in that proceeding. Both lists are intended to allow for future public noticing of all those identified with regard to the Project.

No other process related data needs were identified for this Proponent's Environmental Assessment (PEA). This PEA contains information responsive to the requirements of CPUC General Order 131-D, Appendix G of the State CEQA Guidelines and the CPUC's PEA Checklist. No significant and unavoidable impacts would result from Project implementation, and all potential impacts identified for the Project would be less than significant.

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
163-0-130-330	PO BOX 1473	CAMARILLO	CA	93011	N/A	N/A	N/A	93012
163-0-130-340	PO BOX 1473	CAMARILLO	CA	93011	N/A	N/A	N/A	93012
163-0-130-360	1492 LA CULEBRA CIR	CAMARILLO	CA	93012	N/A	N/A	N/A	93012
163-0-130-385	PO BOX 800	ROSEMEAD	CA	91770	N/A	N/A	N/A	93012
163-0-130-395	PO BOX 800	ROSEMEAD	CA	91770	N/A	N/A	N/A	93012
163-0-130-540	9415 SANTA ROSA RD	SANTA ROSA VALLEY	CA	93012	N/A	N/A	N/A	N/A
163-0-130-550	9415 SANTA ROSA RD	SANTA ROSA VALLEY	CA	93012	N/A	N/A	N/A	N/A
163-0-130-560	9415 SANTA ROSA RD	SANTA ROSA VALLEY	CA	93012	N/A	N/A	N/A	N/A
163-0-170-115	4279 E HUENEME RD	OXNARD	CA	93033	N/A	CAMARILLO	CA	93012
163-0-170-125	PO BOX 1473	CAMARILLO	CA	93011	N/A	CAMARILLO	CA	93012
163-0-180-060	840 COUNTY SQUARE	VENTURA	CA	93003	N/A	CAMARILLO	CA	93012

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
	DR # 3							
163-0-180-095	PO BOX 1473	CAMARILLO	CA	93011	202 CAMARILLO GROVE RD	CAMARILLO	CA	93012
163-0-200-010	4287 VENTAVO RD	MOORPARK	CA	93021	4287 VENTAVO RD	MOORPARK	CA	93021
163-0-200-020	104 VENTURA WAY	CHATSWORTH	CA	91311	4260 VENTAVO RD	MOORPARK	CA	93021
163-0-200-030	10300 PRESILLA RD	SANTA ROSA VALLEY	CA	93012	VENTAVO DR	CAMARILLO	CA	93021
163-0-200-100	11505 CHESTNUT RIDGE ST	MOORPARK	CA	93021	4130 VENTAVO RD	MOORPARK	CA	93021
163-0-200-210	4241 BERKSHIRE ST	OXNARD	CA	93033	N/A	N/A	N/A	N/A
163-0-200-220	4057 BLAIRWOOD DR	MOORPARK	CA	93021	4386 HITCH BLVD	MOORPARK	CA	93021
163-0-200-235	23475 LONG VALLEY RD	WOODLAND HILLS	CA	91367	N/A	CAMARILLO	CA	N/A
163-0-200-240	4241 BERKSHIRE ST	OXNARD	CA	93033	N/A	N/A	N/A	N/A
163-0-200-250	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	N/A	N/A	N/A
163-0-210-120	2809 N REDONDO AVE	CAMARILLO	CA	93010	3070 CERZANNE DR	MOORPARK	CA	93021
163-0-210-130	10255 PRESILLA RD	SANTA ROSA VALLEY	CA	93012	CERZANNE DR	CAMARILLO	CA	93021
163-0-210-140	10255 PRESILLA RD	SANTA ROSA VALLEY	CA	93012	N/A	CAMARILLO	CA	93021
163-0-210-260	235 SANDBERG ST	THOUSAND OAKS	CA	91360	N/A	CAMARILLO	CA	93012
163-0-210-270	10255 PRESILLA RD	SANTA ROSA VALLEY	CA	93012	10255 PRESILLA RD	SANTA ROSA VALLEY	CA	93012
163-0-210-280	10275 PRESILLA RD	SANTA ROSA VALLEY	CA	93012	10275 PRESILLA RD	SANTA ROSA VALLEY	CA	93012
163-0-210-295	11648 BARRANCA RD	SANTA ROSA VALLEY	CA	93012	10248 PRESILLA RD	MOORPARK	CA	93012
235-0-280-015	1120 N ST	SACRAMENTO	CA	95814	N/A	N/A	N/A	91320

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
504-0-010-035	PO BOX 70	MOORPARK	CA	93020	10742 W LOS ANGELES AVE	MOORPARK	CA	93021
504-0-010-055	PO BOX 800	ROSEMEAD	CA	91770	N/A	MOORPARK	CA	93021
504-0-010-085	PO BOX 70	MOORPARK	CA	93020	N/A	MOORPARK	CA	93021
504-0-010-095	PO BOX 800	ROSEMEAD	CA	91770	11960 W LOS ANGELES AVE	MOORPARK	CA	93021
504-0-010-115	PO BOX 800	ROSEMEAD	CA	91770	N/A	N/A	N/A	93021
504-0-010-135	PO BOX 800	ROSEMEAD	CA	91770	N/A	N/A	N/A	93021
504-0-010-145	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	N/A	N/A	93021
504-0-010-175	23475 LONG VALLEY RD	WOODLAND HILLS	CA	91367	N/A	N/A	N/A	93021
504-0-010-190	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	N/A	N/A	93021
504-0-010-205	PO BOX 70	MOORPARK	CA	93020	N/A	N/A	N/A	93021
504-0-010-215	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	N/A	N/A	93021
504-0-010-225	PO BOX 800	ROSEMEAD	CA	91770	N/A	N/A	N/A	93021
504-0-010-235	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	N/A	N/A	93021
504-0-010-245	PO BOX 800	ROSEMEAD	CA	91770	N/A	N/A	N/A	93021
504-0-010-255	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	N/A	N/A	93021
504-0-010-280	PO BOX 70	MOORPARK	CA	93020	N/A	N/A	N/A	93021
504-0-021-115	PO BOX 800	ROSEMEAD	CA	91770	N/A	MOORPARK	CA	93021
504-0-021-165	PO BOX 800	ROSEMEAD	CA	91770	N/A	MOORPARK	CA	93021
504-0-021-245	930 HARRISON ST	MONTEREY	CA	93940	11018 W LOS ANGELES AVE	MOORPARK	CA	93021
504-0-053-395	4942 HOLLYGLEN CT	MOORPARK	CA	93021	4942 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-405	4950 HOLLYGLEN CT	MOORPARK	CA	93021	4950 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-415	4958 HOLLYGLEN CT	MOORPARK	CA	93021	4958 HOLLYGLEN	MOORPARK	CA	93021

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
					CT			
504-0-053-425	4970 HOLLYGLEN CT	MOORPARK	CA	93021	4970 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-435	4978 HOLLYGLEN CT	MOORPARK	CA	93021	4978 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-445	4986 HOLLYGLEN CT	MOORPARK	CA	93021	4986 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-455	4998 HOLLYGLEN CT	MOORPARK	CA	93021	4998 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-465	4999 HOLLYGLEN CT	MOORPARK	CA	93021	4999 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-475	4987 HOLLYGLEN CT	MOORPARK	CA	93021	4987 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-485	4979 HOLLYGLEN CT	MOORPARK	CA	93021	4979 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-495	4971 HOLLYGLEN CT	MOORPARK	CA	93021	4971 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-505	4959 HOLLYGLEN CT	MOORPARK	CA	93021	4959 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-515	4391 CLEARWOOD RD	MOORPARK	CA	93021	4951 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-525	4943 HOLLYGLEN CT	MOORPARK	CA	93021	4943 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-053-535	4935 HOLLYGLEN CT	MOORPARK	CA	93021	4935 HOLLYGLEN CT	MOORPARK	CA	93021
504-0-060-015	4957 MIRA SOL DR	MOORPARK	CA	93021	4957 MIRA SOL DR	MOORPARK	CA	93021
504-0-060-025	4919 MIRA SOL DR	MOORPARK	CA	93021	4919 MIRA SOL DR	MOORPARK	CA	93021
504-0-060-235	4968 MIRA SOL DR	MOORPARK	CA	93021	4968 MIRA SOL DR	MOORPARK	CA	93021
504-0-060-245	4998 MIRA SOL DR	MOORPARK	CA	93021	4998 MIRA SOL DR	MOORPARK	CA	93021
504-0-060-275	4958 MIRA SOL DR	MOORPARK	CA	93021	4958 MIRA SOL DR	MOORPARK	CA	93021

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
504-0-071-175	4859 AVEDON RD	MOORPARK	CA	93021	4859 AVEDON RD	MOORPARK	CA	93021
504-0-071-185	4867 AVEDON RD	MOORPARK	CA	93021	4867 AVEDON RD	MOORPARK	CA	93021
504-0-071-195	4873 AVEDON RD	MOORPARK	CA	93021	4873 AVEDON RD	MOORPARK	CA	93021
504-0-071-205	4881 AVEDON RD	MOORPARK	CA	93021	4881 AVEDON RD	MOORPARK	CA	93021
504-0-071-215	4887 AVEDON RD	MOORPARK	CA	93021	4887 AVEDON RD	MOORPARK	CA	93021
504-0-071-225	PO BOX 650043	DALLAS	TX	75265	4893 AVEDON RD	MOORPARK	CA	93021
504-0-071-235	4870 TALMADGE RD	MOORPARK	CA	93021	4870 TALMADGE RD	MOORPARK	CA	93021
504-0-071-245	4862 TALMADGE RD	MOORPARK	CA	93021	4862 TALMADGE RD	MOORPARK	CA	93021
504-0-071-255	2421 LEEWARD CIR	THOUSAND OAKS	CA	91361	4856 TALMADGE RD	MOORPARK	CA	93021
504-0-072-015	4861 TALMADGE RD	MOORPARK	CA	93021	4861 TALMADGE RD	MOORPARK	CA	93021
504-0-072-185	4860 AVEDON RD	MOORPARK	CA	93021	4860 AVEDON RD	MOORPARK	CA	93021
504-0-091-105	4879 PENROSE AVE	MOORPARK	CA	93021	4879 PENROSE AVE	MOORPARK	CA	93021
504-0-091-115	4883 PENROSE AVE	MOORPARK	CA	93021	4883 PENROSE AVE	MOORPARK	CA	93021
504-0-091-125	4891 PENROSE AVE	MOORPARK	CA	93021	4891 PENROSE AVE	MOORPARK	CA	93021
504-0-091-135	4897 PENROSE AVE	MOORPARK	CA	93021	4897 PENROSE AVE	MOORPARK	CA	93021
504-0-091-145	11803 NIGHTINGALE ST	MOORPARK	CA	93021	11803 NIGHTINGALE ST	MOORPARK	CA	93021
504-0-091-155	11807 NIGHTINGALE ST	MOORPARK	CA	93021	11807 NIGHTINGALE ST	MOORPARK	CA	93021
504-0-091-165	11813 NIGHTINGALE ST	MOORPARK	CA	93021	11813 NIGHTINGALE ST	MOORPARK	CA	93021
504-0-091-175	11817 NIGHTINGALE ST	MOORPARK	CA	93021	11817 NIGHTINGALE ST	MOORPARK	CA	93021
505-0-010-010	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	MOORPARK	CA	93021
505-0-010-330	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	N/A	N/A	93021
505-0-010-340	4302 HITCH BLVD	MOORPARK	CA	93021	4302 HITCH BLVD	MOORPARK	CA	93021
505-0-010-350	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	N/A	N/A	93021

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
505-0-010-385	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	MOORPARK	CA	93021
505-0-010-410	4310 HITCH BLVD	MOORPARK	CA	93021	4310 HITCH BLVD	MOORPARK	CA	93021
505-0-010-420	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	N/A	N/A	93021
505-0-010-470	3303 KIMBER DR STE B	NEWBURY PARK	CA	91320	4298 HITCH BLVD	MOORPARK	CA	93021
505-0-010-480	2890 FELTON ST	NEWBURY PARK	CA	91320	4298 HITCH BLVD	MOORPARK	CA	93021
505-0-030-010	4305 HITCH BLVD	MOORPARK	CA	93021	4305 HITCH BLVD	MOORPARK	CA	93021
505-0-030-020	4295 HITCH BLVD	MOORPARK	CA	93021	4295 HITCH BLVD	MOORPARK	CA	93021
505-0-040-010	PO BOX 43	MOORPARK	CA	93020	10775 CITRUS DR	MOORPARK	CA	93021
505-0-071-010	17825 BAHAMA ST	NORTHRIDGE	CA	91325	10773 CITRUS DR	MOORPARK	CA	93021
505-0-071-025	5440 RALSTON ST	VENTURA	CA	93003	10771 CITRUS DR	MOORPARK	CA	93021
505-0-071-080	1337 ESTUARY WAY	OXNARD	CA	93035	10641 TERNEZ DR	MOORPARK	CA	93021
505-0-071-100	10761 CITRUS DR	MOORPARK	CA	93021	10761 CITRUS DR	MOORPARK	CA	93021
505-0-071-110	10759 CITRUS DR	MOORPARK	CA	93021	10759 CITRUS DR	MOORPARK	CA	93021
505-0-071-125	10763 CITRUS DR	MOORPARK	CA	93021	10763 CITRUS DR	MOORPARK	CA	93021
505-0-071-135	10767 CITRUS DR	MOORPARK	CA	93021	10767 CITRUS DR	MOORPARK	CA	93021
505-0-071-140	800 S VICTORIA AVE	VENTURA	CA	93009	N/A	N/A	N/A	93021
505-0-071-160	10567 TERNEZ DR	MOORPARK	CA	93021	10567 TERNEZ DR	MOORPARK	CA	93021
505-0-080-015	PO BOX 629	STATHAM	GA	30666	10701 CITRUS DR	MOORPARK	CA	93021
505-0-080-025	10707 CITRUS DR	MOORPARK	CA	93021	10707 CITRUS DR	MOORPARK	CA	93021
505-0-080-030	10713 CITRUS DR	MOORPARK	CA	93021	10713 CITRUS DR	MOORPARK	CA	93021
505-0-080-045	10717 CITRUS DR	MOORPARK	CA	93021	10717 CITRUS DR	MOORPARK	CA	93021
505-0-080-050	10721 CITRUS DR	MOORPARK	CA	93021	10721 CITRUS DR	MOORPARK	CA	93021
505-0-080-065	10725 CITRUS DR	MOORPARK	CA	93021	10725 CITRUS DR	MOORPARK	CA	93021
505-0-080-120	416 CANYON CREST DR	SIMI VALLEY	CA	93065	10735 CITRUS DR	MOORPARK	CA	93021

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
505-0-080-130	10690 TERNEZ DR	MOORPARK	CA	93021	10690 TERNEZ DR	MOORPARK	CA	93021
505-0-080-150	10727 CITRUS DR	MOORPARK	CA	93021	10727 CITRUS DR	MOORPARK	CA	93021
505-0-080-160	10729 CITRUS DR	MOORPARK	CA	93021	10729 CITRUS DR	MOORPARK	CA	93021
505-0-080-170	10731 CITRUS DR	MOORPARK	CA	93021	10731 CITRUS DR	MOORPARK	CA	93021
511-0-020-195	1000 S SEAWARD AVE	VENTURA	CA	93001	N/A	MOORPARK	CA	93021
511-0-060-030	65 MARKET ST # 846	SAN FRANCISCO	CA	94111	N/A	MOORPARK	CA	93021
511-0-061-075	5449 ENDEAVOUR CT	MOORPARK	CA	93021	5160 GABBERT RD	MOORPARK	CA	93021
511-0-061-085	5777 BALCOM CANYON RD	SOMIS	CA	93066	5220 GABBERT RD	MOORPARK	CA	93021
511-0-061-115	5350 GABBERT RD	MOORPARK	CA	93021	5350 GABBERT RD	MOORPARK	CA	93021
511-0-061-145	5390 GABBERT RD	MOORPARK	CA	93021	5380 GABBERT RD	MOORPARK	CA	93021
511-0-061-155	PO BOX 11210	SANTA ANA	CA	92711	5300 GABBERT RD	MOORPARK	CA	93021
511-0-062-235	828 W HILLCREST BLVD STE A	INGLEWOOD	CA	90301	5100 N COMMERCE AVE	MOORPARK	CA	93021
511-0-062-245	828 W HILLCREST BLVD STE A	INGLEWOOD	CA	90301	5100 N COMMERCE AVE	MOORPARK	CA	93021
511-0-200-015	PO BOX 65143	LOS ANGELES	CA	90065	N/A	N/A	N/A	93021
511-0-200-020	5100 OLIVAS PARK DR	VENTURA	CA	93003	11015 W LOS ANGELES AVE	MOORPARK	CA	93021
511-0-200-055	PO BOX 800	ROSEMEAD	CA	91770	N/A	MOORPARK	CA	93021
511-0-200-065	PO BOX 800	ROSEMEAD	CA	91770	N/A	MOORPARK	CA	93021
511-0-200-070	65 MARKET ST # 846	SAN FRANCISCO	CA	94111	N/A	N/A	N/A	93021
511-0-200-080	65 MARKET ST # 846	SAN FRANCISCO	CA	94111	N/A	N/A	N/A	93021
511-0-200-090	65 MARKET ST # 846	SAN FRANCISCO	CA	94111	N/A	N/A	N/A	93021
511-0-200-100	65 MARKET ST # 846	SAN	CA	94111	N/A	N/A	N/A	93021

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
		FRANCISCO						
511-0-200-110	65 MARKET ST # 846	SAN FRANCISCO	CA	94111	N/A	N/A	N/A	93021
511-0-200-120	PO BOX 800	ROSEMEAD	CA	91770	N/A	N/A	N/A	93021
511-0-200-130	270 CONEJO RIDGE AVE STE 200	THOUSAND OAKS	CA	91361	11289 W LOS ANGELES AVE	MOORPARK	CA	93021
511-0-200-145	270 CONEJO RIDGE AVE STE 200	THOUSAND OAKS	CA	91361	LOS ANGELES AVE	MOORPARK	CA	93021
511-0-200-155	9171 WILSHIRE BLVD STE 650	BEVERLY HILLS	CA	90210	LOS ANGELES AVE	MOORPARK	CA	93021
511-0-200-165	270 CONEJO RIDGE AVE STE 200	THOUSAND OAKS	CA	91361	LOS ANGELES AVE	MOORPARK	CA	93021
511-0-200-175	8730 WILSHIRE BLVD STE 300	BEVERLY HILLS	CA	90211	10951 W LOS ANGELES AVE	MOORPARK	CA	93021
511-0-200-185	PO BOX 800	ROSEMEAD	CA	91770	N/A	MOORPARK	CA	93021
511-0-200-195	PO BOX 65143	LOS ANGELES	CA	90065	N/A	MOORPARK	CA	93021
511-0-200-200	PO BOX 800	ROSEMEAD	CA	91770	N/A	MOORPARK	CA	93021
511-0-200-210	PO BOX 800	ROSEMEAD	CA	91770	N/A	MOORPARK	CA	93021
511-0-200-235	PO BOX 800	ROSEMEAD	CA	91770	GABBERT RD	MOORPARK	CA	93021
511-0-200-245	1000 S SEAWARD AVE	VENTURA	CA	93001	GABBERT RD	MOORPARK	CA	93021
511-0-200-255	PO BOX 800	ROSEMEAD	CA	91770	GABBERT RD	MOORPARK	CA	93021
511-0-210-015	505 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91360	N/A	MOORPARK	CA	93021
511-0-210-025	505 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91360	TRI GEM AVE	MOORPARK	CA	93021
511-0-210-115	505 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91360	CASTLEBRITE ST	MOORPARK	CA	93021
511-0-210-145	505 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91360	N/A	MOORPARK	CA	93021
511-0-210-155	505 E THOUSAND	THOUSAND	CA	91360	N/A	MOORPARK	CA	93021

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
	OAKS BLVD	OAKS						
511-0-210-165	505 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91360	GOLDBAR DR	MOORPARK	CA	93021
511-0-210-175	505 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91360	GOLDBAR DR	MOORPARK	CA	93021
511-0-210-185	505 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91360	N/A	MOORPARK	CA	93021
511-0-210-195	505 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91360	N/A	MOORPARK	CA	93021
516-0-010-045	1397 REDSAIL CIR	WESTLAKE VILLAGE	CA	91361	3387 CHESTNUT LN	SANTA ROSA VALLEY	CA	93012
516-0-010-135	3343 CHESTNUT LN	SANTA ROSA VALLEY	CA	93012	3343 CHESTNUT LN	SANTA ROSA VALLEY	CA	93012
516-0-010-145	3365 CHESTNUT LN	SANTA ROSA VALLEY	CA	93012	3365 CHESTNUT LN	SANTA ROSA VALLEY	CA	93012
516-0-010-155	10401 PRESILLA RD	SANTA ROSA VALLEY	CA	93012	10401 PRESILLA RD	SANTA ROSA VALLEY	CA	93012
516-0-020-175	10300 PRESILLA RD	SANTA ROSA VALLEY	CA	93012	10300 PRESILLA RD	SANTA ROSA VALLEY	CA	93012
516-0-020-185	10300 PRESILLA RD	SANTA ROSA VALLEY	CA	93012	10300 PRESILLA RD	SANTA ROSA VALLEY	CA	93012
516-0-020-215	10500 PRESILLA RD	SANTA ROSA VALLEY	CA	93012	10500 PRESILLA RD	SANTA ROSA VALLEY	CA	93012
516-0-220-195	1397 REDSAIL CIR	WESTLAKE VILLAGE	CA	91361	N/A	CAMARILLO	CA	93012
516-0-220-225	1310 LOS PRIETOS CT	OXNARD	CA	93035	10680 CITRUS DR	MOORPARK	CA	93021
516-0-220-235	1397 REDSAIL CIR	WESTLAKE VILLAGE	CA	91361	N/A	CAMARILLO	CA	N/A
520-0-180-220	3064 S HIGHLAND DR	SALT LAKE CITY	UT	84106	9630 SANTA ROSA RD	SANTA ROSA VALLEY	CA	93012
550-0-010-010	7385 SANTA ROSA RD	CAMARILLO	CA	93012	N/A	CAMARILLO	CA	N/A

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
550-0-010-365	6211 AVENIDA GANSO	GOLETA	CA	93117	12754 SANTA ROSA RD	CAMARILLO	CA	93012
550-0-010-445	9715 SANTA ROSA RD	SANTA ROSA VALLEY	CA	93012	N/A	N/A	N/A	93012
550-0-020-015	2345 E YUCCA DR	CAMARILLO	CA	93010	2345 YUCCA DR	SANTA ROSA VALLEY	CA	93012
550-0-020-445	10188 CHURCHMAN LN	SANTA ROSA VALLEY	CA	93012	10188 CHURCHMAN LN	SANTA ROSA VALLEY	CA	93012
550-0-020-565	10183 CHURCHMAN LN	SANTA ROSA VALLEY	CA	93012	10183 CHURCHMAN LN	SANTA ROSA VALLEY	CA	93012
550-0-020-595	10187 CHURCHMAN LN	SANTA ROSA VALLEY	CA	93012	10187 CHURCHMAN LN	SANTA ROSA VALLEY	CA	93012
550-0-020-665	10185 CHURCHMAN LN	SANTA ROSA VALLEY	CA	93012	10185 CHURCHMAN LN	SANTA ROSA VALLEY	CA	93012
550-0-020-685	10181 CHURCHMAN LN	SANTA ROSA VALLEY	CA	93012	10181 CHURCHMAN LN	SANTA ROSA VALLEY	CA	93012
550-0-030-020	2001 PENNSYLVANIA AVE NW STE 1150	WASHINGTON	DC	20006	N/A	N/A	N/A	93012
550-0-030-120	1801 AVENUE OF THE STARS	LOS ANGELES	CA	90067	N/A	N/A	N/A	93012
550-0-030-175	PO BOX 1613	THOUSAND OAKS	CA	91358	10244 OATFIELD WAY	SANTA ROSA VALLEY	CA	93012
550-0-030-185	2513 BUGGY LN	SANTA ROSA VALLEY	CA	93012	2513 BUGGY LN	SANTA ROSA VALLEY	CA	93012
550-0-030-195	2539 BUGGY LN	SANTA ROSA VALLEY	CA	93012	2539 BUGGY LN	SANTA ROSA VALLEY	CA	93012
550-0-030-205	2561 BUGGY LN	SANTA ROSA VALLEY	CA	93012	2561 BUGGY LN	SANTA ROSA VALLEY	CA	93012
550-0-030-215	2581 BUGGY LN	SANTA ROSA VALLEY	CA	93012	2581 BUGGY LN	SANTA ROSA VALLEY	CA	93012

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
550-0-030-225	2609 BUGGY LN	SANTA ROSA VALLEY	CA	93012	2609 BUGGY LN	SANTA ROSA VALLEY	CA	93012
550-0-030-235	2613 BUGGY LN	SANTA ROSA VALLEY	CA	93012	2631 BUGGY LN	SANTA ROSA VALLEY	CA	93012
550-0-030-245	2653 BUGGY LN	SANTA ROSA VALLEY	CA	93012	2653 BUGGY LN	SANTA ROSA VALLEY	CA	93012
550-0-030-255	2669 BUGGY LN	SANTA ROSA VALLEY	CA	93012	2669 BUGGY LN	SANTA ROSA VALLEY	CA	93012
550-0-030-275	2999 YUCCA DR	SANTA ROSA VALLEY	CA	93012	2999 YUCCA DR	SANTA ROSA VALLEY	CA	93012
550-0-030-285	2993 YUCCA DR	SANTA ROSA VALLEY	CA	93012	2993 YUCCA DR	SANTA ROSA VALLEY	CA	93012
550-0-030-295	2985 YUCCA DR	SANTA ROSA VALLEY	CA	93012	2985 YUCCA DR	SANTA ROSA VALLEY	CA	93012
667-0-051-015	201 ROSSMORE DR	OXNARD	CA	93035	3499 GRANDE VISTA DR	THOUSAND OAKS	CA	91320
667-0-051-115	PO BOX 969	GLENDALE	CA	91209	N/A	THOUSAND OAKS	CA	91320
667-0-051-125	PO BOX 969	GLENDALE	CA	91209	134 ACADEMY DR	THOUSAND OAKS	CA	91320
667-0-051-130	PO BOX 969	GLENDALE	CA	91209	N/A	THOUSAND OAKS	CA	91320
667-0-080-015	1400 E JANSS RD	THOUSAND OAKS	CA	91362	N/A	N/A	N/A	91320
667-0-080-035	1400 E JANSS RD	THOUSAND OAKS	CA	91362	N/A	N/A	N/A	91320
667-0-080-065	8573 CANOGA AVE	CANOGA PARK	CA	91304	1311 LAWRENCE DR	THOUSAND OAKS	CA	91320
667-0-080-075	2131 WALNUT GROVE AVE # 2	ROSEMEAD	CA	91770	N/A	N/A	N/A	91320
667-0-080-085	PO BOX 800	ROSEMEAD	CA	91770	N/A	N/A	N/A	91320
667-0-080-095	1299 LAWRENCE DR	NEWBURY PARK	CA	91320	1299 LAWRENCE DR	THOUSAND OAKS	CA	91320

Table 6.0-1: Parcels within a 300-Foot Radius of the Project

APN	MAILING ADDRESS	MAILING CITY	MAILING STATE	MAILING ZIP CODE	PROPERTY ADDRESS	PROPERTY CITY	PROPERTY STATE	PROPERTY ZIP CODE
667-0-080-105	2100 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91362	N/A	N/A	N/A	91320
667-0-120-100	2100 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91362	N/A	N/A	N/A	N/A
667-0-120-270	2100 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91362	N/A	N/A	N/A	N/A
667-0-120-280	2100 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91362	N/A	N/A	N/A	N/A
667-0-120-310	2100 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91362	N/A	N/A	N/A	N/A
667-0-130-545	201 ISABELLA ST	PITTSBURGH	PA	15212	2517 AZURITE CIR	THOUSAND OAKS	CA	91320
667-0-130-555	201 ISABELLA ST	PITTSBURGH	PA	15212	2551 AZURITE CIR	THOUSAND OAKS	CA	91320
667-0-130-565	621 VIA ALONDRA STE 602	CAMARILLO	CA	93012	2585 AZURITE CIR	THOUSAND OAKS	CA	91320
667-0-130-755	5940 VARIEL AVE	WOODLAND HILLS	CA	91367	1180 TOURMALINE DR	THOUSAND OAKS	CA	91320
667-0-130-765	3265 JOHNSON AVE STE 214	BRONX	NY	10463	1167 LAWRENCE DR	THOUSAND OAKS	CA	91320
667-0-340-020	8383 WILSHIRE BLVD	BEVERLY HILLS	CA	90211	N/A	THOUSAND OAKS	CA	91320
667-0-340-030	8383 WILSHIRE BLVD STE 700	BEVERLY HILLS	CA	90211	RANCHO CONEJO	THOUSAND OAKS	CA	91320
667-0-340-205	8383 WILSHIRE BLVD	BEVERLY HILLS	CA	90211	N/A	THOUSAND OAKS	CA	91320
667-0-340-235	2100 E THOUSAND OAKS BLVD	THOUSAND OAKS	CA	91362	N/A	THOUSAND OAKS	CA	91320
667-0-340-245	PO BOX 5627	CHERRY HILL	NJ	8034	N/A	THOUSAND OAKS	CA	91320

Table 6.0-2: Persons Involved in Previous Advice Letter Proceedings

NAME	ADDRESS	CITY/STATE/ZIP
Adams, The	12985 Sunny Lane	Santa Rosa Valley, CA 93012
Allison, R.	11521 Sumac Street	Santa Rosa Valley, CA 93012
Ander, Linda	2650 Buggy Lane	Camarillo, CA 93012
Belnick, Kris	2353 Barbara Drive	Santa Rosa Valley, CA 93012
Black, Kimme I.	12486 Saddleridge Ct.	Santa Rosa Valley, CA 93012
Bolado, Teresa	13499 Old Butterfield Rd	Santa Rosa Valley, CA 93012
Caron, Alisa	10839 E. Las Posas Rd	Camarillo, CA 93012
Chandler, Phil	1984 Freeborn Way	Camarillo, CA 93012
Coleman, Tony & Eliza	2850 Yucca Drive	Camarillo, CA 93012
Dickey, Virginia	10320 Oatfield Way	Camarillo, CA 93012
Figueroa, Joe & Lorena	2291 Barbara Drive	Camarillo, CA 93012
Friedman, Lisa M.	11020 E. Las Posas Road	Camarillo, CA 93012
Galas, Homel	2855 Yucca Drive	Camarillo, CA 93012
Graham, Ph.D., John L.	3362 Cajon Circle	Santa Rosa Valley, CA 93012
Groen, Eric	2998 N. Redondo Avenue	Camarillo, CA 93012
Hall, Kristen	2669 Buggy Lane	Santa Rosa Valley, CA 93012
Hamilton, Carol	10700 Presilla Road	Camarillo, CA 93012
Hesse, Rob	12717 Rosedale Court	Santa Rosa Valley, CA 93012
Hoffman, Karen	2217 Brittany Park Road	Camarillo, CA 93012
Hughes, Gale	12970 Andalusia Drive	Santa Rosa Valley, CA 93012
Hurlbut, Lydia	2610 E. Las Posas Circle	Camarillo, CA 93012
Ibrahim, Loila & Sam	2981 Yucca Drive	Camarillo, CA 93012
Jacobs, Allison	10332 Oatfield Way	Camarillo, CA 93012
Jiminez, Joyce	10248 Principe Place	Santa Rosa Valley, CA 93012
Justin, Pamela	3068 Calvert Court	Camarillo, CA 93012
Krupka, Mike & Toni	10189 Churchman Lane	Camarillo, CA 93012
Ladisky, Mel	3320 Chestnut Lane	Santa Rosa Valley, CA 93012
Leonard, Deidre	2275 Barbara Drive	Santa Rosa Valley, CA 93012
Lopez, Alfonso	11428 Highridge Court	Santa Rosa Valley, CA 93012
Martynowicz, Z.	12516 Ridge Drive	Santa Rosa Valley, CA 93012
Matley, Bonny & J. Brian	2405 Barbara Drive	Santa Rosa Valley, CA 93012
Matthews, Linda	10195 Churchman Lane	Santa Rosa Valley, CA 93012
Memmott, Richard	10550 Chippenham Road	Camarillo, CA 93012

Table 6.0-2: Persons Involved in Previous Advice Letter Proceedings

NAME	ADDRESS	CITY/STATE/ZIP
Miller, Katherine & Rob	2720 Yucca Drive	Camarillo, CA 93012
Milligan, Terry and John	3321 Chestnut Lane	Camarillo, CA 93012
Padilla, Laura	10584 Chippenhan Road	Camarillo, CA 93012
Pearlman, Gerald & Ann Marie	13368 Orions Flight Way	Santa Rosa Valley, CA 93012
Penta, Cindy	3069 Calvert Court	Santa Rosa Valley, CA 93012
Pentis, Gary & Janet	2391 Glenside Lane	Santa Rosa Valley, CA 93012
Perkins, J. Shields	13649 Pacific Breeze Drive	Santa Rosa Valley, CA 93012
Quinn, Richard & Maribeth	2151 Applewood Lane	Camarillo, CA 93012
Richardson, Monica	10587 Chippenham Road	Camarillo, CA 93012
Riggio, Joe & Jane	2888 Los Fresnos Circle	Santa Rosa Valley, CA 93012
Rohlfing, Sue	2351 Applewood Lane	Santa Rosa Valley, CA 93012
Sawyer, Susan	12785 Rosedale Court	Santa Rosa Valley, CA 93012
Schultz, A.	10416 Oatfield Way	Camarillo, CA 93012
Simmons, Andrea	11365 Presilla Road	Santa Rosa Valley, CA 93012
Stilley, Larry	2625 Vista Arroyo Drive	Santa Rosa Valley, CA 93012
Stonehouse, John	10291 Principe Place	Santa Rosa Valley, CA 93012
The Residents at	2731 Yucca Drive	Camarillo, CA 93012
The Residents at	13550 Andalusia Drive	Santa Rosa Valley, CA 93012
The Residents at	13468 Andalusia Drive	Santa Rosa Valley, CA 93012
The Residents at	10908 Escollera Circle	Camarillo, CA 93012
The Residents at	3090 Calvert Court	Santa Rosa Valley, CA 93012
The Residents at	12704 Rosedale Court	Santa Rosa Valley, CA 93012
The Residents at	7079 Quito Court	Santa Rosa Valley, CA 93012
The Residents at	1790 Corte Jubilo	Santa Rosa Valley, CA 93012
The Residents at	12229 Ridge Drive	Santa Rosa Valley, CA 93012
The Residents at	13053 Rancho Vista	Santa Rosa Valley, CA 93012
The Residents at	475 Mariposa Drive	Santa Rosa Valley, CA 93012
The Residents at	2368 Blanchard Road	Santa Rosa Valley, CA 93012
The Residents at	2624 Marvella Court	Santa Rosa Valley, CA 93012
The Residents at	4421 Alder Circle	Santa Rosa Valley, CA 93012
The Residents at	3160 N. Escollera Avenue	Santa Rosa Valley, CA 93012
The Residents at	11291 Highridge Court	Camarillo, CA 93012
The Residents at	10291 Principe Place	Santa Rosa Valley, CA 93012

Table 6.0-2: Persons Involved in Previous Advice Letter Proceedings

NAME	ADDRESS	CITY/STATE/ZIP
The Residents at	13550 Andalusia Drive	Santa Rosa Valley, CA 93012
The Residents at	12243 Presilla Road	Camarillo, CA 93012
The Residents at	2993 Yucca Drive	Camarillo, CA 93012
The Residents at	2862 Yucca Drive	Camarillo, CA 93012
The Residents at	2650 Buggy Lane	Camarillo, CA 93012
The Residents at	2867 Yucca Drive	Camarillo, CA 93012
The Residents at	10256 Oatfield Way	Camarillo, CA 93012
The Residents at	2867 Yucca Drive	Camarillo, CA 93012
The Residents at	2561 Buggy Lane	Camarillo, CA 93012
The Residents at	10256 Oatfield Way	Camarillo, CA 93012
Thomas, Donald & Phaeba	10400 Presilla	Santa Rosa Valley, CA 93012
Thrasher, Joyce & L.E.	10251 Oatfield Way	Camarillo, CA 93012
Torres Residence, The	2690 Riata Ct.	Santa Rosa Valley, CA 93012
Vannix, Bob & Laurel	235 Rose Lane	Santa Rosa Valley, CA 93012
Volpe, Lou & Marne	2391 Rose Lane	Santa Rosa Valley, CA 93012
Warbuton, Catherine	2850 N. Los Fresnos Circle	Camarillo, CA 93012
Weidenweber, Don & Sigrid	2253 Applewood Lane	Santa Rosa Valley, CA 93012
Weider, Renee	3342 Chestnut Lane	Santa Rosa Valley, CA 93012
Wilk, George & Mickey	2590 Buggy Lane	Santa Rosa Valley, CA 93012
Woodfill, Jan	2677 Riata Ct	Santa Rosa Valley, CA 93012
Zatlin, Amy & Jeffrey	10327 Oatfield Way	Camarillo, CA 93012
Ms. Danalynn Pritz, PRITZ & ASSOCIATES	3625 E. Thousand Oaks Blvd., Ste.176	Westlake Village, CA 91362
Eliza Coleman, President Anthony Jacobs, Secretary Santa Rosa Valley Estates Homeowner's Association	3623 Old Conejo Road, Suite 207	Newbury Park, CA 91320
Alan Sozio, Esq. BURKE, WILLIAMS & SORENSEN LLP	444 S. Flower Street, Ste 2400	Los Angeles, CA 90071
Paul D. Burns, President, BURNS PACIFIC CONSTRUCTION, Inc.	505 E. Thousand Oaks Blvd.	Thousand Oaks, CA 91360
Don Shubert, Chair Santa Rosa Valley Municipal Advisory Council	11500 Barranca Road	Santa Rosa Valley, CA 93012

Table 6.0-2: Persons Involved in Previous Advice Letter Proceedings

NAME	ADDRESS	CITY/STATE/ZIP
David J. Tanner Environmental and Regulatory Specialists, Inc.	223 62nd Street	Newport Beach, CA 92663

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) for a Permit to Construct Electrical Facilities With Voltages Between 50 kV and 200 kV: Moorpark-Newbury 66 kV Subtransmission Line Project	)))))	Application No. _____

PROPONENT'S ENVIRONMENTAL ASSESSMENT
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VOLUME 2 of 3

This PEA is being filed separately from the Application and is being submitted as an Archival DVD and CD-ROM.

RUSSELL C. SWARTZ
BETH GAYLORD
TAMMY JONES

Attorneys for
SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770
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Facsimile: (626) 302-1926
E-mail: tammy.jones@sce.com

Dated: October 28, 2013

Appendix A

CEQA Checklist

Appendix A
CEQA Checklist

PROJECT DESCRIPTION AND BACKGROUND

Project Title

Moorpark-Newbury 66 kV Subtransmission Line Project

Lead Agency Name and Address

California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3298

Contact Person and Phone Number

Christine McLeod
Principal Advisor – Regulatory Policy & Affairs
(626) 302-3947

Project Location

The Project would be constructed in unincorporated portions of central Ventura County, the City of Moorpark, and the City of Thousand Oaks. The Project includes work to be conducted at the following SCE-owned existing substations: Moorpark Substation and Newbury Substation.

Project Sponsor's Name and Address

Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

General Plan Description

The California Public Utilities Commission (CPUC) has primary jurisdiction over the Project because it authorizes the construction, operation, and maintenance of public utility facilities. Although such projects are exempt from local land-use and zoning regulations and permitting, CPUC General Order (G.O.) 131-D Section XIV.B. states that "… local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters". SCE has considered local and state land use plans as part of the environmental review process as described in the attached Proponent's Environmental Assessment (PEA).

The General Plan land use designations for the substations where work would be conducted are as follows:

	Substation Location	**Surrounding Land Uses**
Moorpark Substation	Utilities	Medium Industrial; General Commercial; Medium Density Residential; Hitch Ranch Specific Plan
Newbury Substation	Industrial	Institutional; Industrial

Zoning

The CPUC has primary jurisdiction over the Project as described above in the General Plan discussion. The zoning designations for the substations where work would be conducted are as follows:

	Substation Location	**Surrounding Land Uses**
Moorpark Substation	Limited Industrial	Limited Industrial; Commercial Planned Development; One Family Residential; Agriculture Exclusive
Newbury Substation	Industrial Park	Industrial Park; Public, Quasi-Public, Institutional Lands and Facilities

The entirety of the 66 kV subtransmission line components of the Project are located in existing Southern California Edison (SCE) rights-of-way on private and public lands.

Description of Project

The purpose of the Project is to ensure the availability of safe and reliable electric service to meet customer demand in the ENA. The Electrical Needs Area is defined as the area served by

Newbury Substation and Pharmacy Substation within the Moorpark 66 kV Subtransmission System. The Project is needed to address: 1) a projected voltage drop that would exceed the acceptable 5 percent limit on the 66 kV bus at Newbury Substation under abnormal system conditions; and 2) a projected overload on the Moorpark-Newbury tap of the Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line under a normal system configuration. The Project includes the following major components:

- Construction of approximately 1,200 feet of new underground 66 kV subtransmission line entirely within Moorpark Substation.
- Construction of approximately 5 miles of the new Moorpark-Newbury 66 kV Subtransmission Line on new TSPs on the south and east sides of SCE's existing Moorpark-Ormond Beach 220 kV Right-of-Way (ROW).
- Construction of approximately 3 miles of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW. Existing single-circuit lattice steel towers (LSTs) would be replaced with new TSPs; the TSPs would be double-circuited, carrying both the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line and the new Moorpark-Newbury 66 kV Subtransmission Line. The existing single-circuit Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line in this section would be reconstructed and reconductored to accommodate the installation of the new Moorpark-Newbury 66 kV Subtransmission Line.
- Construction of approximately 1 mile of the new Moorpark-Newbury 66 kV Subtransmission Line within the existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line ROW into Newbury Substation. Existing single-circuit wood poles would be replaced with new lightweight steel (LWS) poles; within Newbury Substation, four wood poles would be replaced with four TSPs. The existing Moorpark-Newbury-Pharmacy 66 kV Subtransmission Line would be reconstructed and transferred to the new LWS poles and TSPs in a double-circuit configuration to accommodate the new Moorpark-Newbury 66 kV Subtransmission Line.
- Construction of new 66 kV subtransmission line positions and associated infrastructure within Moorpark Substation and Newbury Substation to facilitate the termination of the new Moorpark-Newbury 66 kV Subtransmission Line.
- Transfer of existing distribution circuitry and telecommunication facilities to new subtransmission poles as necessary.

Surrounding Land Uses and Setting

The Moorpark-Newbury 66 kV Subtransmission Line Project is located in unincorporated areas of Ventura County, in the City of Moorpark, and in the City of Thousand Oaks. The Project is located in the foothills of the Transverse Ranges geomorphic province, which is characterized by west-

east trending mountain ranges and ridges (e.g., Las Posas Hills, Calleguas Hills) separated by intervening valleys (e.g., Little Simi Valley and Santa Rosa Valley). Numerous smaller, steep-sided canyons are aligned perpendicular to the major ridges. Surface waters in the vicinity of the Project include the upstream reaches of Calleguas Creek, Las Posas Arroyo, Lower Conejo Arroyo and Upper Conejo Arroyo. The Project crosses over lands primarily in agricultural use (orchards), sparse rural development, and open space.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below were, or would be potentially, affected by the Project. The impacts to these resources were, or would be, reduced to a less than significant level with the implementation of Project features described in Chapters 3 and 4.

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

CEQA Environmental Checklist

This checklist identifies physical, biological, social and economic factors that have been, or may be, affected by the Project. In many cases, background studies performed in connection with the Project indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included within the body of the environmental document itself (in this case, SCE's PEA). The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance. Two Checklists are presented below: one for the Past Activities of the Project, and one for the Future Activities of the Project.

PAST ACTIVITIES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: 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) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
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?	☐	☐	☐	☒
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management 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) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and 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 federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to 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 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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS: 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?	☐	☐	☒	☐
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and 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 for people residing or working in the project area?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Create or contribute to runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b)Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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 expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial 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 housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIV. PUBLIC SERVICES: 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 public services:	☐	☐	☒	☐
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☐	☒
XV. RECREATION: Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) 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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

FUTURE ACTIVITIES

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: 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) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
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?	☐	☐	☐	☒
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management 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) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and 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 federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to 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 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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS: 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?	☐	☐	☒	☐
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and 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 for people residing or working in the project area?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Create or contribute to runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b)Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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 expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial 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 housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIV. PUBLIC SERVICES: 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 public services:	☐	☐	☒	☐
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☐	☒
XV. RECREATION: Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) 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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered 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?	☐	☐	☒	☐

SOURCES AND EXPLANATIONS OF ANSWERS

Chapter 4 of the PEA provides detailed discussions for each resource area.

Appendix B

List of Preparers

Chapters 1, 2, 3, and 5

Southern California Edison: Estela Aguilar, Project Analyst

Southern California Edison: Steven K. Alford, Manager of Licensing and Execution Management, Transmission Project Delivery. BS Organizational Management, University of La Verne; Certificate in Project Management, University of California Irvine; Certificate in Construction Management, University of California Los Angeles

Southern California Edison: Amy Biamonte, Land Management North, Real Properties. BA Psychology, California State Northridge

Southern California Edison: David Bosnak, Project Analyst

Southern California Edison: Charlene Comeaux, Project Analyst. BS Business Administration, California State University Los Angeles

Southern California Edison: Julie Gilbert, Environmental Coordinator. BA Journalism, Louisiana State University

Southern California Edison: Jack Haggenmiller, P.E., Project Manager. MBA, Pepperdine University; BS Electrical Engineering, University of Southern California. California Registered Electrical Engineer #15693

Southern California Edison: Kendra Heinicke, Estimator. BS Electrical Engineering, West Coast University

Southern California Edison: Philippe Lapin, Manager. MA Anthropology, California State University, Fullerton; BA Anthropology, University of California Irvine

Southern California Edison: Warnetta Logan, Project Manager. BS Civil Engineering, Loyola Marymount University

Southern California Edison: Justin Larson, Land Acquisition – Real Properties. BA Sociology, San Diego State University. Licensed California Real Estate Salesperson

Southern California Edison: Grace Yao, Corporate Representative, Local Public Affairs (LPA), Public Involvement, CSBU. MPP University of California Los Angeles

Southern California Edison: People's Choice Staffing: Lauren Chirico, Project Engineer. BBA Marketing/Finance, Baruch College, C.U.N.Y.

Chapter 4

Aesthetics

Environmental Vision: Charles Cornwall, APA. MS Landscape Architecture, University of California at Berkeley

Environmental Vision: Marsha Gale, ASLA. MS City and Regional Planning; MS City & Regional Planning; MS Landscape Architecture, University of California at Berkeley

Environmental Vision: Nana Kirk, ASLA. Ph.D. Environmental Planning, University of California at Berkeley

Agriculture and Forestry Resources

ARCADIS: Conrad Mulligan, Senior Scientist. MSc Marine Policy, London School of Economics and Political Science

ARCADIS: Jason Adams, Staff Geologist. MS Geological Sciences, University of Colorado. Wyoming Professional Geologist PG-3826

Air Quality

Southern California Edison: Tammy Chavez, Air Quality Specialist. BS Environmental Science, University of California Riverside

ARCADIS: Bryan Chen, Senior Environmental Engineer. MS Environmental Engineering, Johns Hopkins University. LEED Green Associate

Biological Resources

Southern California Edison: Roger Overstreet, Manager, Biological Resources. BS Biological Sciences, California Polytechnic University, San Luis Obispo

Southern California Edison: Manjunath Venkat, Consulting Biologist. MS Environmental Science

ARCADIS: Greg McGowan, Principal Biologist. BS Ecology and Systematic Biology, California Polytechnic State University

Rincon Consultants: Amber Bruno, Biologist/Project Manager, Biological Services Program-Biological and Archeological Resource Group. BS Botany and Plant Science, University California Riverside

Rincon Consultants: Stephanie Lopez, Biologist/Project Manager, Biological Services Program-Biological and Archeological Resource Group. BS Human Development, Colorado State University

Cultural Resources

Southern California Edison: Chris Doolittle, RPA, Senior Archaeologist. MA University of Arizona; BA University of California, Berkeley

Geology and Soils

Southern California Edison: Thomas Hill, PG, EG, Geologist. MS University of California Riverside

ARCADIS: Jason Adams, Staff Geologist. MS Geological Sciences, University of Colorado. Wyoming Professional Geologist PG-3826

Greenhouse Gas Emissions

Southern California Edison: Tammy Chavez, Air Quality Specialist. BS Environmental Science, University of California Riverside

ARCADIS: Bryan Chen, Senior Environmental Engineer. MS Environmental Engineering, Johns Hopkins University. LEED Green Associate

Hazards and Hazardous Materials

Southern California Edison: John R. Johnsen, Manager Project/Product 2. BA Biology, California State University Northridge. California Registered Environmental Assessor (REA), California Registered Environmental Health Specialist (REHS)

Southern California Edison: Phuong Tran, P.E, Engineer. BS Chemical Engineering, University of California Irvine. California Registered Professional Engineer, Chemical CH 6342

ARCADIS: Lee Miles, Senior Environmental Scientist. MA Biogeography, California State University

Hydrology and Water Quality

Southern California Edison: Paul Teensma, JD, CPESC, Senior Environmental Specialist, Water Quality Section. BS Geological Sciences, California State University, Fullerton; JD University of California, Hastings College of the Law

ARCADIS: Peter Boucher, Environmental Scientist. MS Environmental Engineering, Northeastern University

Land Use and Planning

Southern California Edison: Julie Gilbert, Environmental Coordinator. BA Journalism, Louisiana State University

ARCADIS: Conrad Mulligan, Senior Scientist. MSc Marine Policy, London School of Economics and Political Science

Mineral Resources

Southern California Edison: Julie Gilbert, Environmental Coordinator. BA Journalism, Louisiana State University

ARCADIS: Jason Adams, Staff Geologist. MS Geological Sciences, University of Colorado. Wyoming Professional Geologist PG-3826

Noise

Southern California Edison: Cornelis Overweg, P.E., Senior Environmental Noise Specialist. MS Mechanical Engineering, H.T.S. Amsterdam. INCE Bd. Cert., LEED®AP, California Registered Mechanical Engineer #31967

ARCADIS: Michael Burrill, Senior Acoustical Scientist. BA Applied Physics with Emphasis on Theoretical Acoustics, University of California at San Diego. Member of the Acoustical Society of America (ASA); Member of the Institute of Noise Control Engineering (INCE)

ARCADIS: Kevin Fowler, Project Acoustical Scientist. BA Theoretical and Applied Acoustics, Columbia College. Member of the Acoustical Society of America (ASA), Member of the Institute of Noise Control Engineering (INCE)

Population and Housing

Southern California Edison: Julie Gilbert, Environmental Coordinator. BA Journalism, Louisiana State University

ARCADIS: Conrad Mulligan, Senior Scientist. MSc Marine Policy, London School of Economics and Political Science

Public Services

Southern California Edison: Julie Gilbert, Environmental Coordinator. BA Journalism, Louisiana State University

ARCADIS: Conrad Mulligan, Senior Scientist. MSc Marine Policy, London School of Economics and Political Science

Recreation

Southern California Edison: Julie Gilbert, Environmental Coordinator. BA Journalism, Louisiana State University

ARCADIS: Conrad Mulligan, Senior Scientist. MSc Marine Policy, London School of Economics and Political Science

Transportation and Traffic

Southern California Edison: Julie Gilbert, Environmental Coordinator. BA Journalism, Louisiana State University

ARCADIS: Conrad Mulligan, Senior Scientist. MSc Marine Policy, London School of Economics and Political Science

Utilities and Service Systems

Southern California Edison: Julie Gilbert, Environmental Coordinator. BA Journalism, Louisiana State University

ARCADIS: Lee Miles, Senior Environmental Scientist. MA, Biogeography, California State University

Appendix C

Agency Consultations

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

December 11, 2007
(6042)

Ms. Carol Gaubatz
Associate Governmental Program Analyst
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

VIA FACSIMILE (916) 657-5390

Subject: **Lands File Search Request for the Moorpark-Newbury 66kV New Source Line Project, Ventura County, California**

Dear Ms. Gaubatz:

Southern California Edison requests a review of the Sacred Lands File for the proposed restructuring of the Moorpark-Newbury-Pharmacy 66kV transmission line in the Santa Rosa Valley area of Ventura County, California.

The project area, as shown on the attached maps, is located in:

Sections 6 and 7 of Township 2 North, Range 19 West and Sections 12 and 13 of Township 2 North and Range 20 West of the San Bernardino Base Meridian on the U.S. Geological Survey 7.5' *Moorpark*, California topographic quadrangle sheet (dated 1951, photo revised 1969, photo inspected 1974).

Unsectioned portions of Township 2 North, Range 20 West; and Sections 1 and 2 of Township 1 North and Range 20 West of the San Bernardino Base Meridian on the U.S. Geological Survey 7.5' *Newbury Park*, California topographic quadrangle sheet (dated 1950, photo revised 1967).

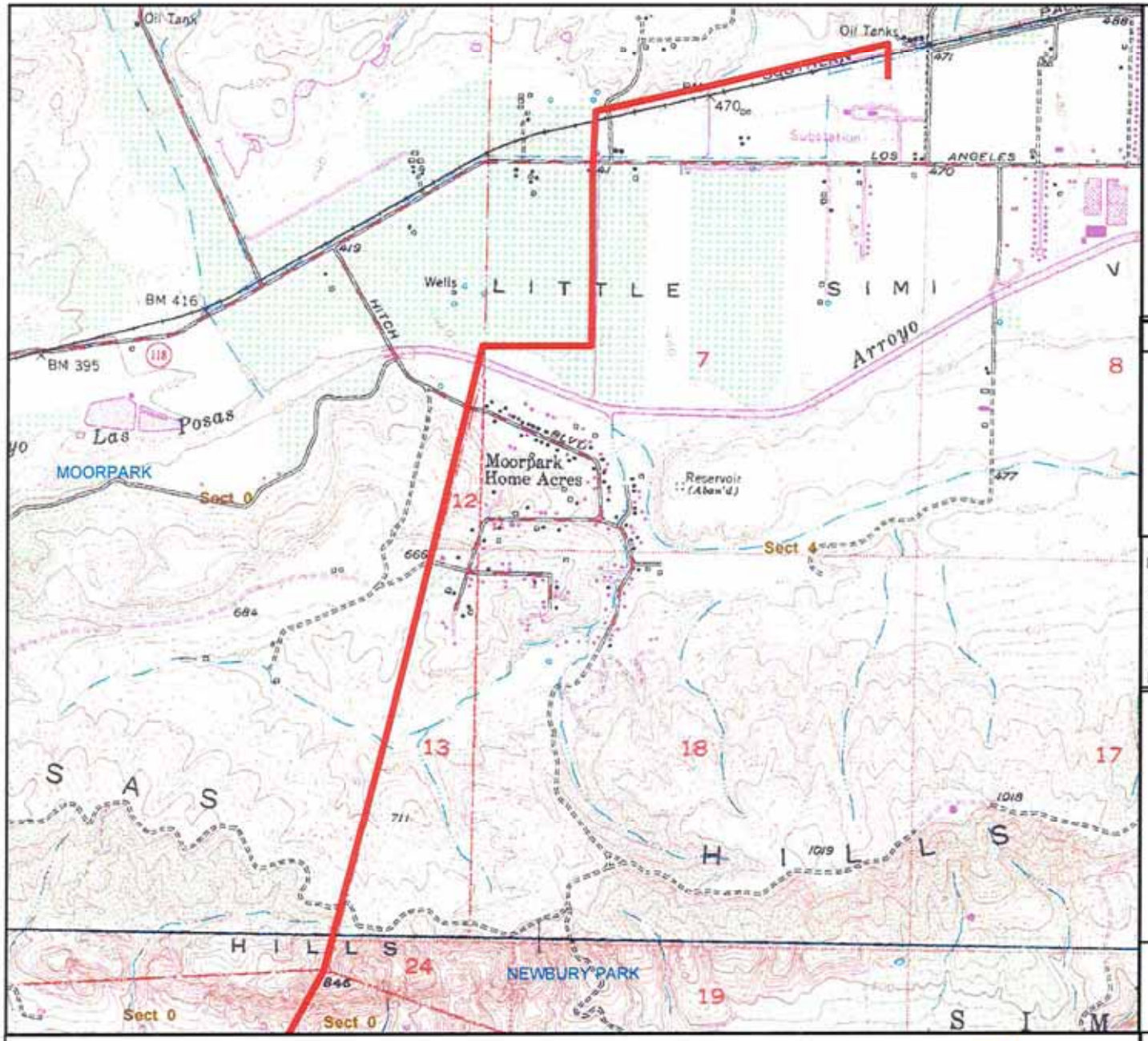
Please fax the results of this search to my attention at (626) 302-9130. For correspondence, please reference the project number of **6042**. If you have any questions regarding this request, please do not hesitate to contact me at (626) 302-7098. I can also be reached via email at koral.ahmet@sce.com. Thank you for your assistance with this project!

Sincerely,

Koral Ahmet, MA, RPA
Archaeologist
Southern California Edison
Corporate Environment Health & Safety

Attachment: As stated

2244 Walnut Avenue
Rosemead, CA 91770
Phone: (626) 302-7098
Fax: (626) 302-9130
koral.ahmet@sce.com



0 1 2 Kilometers

0 0.5 1 Miles

Southern California Edison
Moorpark-Newbury Park 66 kV
New Source Line Project

Moorpark & Newbury Park
USGS Topographic Quadrangles

Legend

Project Area

Issued For: Native American Hritage Commission

Prepared By: Koral Ahmet

Date: December 11, 2007

Project Number: 6042

Projection: NAD 83 UTM Zone 11

Index Map

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Project Location

SOUTHERN CALIFORNIA EDISON
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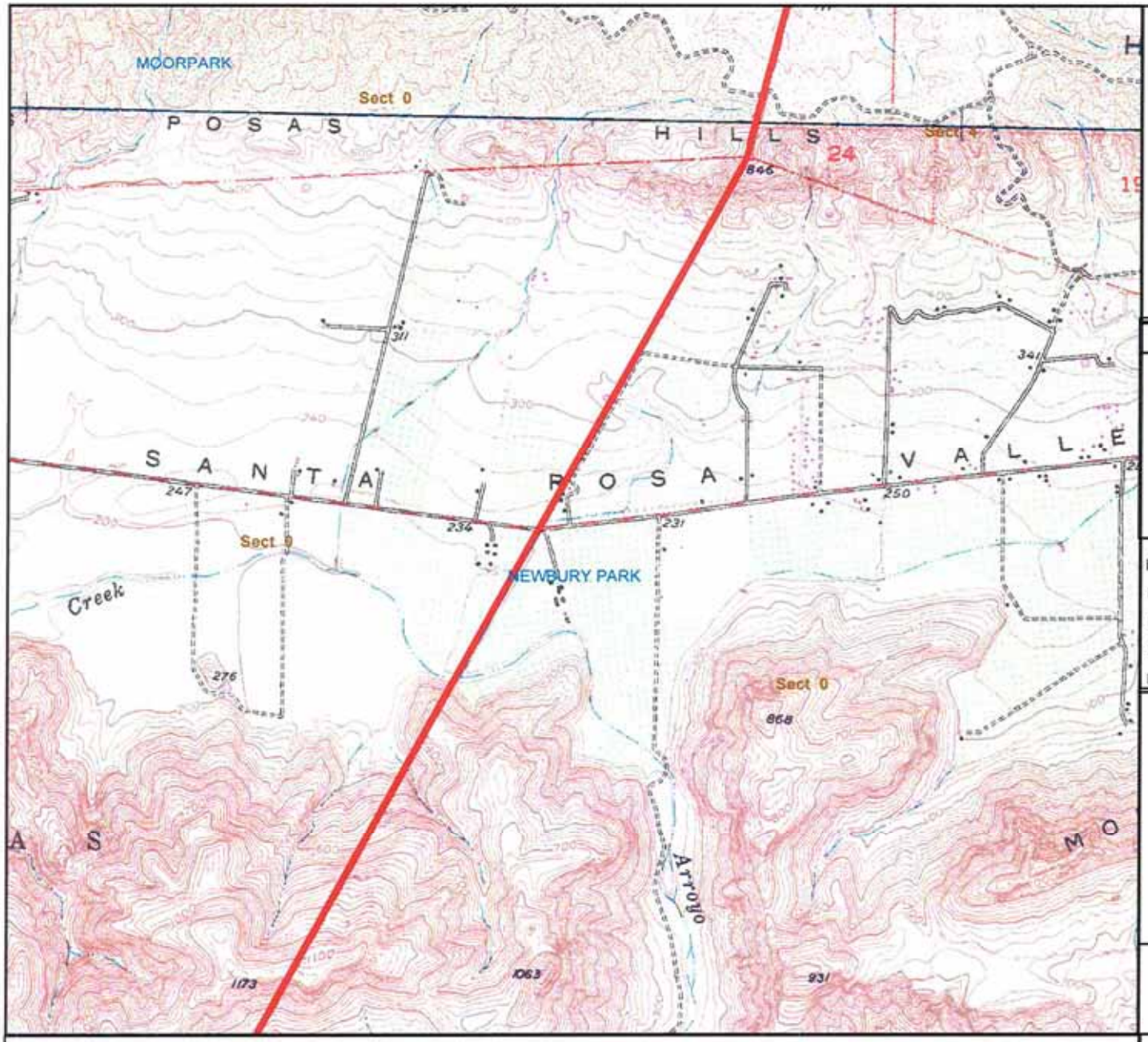
ISSI

Thomas Bros. Maps



Southern California Edison
Moorpark-Newbury Park 66 kV
New Source Line Project

Moorpark & Newbury Park
USGS Topographic Quadrangles

Legend

Project Area

Issued For: Native American Hritage Commission
Prepared By: Koral Ahmet
Date: December 11, 2007
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Index Map

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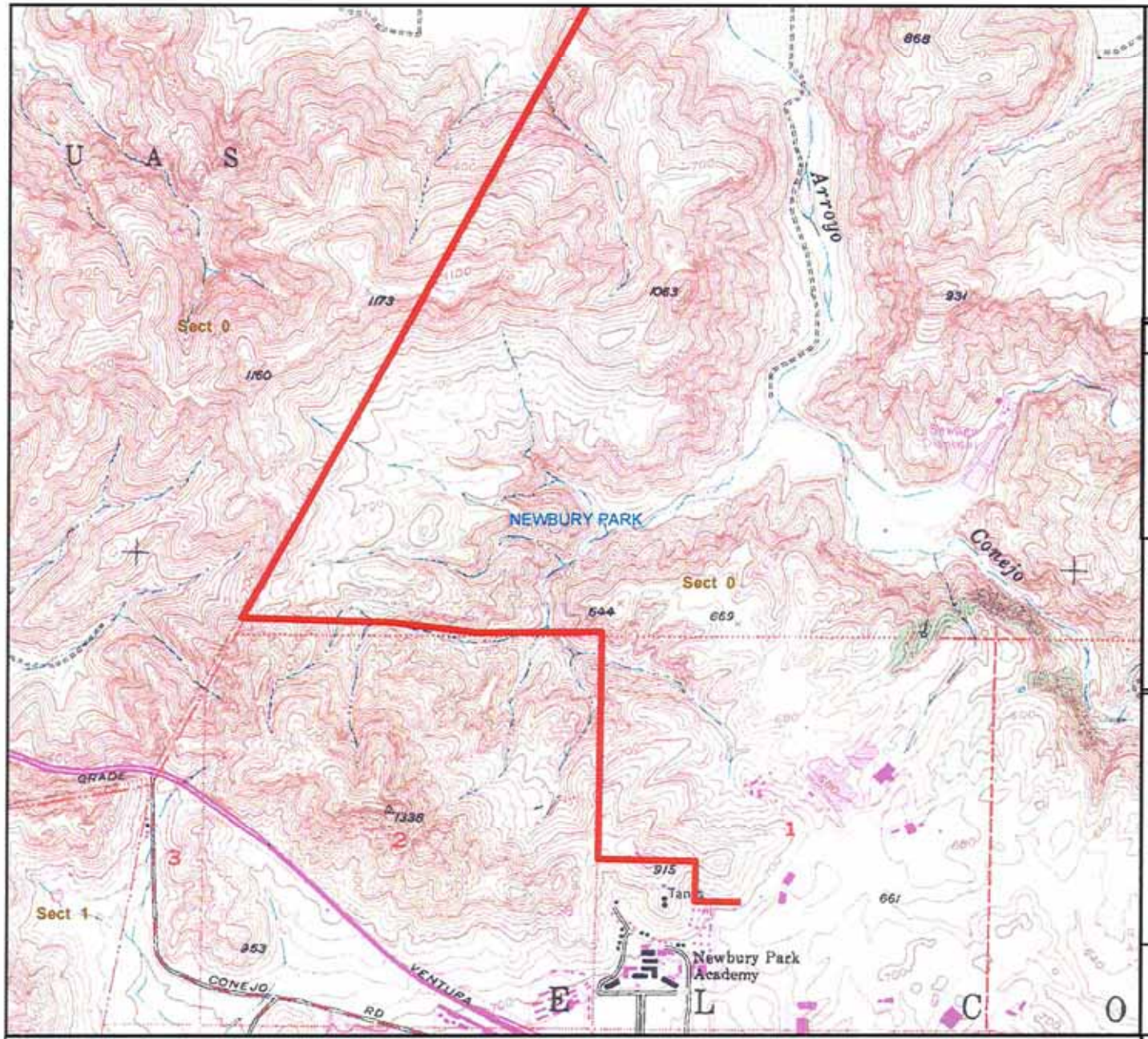

Southern California Edison
Moorpark-Newbury Park 66 kV
New Source Line Project

Moorpark & Newbury Park
USGS Topographic Quadrangles

Legend

Project Area

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Projection: NAD 83 UTM Zone 11

Index Map

0 1 2 Kilometers
0 0.5 1 Miles

SOUTHERN CALIFORNIA EDISON
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STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390

December 13, 2007

Koral Ahmet
Archaeologist
Southern California Edison
2244 Walnut Avenue
Rosemead, CA 91770

Sent by FAX: 626-302-9130
Number of pages: 3

Re: Proposed Moorpark-Newbury 66kV New Source Like Project, Ventura County.

Dear Ms. Ahmet:

A record search of the sacred lands file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4040.

Sincerely,

Katy Sanchez

Katy Sanchez
Program Analyst

Native American Contacts
Ventura County
December 12, 2007

Charles Cooke
32835 Santiago Road
Acton , CA 93510
(661) 269-1422
(661) 733-1812
Chumash
Fernandeno
Tataviam
Kitanemuk

Owl Clan
Qun-tan Shup
48825 Sapaque Road
Bradley , CA 93426
(805) 472-9536
(805) 835-2382 - CELL
Chumash

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks , CA 91362
805 492-7255
Chumash
Tataviam
Fernandeño

Stephen William Miller
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Chumash

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jtumamait@sbcglobal.net
(805) 646-6214
Chumash

Randy Guzman - Folkes
111131 Bedford Ave
Northridge , CA 91326
ndnrandy@hotmail.com
(805) 501-5279 (cell)
Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

Patrick Tumamait
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Ojai , CA 93023
yanahea2@aol.com
(805) 640-0481
(805) 216-1253 Cell
Chumash

Coastal Band of the Chumash Nation
Roberta Cordero
4454 La Paloma Road
Santa Barbara , CA 93105
roberta.cordero@gmail.com
805-681-9133
Chumash

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Moorpark-Newbury 66kV New Source Line Project; Ventura County.

Native American Contacts
Ventura County
December 12, 2007

Charles S. Parra
P.O. Box 6612 Chumash
Oxnard , CA 93031
(805) 340-3134 (Cell)
(805) 488-0481 (Home)

Carol A. Pulido
165 Mountainview Street Chumash
Oak View , CA 93022
805-649-2743 (Home)

Melissa M. Para-Hernandez
119 North Balsam Street Chumash
Oxnard , CA 93030
805-988-9171

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Moorpark-Newbury 66kV New Source Line Project; Ventura County.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

November 13, 2012

Mr. David Singleton
Governmental Program Analyst
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

Subject: Sacred Lands File Search Request for the Moorpark-Newbury 66kV New Source Line Project, Ventura County, California

Dear Mr. Singleton:

Southern California Edison requests a review of the Sacred Lands File for the proposed restructuring of the Moorpark-Newbury-Pharmacy 66kV transmission line in the Santa Rosa Valley area of Ventura County, California.

The project area, as shown on the attached maps, is located in:

Sections 6 and 7 of Township 2 North, Range 19 West and Sections 12 and 13 of Township 2 North and Range 20 West of the San Bernardino Base Meridian on the U.S. Geological Survey *7.5' Moorpark,* California topographic quadrangle sheet (dated 1951, photo revised 1969, photo inspected 1974).

Unsectioned portions of Township 2 North, Range 20 West; and Sections 1 and 2 of Township 1 North and Range 20 West of the San Bernardino Base Meridian on the U.S. Geological Survey *7.5' Newbury Park,* California topographic quadrangle sheet (dated 1950, photo revised 1967).

Please submit the results of this search via email to christopher.doolittle@sce.com or regular mail to my attention at the address below. If you have any questions regarding this request, please do not hesitate to contact me at (626) 462-8614. Thank you for your assistance with this project!

Sincerely,

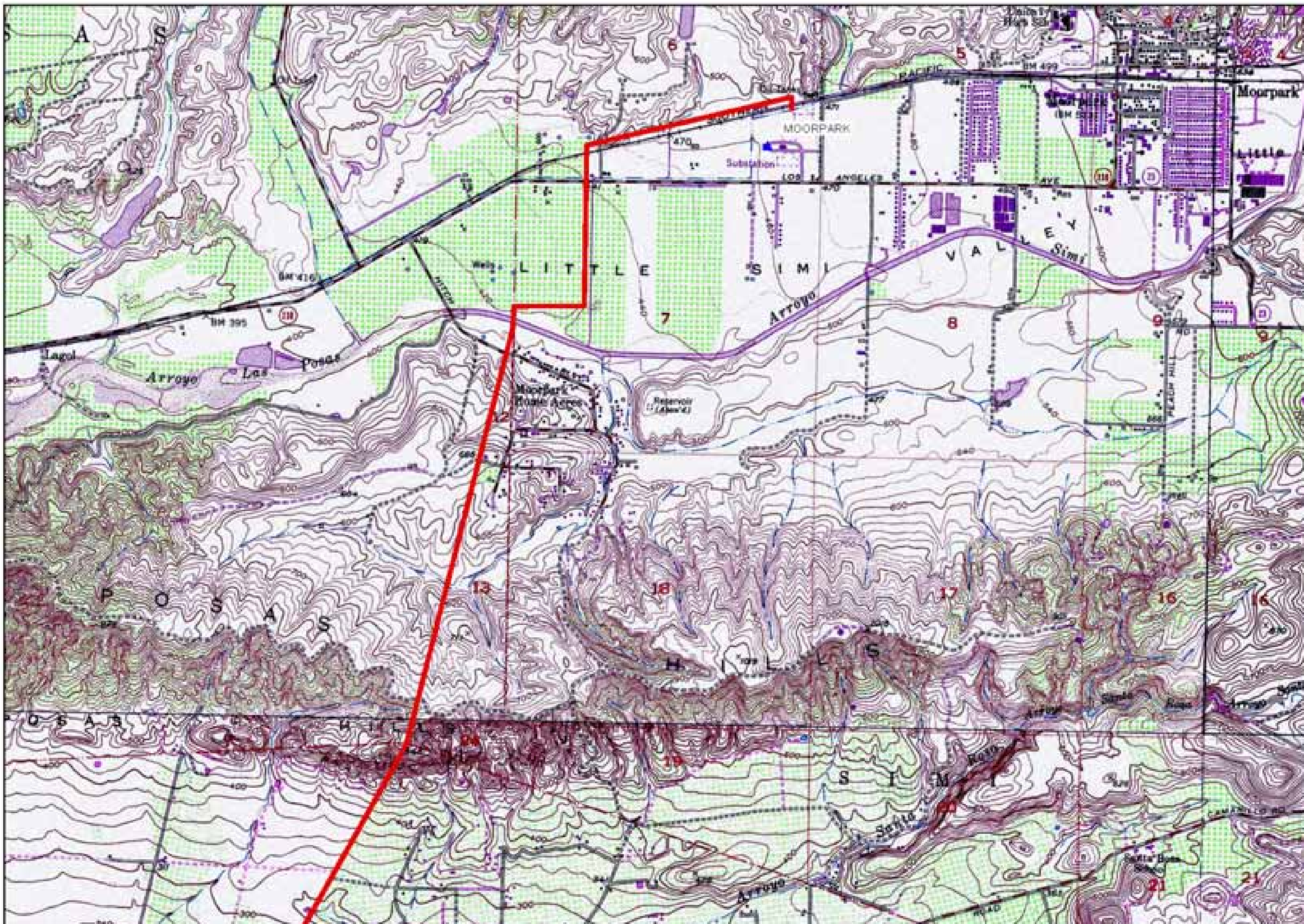
Christopher Doolittle, MA, RPA
Archaeologist
Southern California Edison
1218 S. Fifth Avenue
Monrovia, CA 91016

Enclosure: As stated

Southern California Edison
Moorpark-Newbury 66 kV Project

Legend

- Project Route
- ▲ Substation



Issued For: Native American Heritage Commission

Date: November 13, 2012

Original Scale: 1:24,000

Map 1 of 2

Index Map

Projection: NAD 83 UTM Zone 11

SOUTHERN CALIFORNIA EDISON
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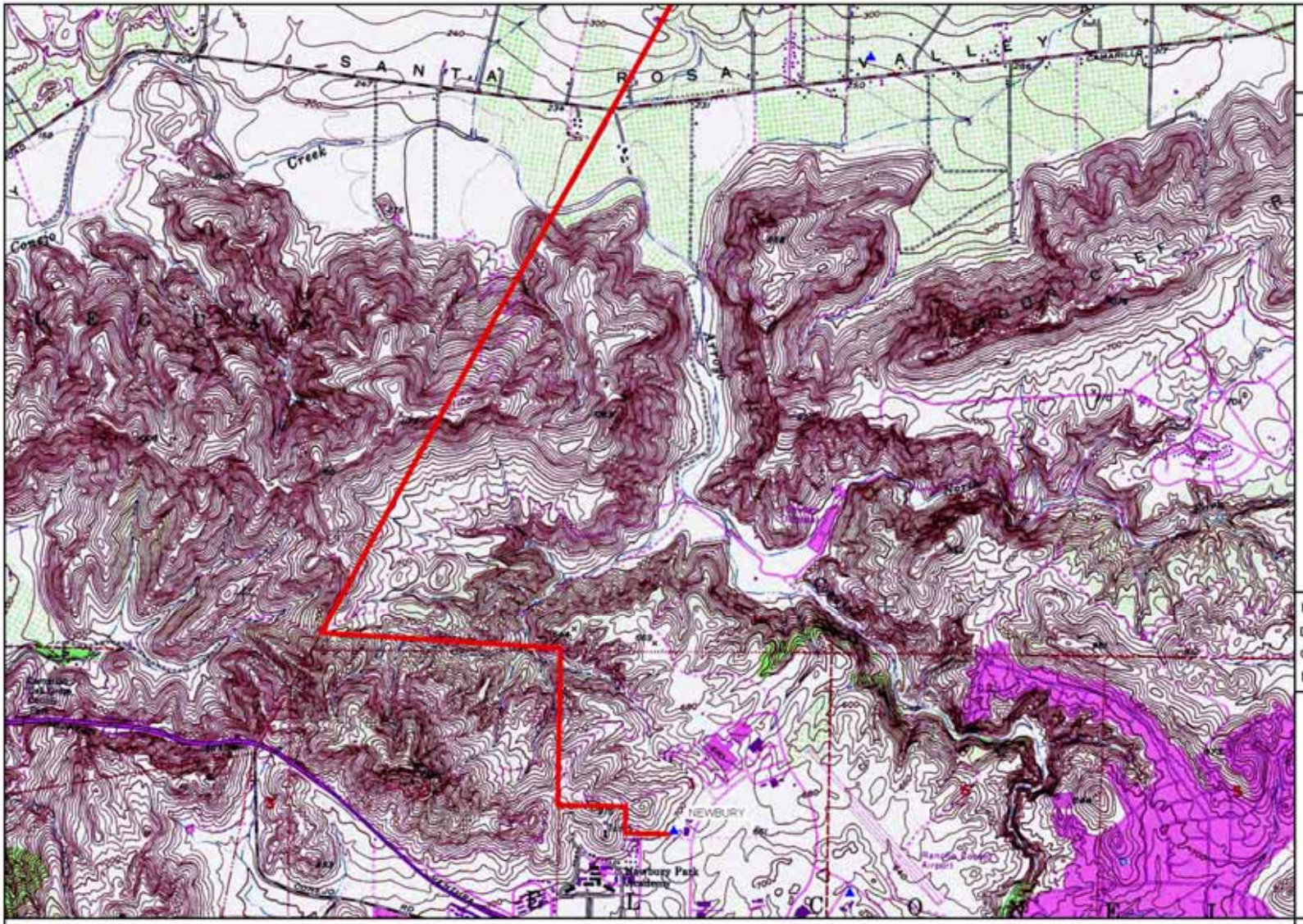
USGS 7.5 Minute Topographic Quad: Newbury Park and Moorpark

0 0.25 0.5 0.75 1 Miles

Thomas Bros. Maps



Southern California Edison
Moorpark-Newbury 66 kV Project

Legend

Project Route
Substation

Issued For: Native American Heritage Commission
Date: November 13, 2012
Original Scale: 1:24,000
Map 2 of 2

Index Map

Projection: NAD 83 UTM Zone 11

SOUTHERN CALIFORNIA EDISON
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USGS 7.5 Minute Topographic Quad: Newbury Park

0 0.25 0.5 0.75 1 Miles

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

November 20, 2012

Mr. Christopher Doolittle, M.A., RPA
Southern California Edison
1218 S. Fifth Avenue
Monrovia, CA 91016

Sent by U.S. Mail
No. of Pages: 5

Re: Sacred Lands File Search and Native American Contacts list for the proposed Sacred Lands File Search and Native American Contacts list for the proposed **"Moorpark-Newbury 66kV New Source Line Project;"** located in Ventura County, California

Dear. Mr. Doolittle:
:

The Native American Heritage Commission (NAHC) conducted a search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American traditional cultural places or cultural landscapes in any APE. While in this case, a search of the NAHC *Sacred Lands File* did not indicate the presence of any sites within the APE you provided. Also, a Native American tribe or individual may be the only source for the presence of traditional cultural places. For that reason, enclosed is a list of Native American individuals/organizations who may have knowledge of traditional cultural places in your project area. This list should provide a starting place in locating any areas of potential adverse impact. Also, there are Native American Cultural resources in nearby USGS Sections to the APE.

California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to. California Government Code §6254 (r). The purpose of this code is to protect such sites from vandalism, theft and destruction.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

The California Environmental Quality Act (CEQA – CA Public Resources Code §§ 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental

Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. CA Government Code §65040.12(e) defines "environmental justice" provisions and is applicable to the environmental review processes. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and California Public Resources Code Section 21083.2 (Archaeological Resources) that requires documentation, data recovery of cultural resources, construction to avoid sites and the possible use of covenant easements to protect sites.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Local Native Americans may have knowledge of the religious and cultural significance of the historic properties of the proposed project for the area (e.g. APE). Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). We urge consultation with those tribes and interested Native Americans on the list that the NAHC has provided in order to see if your proposed project might impact Native American cultural resources. Lead agencies should consider avoidance as defined in §15370 of the CEQA Guidelines when significant cultural resources as defined by the CEQA Guidelines §15064.5 (b)(c)(f) may be affected by a proposed project. If so, Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "substantial," and Section 21083.2 which requires documentation, data recovery of cultural resources.

The NAHC makes no recommendation or preference of any single individual, or group over another. All of those on the list should be contacted, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Partnering with local tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 4(f), Section 110 and (k) of the federal NHPA (16 U.S.C. 470 *et seq*), Section 4(f) of the Department of Transportation Act of 1966 (23 CFR 774); 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including

cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The NAHC remains concerned about the limitations and methods employed for NHPA Section 106 Consultation.

Also, California Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery', another important reason to have Native American Monitors on board with the project.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. An excellent way to reinforce the relationship between a project and local tribes is to employ Native American Monitors in all phases of proposed projects including the planning phases.

Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibility threatened by proposed project activity.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton

Attachment: Native American Contact List

Native American Contacts
Ventura County
November 20, 2012

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks, CA 91362
folkes@msn.com
805 492-7255
(805) 558-1154 - cell
Chumash
Tataviam
Ferrnandeño

Barbareno/Ventureno Band of Mission Indians
Julie Lynn Tumamait-Stennslie, Chairwoman
365 North Poli Ave
Ojai , CA 93023
jtumamait@sbcglobal.net
(805) 646-6214
Chumash

Owl Clan
Dr. Kote & Lin A-Lul'Koy Lotah
48825 Sapaque Road
Bradley , CA 93426
mupaka@gmail.com
(805) 472-9536
Chumash

Patrick Tumamait
992 El Camino Corto
Ojai , CA 93023
(805) 640-0481
(805) 216-1253 Cell
Chumash

Santa Ynez Band of Mission Indians
Vincent Armenta, Chairperson
P.O. Box 517
Santa Ynez , CA 93460
varmenta@santaynezchumash.
(805) 688-7997
(805) 686-9578 Fax
Chumash

San Luis Obispo County Chumash Council
Chief Mark Steven Vigil
1030 Ritchie Road
Grover Beach CA 93433
(805) 481-2461
(805) 474-4729 - Fax
Chumash

Fernandeno Tataviam Band of Mission Indians
Ronnie Salas, Cultural Preservation Department
1019 - 2nd Street, Suite #1
San Fernando CA 91340
rsalas@tataviam-nsn.gov
(818) 837-0794 Office
(818) 837-0796 Fax
Fernandeno
Tataviam

Owl Clan
Qun-tan Shup
48825 Sapaque Road
Bradley , CA 93426
mupaka@gmail.com
(805) 472-9536 phone/fax
(805) 835-2382 - CELL
Chumash

This list is current only as of the date of this document.

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This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed Moorpark-Newbury 66kV New Source Line Project; located in Ventura County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contacts
Ventura County
November 20, 2012

Stephen William Miller
189 Cartagena
Camarillo , CA 93010
(805) 484-2439
Chumash

Charles S. Parra
P.O. Box 6612
Oxnard , CA 93031
(805) 340-3134 (Cell)
(805) 488-0481 (Home)
Chumash

Santa Ynez Tribal Elders Council
Adelina Alva-Padilla, Chair Woman
P.O. Box 365
Santa Ynez , CA 93460
elders@santaynezchumash.org
(805) 688-8446
(805) 693-1768 FAX
Chumash

Santa Ynez Band of Mission Indians
Tribal Administrator/Counsel Sam Cohen
P.O. Box 517
Santa Ynez , CA 93460
info@santaynezchumash.
(805) 688-7997
(805) 686-9578 Fax
Chumash

Randy Guzman - Folkes
6471 Cornell Circle
Moorpark , CA 93021
ndnRandy@yahoo.com
(805) 905-1675 - cell
Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

Carol A. Pulido
165 Mountainview Street
Oak View , CA 93022
805-649-2743 (Home)
Chumash

Coastal Band of the Chumash Nation
Toni Cordero, Chairwoman
P.O. Box 4464
Santa Barbara CA 93140
cordero44@charter.net
805-964-3447
Chumash

Melissa M. Parra-Hernandez
119 North Balsam Street
Oxnard , CA 93030
envyy36@yahoo.com
805-983-7964
(805) 248-8463 cell
Chumash

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Native American Contacts
Ventura County
November 20, 2012

Frank Arredondo
PO Box 161 Chumash
Santa Barbara CA 93102
ksen_sku_mu@yahoo.com
805-617-6884
805-893-1459
ksen_sku_mu@yahoo.com

Coastal Band of the Chumash Nation
Janet Darlene Garcia
P.O. Box 4464 Chumash
Santa Barbara CA 93140
805-689-9528

Santa Ynez Tribal Elders Council
Freddie Romero, Cultural Preservation Conslnt
P.O. Box 365 Chumash
Santa Ynez , CA 93460
805-688-7997, Ext 37
freddyromero1959@yahoo.com

Coastal Band of the Chumash Nation
Crystal Baker
P.O. Box 4464 Chumash
Santa Barbara CA 93140
805-689-9528

Barbareno/Ventureno Band of Mission Indians
Kathleen Pappo
2762 Vista Mesa Drive Chumash
Rancho Pales Verdes CA 90275
310-831-5295

Barbareno/Ventureno Band of Mission Indians
Raudel Joe Banuelos, Jr.
331 Mira Flores Court Chumash
Camarillo , CA 93012
805-987-5314

This list is current only as of the date of this document.

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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Addressee
Address
City, State, ZIP

December 11, 2012

SUBJECT: Native American Consultation for the Moorpark-Newbury 66 kV Project, Ventura County, California.

Dear Ms./Mr____:

At the recommendation of the Native American Heritage Commission (NAHC), Southern California Edison (SCE) requests your input regarding the identification of potential impacts to cultural resources, sacred lands or other heritage sites located within the Moorpark-Newbury 66 kV Project. As background, the Moorpark-Newbury 66kV Project was first proposed in 2007. SCE conducted consultation with tribes at that time, but construction did not begin until several years later. The project was subsequently put on hiatus in 2011 and its status changed from an exempt project to a licensed project, per the California Public Utilities Commission.

Due to the length of time since the original communication and the fact that new tribal contacts were provided to SCE in our recent NAHC letter, SCE decided to update you on the project's progress and to ask again for your input regarding the identification of potential impacts to cultural resources, sacred lands or other heritage sites.

As shown in the attached map (Figure 1), the project is located within an approximately 8.5 mile segment of SCE's existing transmission corridor, between Moorpark Substation and Newbury Substation. The proposed project consists of the removal of existing structures and electrical lines, and the construction and installation of new structures, electrical lines and fiber optic cable along the Moorpark-Newbury-Pharmacy 66 kV subtransmission line. SCE would appreciate any information you may have regarding Native American cultural resources located in or near the proposed project location. Any information concerning the location, identity, character and traditional use of cultural places identified during consultation will be considered confidential.

For project planning purposes SCE is requesting to receive any questions or concerns regarding this project no later than 30 days from the receipt of this letter. If you have any questions, please feel free to call me at (626) 462-8614, or via email at christopher.doolittle@sce.com.

Thank you for your assistance and participation.

Sincerely,

Christopher Doolittle, MA, RPA
Senior Archaeologist
Natural and Cultural Resources Group
Corporate Environmental Services

Southern California Edison
1218 S. Fifth Avenue
Monrovia, CA 91016

Title	First Name	Last Name	Company Name	Address Line 1	City	State	ZIP Code	Position	Cultrural Affiliation
Ms.	Adelina	Alva-Padilla	Santa Ynez Tribal Elders Council	P.O. Box 365	Santa Ynez	CA	93460	Chair Woman	Chumash
Mr.	Vincent	Armenta	Santa Ynez Band of Mission Indians	P.O. Box 517	Santa Ynez	CA	93460	Chairperson	Chumash
Mr.	Frank	Arredondo		PO Box 161	Santa Barbara	CA	93102		Chumash
Ms.	Crystal	Baker	Coastal Band of the Chumash Nation	P.O. Box 4464	Santa Barbara	CA	93140		Chumash
Mr.	Raudel Joe	Banuelos, Jr.	Barbareno/Ventureno Band of Mission Indians	331 Mira Flores Court	Camarillo	CA	93012		Chumash
Mr.	Sam	Cohen	Santa Ynez Band of Mission Indians	P.O. Box 517	Santa Ynez	CA	93460	Tribal Administrator/ Counsel	Chumash
Ms.	Toni	Cordero	Coastal Band of the Chumash Nation	P.O. Box 4464	Santa Barbara	CA	93140	Chairwoman	Chumash
Ms.	Janet Darlene	Garcia	Coastal Band of the Chumash Nation	P.O. Box 4464	Santa Barbara	CA	93140		Chumash
Mr.	Randy	Guzman –Folkes		6471 Cornell Circle	Moorpark	CA	93021		Chumash Fernandeño Tataviam Shoshone Paiute Yaqui
Ms.	Kote	Lotta	Owl Clan	48825 Sapaque Rd.	Bradley	CA	93426		Chumash, Yaqui
Mr.	Stephen William	Miller		189 Cartegena	Camarillo	CA	93010		
Ms.	Kathleen	Pappo	Barbareno/Ventureno Band of Mission Indians	2762 Vista Mesa Drive	Rancho Pales Verdes	CA	90275		Chumash
Mr.	Charles	Parra		P.O. Box 6612	Oxnard	CA	93031		
Ms.	Melissa	Parra-Hernandez		119 N. Balsam St.	Oxnard	CA	93030		Chumash
Ms.	Carol	Pulido		165 Mountainview St.	Oak View	CA	93022		
Mr.	Freddie	Romero	Santa Ynez Tribal Elders Council	P.O. Box 365	Santa Ynez	CA	93460	Cultural Preservation Conslnt	Chumash
Mr.	Ronnie	Salas	Fernando Tataviam Band of Mission Indians	1019 2nd St., Suite #1	San Fernando	CA	91340	Cultural Preservation	Fernandeno, Tatatviam
Ms.	Beverly	Salazar Folkes		1931 Shadybrook Drive	Thousand Oaks	CA	91362		Chumash, Tataviam. Ferrnandeño
Mr.	Qun-tan	Shup	Owl Clan	48825 Sapaque Rd.	Bradley	CA	93426		Chumash
Mr.	Patrick	Tumamait		992 El Camino Corto	Ojai	CA	93023		Chumash
Ms.	Julie Lynn	Tumamait-Stennslie	Barbareno/Ventureno Band of Mission Indians	365 North Poli Ave	Ojai	CA	93023	Chairwoman	Chumash
Chief	Mark Steven	Vigil	San Luis Obispo County Chumash Council	1030 Ritchie Road	Grover Beach	CA	93433		Chumash

Appendix D

Public Involvement

SOUTHERN CALIFORNIA EDISON®
An *EDISON INTERNATIONAL*® Company

Rudy Gonzales
Region Manager
Local Public Affairs

June 25, 2013

Ms. Kim Prillhart
Planning Director
County of Ventura
800 S. Victoria Ave. L-1740
Ventura, CA 93009-1740

Dear Ms. Prillhart,

Southern California Edison Company (SCE) will be filing a Permit to Construct (PTC) application with the California Public Utilities Commission (CPUC) to complete construction on the Moorpark-Newbury 66 Kilovolt Subtransmission Line Project (the Project), a portion of which is proposed to be constructed in the county of Ventura.

CPUC General Order 131-D, which governs this approval process, requires SCE to request a written position statement regarding the Project from the cities and counties through which the Project will traverse, and to include those position statements in the application. The purpose of this letter is to request from you a written position statement regarding this Project.

The Project will ensure the availability of safe and reliable electric service to meet customer demand in western Thousand Oaks as well as address forecasted overloads on our infrastructure serving this region. It would also enhance reliability and operational flexibility in the area served by Newbury Substation and Pharmacy Substation within the Moorpark 66 Kilovolt Subtransmission System. The Project, which consists of constructing a new 66 kilovolt subtransmission line between SCE's Moorpark Substation and Newbury Substation, involves the construction of new facilities and reconstruction and reconductoring of existing facilities. It is approximately 9 miles in length, and traverses portions of the cities of Moorpark and Thousand Oaks, and unincorporated areas of Ventura County.

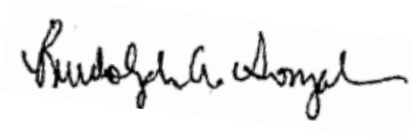
As you may be aware, SCE initiated construction on the Project during the fall of 2010. At the time, the Project had been determined to be exempt from CPUC permitting requirements. Thereafter, however, after reviewing a request for rehearing of the CPUC resolution that had previously confirmed the Project was exempt from CPUC permitting requirements, the CPUC in November 2011 issued a decision ordering SCE to file a PTC application if it wished to complete

3589 Foothill Drive
Thousand Oaks, CA 91361

construction of the Project. At the time the CPUC issued its order, construction of the Project was approximately 60% complete. SCE is now moving forward with the requested PTC filing at the CPUC, and in accordance with the requirements for such an application, SCE respectfully requests a position statement from the county of Ventura. We would appreciate it if you could send us a position letter regarding the Project no later than August 1, 2013 for inclusion in SCE's PTC application to the CPUC. I am available to discuss this project further and to answer any questions you may have beforehand, if you wish.

Thank you for your cooperation.

Sincerely,



Rudy Gonzales
SCE Local Public Affairs Region Manager

3589 Foothill Drive
Thousand Oaks, CA 91361

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Rudy Gonzales
Region Manager
Local Public Affairs

June 25, 2013

Mr. Hugh Riley
Assistant City Manager
City of Moorpark
799 Moorpark Avenue
Moorpark CA 93021

Dear Mr. Riley,

Southern California Edison Company (SCE) will be filing a Permit to Construct (PTC) application with the California Public Utilities Commission (CPUC) to complete construction on the Moorpark-Newbury 66 Kilovolt Subtransmission Line Project (the Project), a portion of which is proposed to be constructed in the city of Moorpark.

CPUC General Order 131-D, which governs this approval process, requires SCE to request a written position statement regarding the Project from the cities and counties through which the Project will traverse, and to include those position statements in the application. The purpose of this letter is to request from you a written position statement regarding this Project.

The Project will ensure the availability of safe and reliable electric service to meet customer demand in western Thousand Oaks as well as address forecasted overloads on our infrastructure serving this region. It would also enhance reliability and operational flexibility in the area served by Newbury Substation and Pharmacy Substation within the Moorpark 66 Kilovolt Subtransmission System. The Project, which consists of constructing a new 66 kilovolt subtransmission line between SCE's Moorpark Substation and Newbury Substation, involves the construction of new facilities and reconstruction and reconductoring of existing facilities. It is approximately 9 miles in length, and traverses portions of the cities of Moorpark and Thousand Oaks, and unincorporated areas of Ventura County.

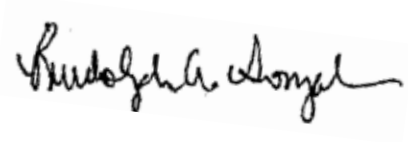
As you may be aware, SCE initiated construction on the Project during the fall of 2010. At the time, the Project had been determined to be exempt from CPUC permitting requirements. Thereafter, however, after reviewing a request for rehearing of the CPUC resolution that had previously confirmed the Project was exempt from CPUC permitting requirements, the CPUC in November 2011 issued a decision ordering SCE to file a PTC application if it wished to complete

3589 Foothill Drive
Thousand Oaks, CA 91361

construction of the Project. At the time the CPUC issued its order, construction of the Project was approximately 60% complete. SCE is now moving forward with the requested PTC filing at the CPUC, and in accordance with the requirements for such an application, SCE respectfully requests a position statement from the city of Moorpark. We would appreciate it if you could send us a position letter regarding the Project no later than August 1, 2013 for inclusion in SCE's PTC application to the CPUC. I am available to discuss this project further and to answer any questions you may have beforehand, if you wish.

Thank you for your cooperation.

Sincerely,



Rudy Gonzales
SCE Local Public Affairs Region Manager

3589 Foothill Drive
Thousand Oaks, CA 91361

SOUTHERN CALIFORNIA EDISON®
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Rudy Gonzales
Region Manager
Local Public Affairs

June 25, 2013

Mr. Jay T. Spurgin
Public Works Director
City of Thousand Oaks
2100 Thousand Oaks Blvd.
Thousand Oaks, CA 91362

Dear Mr. Spurgin,

Southern California Edison Company (SCE) will be filing a Permit to Construct (PTC) application with the California Public Utilities Commission (CPUC) to complete construction on the Moorpark-Newbury 66 Kilovolt Subtransmission Line Project (the Project), a portion of which is proposed to be constructed in the city of Thousand Oaks.

CPUC General Order 131-D, which governs this approval process, requires SCE to request a written position statement regarding the Project from the cities and counties through which the Project will traverse, and to include those position statements in the application. The purpose of this letter is to request from you a written position statement regarding this Project.

The Project will ensure the availability of safe and reliable electric service to meet customer demand in western Thousand Oaks as well as address forecasted overloads on our infrastructure serving this region. It would also enhance reliability and operational flexibility in the area served by Newbury Substation and Pharmacy Substation within the Moorpark 66 Kilovolt Subtransmission System. The Project, which consists of constructing a new 66 kilovolt subtransmission line between SCE's Moorpark Substation and Newbury Substation, involves the construction of new facilities and reconstruction and reconductoring of existing facilities. It is approximately 9 miles in length, and traverses portions of the cities of Moorpark and Thousand Oaks, and unincorporated areas of Ventura County.

As you may be aware, SCE initiated construction on the Project during the fall of 2010. At the time, the Project had been determined to be exempt from CPUC permitting requirements. Thereafter, however, after reviewing a request for rehearing of the CPUC resolution that had previously confirmed the Project was exempt from CPUC permitting requirements, the CPUC in November 2011 issued a decision ordering SCE to file a PTC application if it wished to complete

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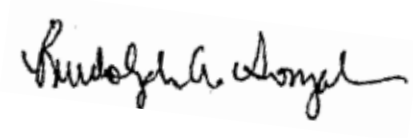
construction of the Project. At the time the CPUC issued its order, construction of the Project was approximately 60% complete. SCE is now moving forward with the requested PTC filing at the CPUC, and in accordance with the requirements for such an application, SCE respectfully requests a position statement from the city of Thousand Oaks. We would appreciate it if you could send us a position letter regarding the Project no later than August 1, 2013 for inclusion in SCE's PTC application to the CPUC. I am available to discuss this project further and to answer any questions you may have beforehand, if you wish.

Thank you for your cooperation.

Sincerely,



Rudy Gonzales
SCE Local Public Affairs Region Manager

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Appendix E

Construction Emissions Calculations

Phase Name	Phase Type	Phase Start Date	Phase End Date	Num Days Week	Num Days	Phase Description
Future Survey	Site Preparation	2014/01/01	2014/01/14	5	10	Future Phase 01
Future Marshalling Yards	Site Preparation	2014/01/15	2014/08/14	5	152	Future Phase 02
Future ROW Clearing	Grading	2014/01/15	2014/01/16	5	2	Future Phase 03
Future Roads and Landing Work	Grading	2014/01/15	2014/01/22	5	6	Future Phase 04
Future Guard Structure Installation	Building Construction	2014/01/15	2014/01/17	5	3	Future Phase 05
Future Remove Existing Conductor	Trenching	2014/01/15	2014/02/04	5	15	Future Phase 06
Future Wood Pole Removal	Site Preparation	2014/01/15	2014/01/15	5	1	Future Phase 07
Future LST Removal	Site Preparation	2014/01/15	2014/02/21	5	28	Future Phase 08
Future LST Foundation Removal	Demolition	2014/01/15	2014/01/23	5	7	Future Phase 09
Future Install TSP Foundations	Site Preparation	2014/01/15	2014/02/21	5	28	Future Phase 10
Future TSP Haul	Site Preparation	2014/01/15	2014/01/22	5	6	Future Phase 11
Future TSP Assembly	Site Preparation	2014/01/15	2014/02/13	5	22	Future Phase 12
Future TSP Erection	Site Preparation	2014/01/15	2014/02/13	5	22	Future Phase 13
Future LWS Pole Haul	Site Preparation	2014/01/15	2014/01/15	5	1	Future Phase 14
Future LWS Pole Assembly	Site Preparation	2014/01/15	2014/01/15	5	1	Future Phase 15
Future Instal LWS Pole	Site Preparation	2014/01/15	2014/01/15	5	1	Future Phase 16
Future Install Conductor	Site Preparation	2014/03/18	2014/07/29	5	96	Future Phase 17
Future Guard Structure Removal	Demolition	2014/07/30	2014/07/31	5	2	Future Phase 18
Future Restoration	Site Preparation	2014/07/30	2014/08/01	5	3	Future Phase 19
Future Duct Bank Installation	Site Preparation	2014/07/30	2014/07/31	5	2	Future Phase 20
Future UG Cable Installation	Site Preparation	2014/07/30	2014/08/05	5	5	Future Phase 21
Future Tree Trimming	Site Preparation	2014/07/30	2014/08/14	5	12	Future Phase 22
Future Sub Electrical MP	Site Preparation	2014/01/15	2014/01/28	5	10	Future Phase SS1
Future Sub Wiring MP	Site Preparation	2014/01/15	2014/04/01	5	55	Future Phase SS2
Future Sub Test/Maint MP	Site Preparation	2014/01/15	2014/03/04	5	35	Future Phase SS3
Future Sub Electrical NB	Site Preparation	2014/01/15	2014/01/28	5	10	Future Phase SS4
Future Sub Wiring NB	Site Preparation	2014/01/15	2014/02/25	5	30	Future Phase SS5
Future Sub Test/Maint NB	Site Preparation	2014/01/15	2014/01/15	5	35	Future Phase SS6
Previous Survey	Site Preparation	2010/10/01	2010/10/13	5	9	Previous Phase 01
Previous ROW Clearing	Grading	2010/10/14	2010/10/19	5	4	Previous Phase 02
Previous Tree Trimming and Removal	Building Construction	2010/10/14	2010/11/22	5	28	Previous Phase 03
Previous Roads and Landing Work	Grading	2010/10/14	2010/11/22	5	28	Previous Phase 04
Previous Install TSP Foundation	Site Preparation	2010/10/14	2011/01/07	5	62	Previous Phase 05
Previous Drill&Fill TSP Foundation	Site Preparation	2010/10/14	2010/10/21	5	6	Previous Phase 06
Previous TSP Haul	Site Preparation	2010/10/14	2010/10/21	5	6	Previous Phase 07
Previous TSP Assembly	Site Preparation	2010/10/14	2010/11/12	5	22	Previous Phase 08
Previous TSP Erection	Site Preparation	2010/10/14	2010/11/15	5	23	Previous Phase 09
Previous Vault Installation	Site Preparation	2010/10/14	2010/10/21	5	6	Previous Phase 10
Previous Duct Bank Installation	Site Preparation	2010/10/14	2010/10/18	5	3	Previous Phase 11
Previous Wood Pole Removal	Site Preparation	2010/10/14	2010/10/19	5	4	Previous Phase 12
Previous LWS Pole Haul	Site Preparation	2010/10/14	2010/11/02	5	14	Previous Phase 13
Previous LWS Pole Assembly	Site Preparation	2010/10/14	2010/11/02	5	14	Previous Phase 14
Previous Instal LWS Pole	Site Preparation	2010/10/14	2010/11/02	5	14	Previous Phase 15
Previous Install Conductor	Site Preparation	2011/01/08	2011/01/13	5	4	Previous Phase 16
Previous Restoration	Site Preparation	2011/01/14	2011/01/17	5	2	Previous Phase 17
Previous Sub Civil MP	Site Preparation	2010/10/14	2010/11/05	5	17	Previous Phase SS1
Previous Sub Wiring MP	Site Preparation	2010/10/14	2010/12/29	5	55	Previous Phase SS2
Previous Sub Civil NB	Site Preparation	2010/10/14	2010/10/21	5	6	Previous Phase SS3
Previous Sub Wiring NB	Site Preparation	2010/10/14	2010/10/27	5	10	Previous Phase SS4

Phase Name	OffRoad Equipment Type	OffRoad Equipment Unit Amount	Usage Hours	Horse Power	Load Factor
Previous Wood Pole Removal	Air Compressors	1	4	60	0.48
Previous Wood Pole Removal	Cranes	1	6	350	0.43
Previous Wood Pole Removal	Off-Highway Trucks	1	6	250	0.57
Previous Wood Pole Removal	Off-Highway Trucks	1	8	400	0.57
Previous LWS Pole Haul	Cranes	1	6	350	0.43
Previous LWS Pole Haul	Off-Highway Trucks	1	8	400	0.57
Previous LWS Pole Assembly	Air Compressors	1	6	60	0.48
Previous LWS Pole Assembly	Cranes	1	8	350	0.43
Previous Instal LWS Pole	Bore/Drill Rigs	1	4	210	0.75
Previous Instal LWS Pole	Cranes	1	6	350	0.43
Previous Instal LWS Pole	Off-Highway Trucks	1	6	250	0.57
Previous Instal LWS Pole	Off-Highway Trucks	1	8	400	0.57
Previous Instal LWS Pole	Tractors/Loaders/Back	1	8	125	0.55
Previous Install TSP Foundation	Bore/Drill Rigs	1	6	210	0.75
Previous Install TSP Foundation	Cranes	1	4	350	0.43
Previous Install TSP Foundation	Off-Highway Trucks	1	8	300	0.57
Previous Install TSP Foundation	Off-Highway Trucks	1	4	350	0.57
Previous Install TSP Foundation	Off-Highway Trucks	1	2	350	0.57
Previous Install TSP Foundation	Tractors/Loaders/Back	1	6	125	0.55
Previous Drill&Fill TSP	Aerial Lifts	2	6	75	0.46
Previous Drill&Fill TSP	Forklifts	1	6	75	0.3
Previous Drill&Fill TSP	Off-Highway Trucks	1	6	100	0.57
Previous TSP Assembly	Aerial Lifts	2	8	75	0.46
Previous TSP Erection	Graders	1	6	250	0.61
Previous TSP Erection	Off-Highway Trucks	1	4	450	0.57
Previous TSP Erection	Off-Highway Trucks	1	8	300	0.57
Previous TSP Erection	Off-Highway Trucks	1	8	300	0.57
Previous TSP Erection	Tractors/Loaders/Back	1	6	125	0.55
Previous TSP Erection	Tractors/Loaders/Back	1	6	150	0.55
Previous Vault Installation	Air Compressors	1	4	60	0.48
Previous Vault Installation	Cranes	1	6	350	0.43
Previous Vault Installation	Excavators	1	4	250	0.57
Previous Vault Installation	Graders	1	6	250	0.61
Previous Vault Installation	Off-Highway Trucks	1	6	250	0.57
Previous Vault Installation	Off-Highway Trucks	1	8	400	0.57
Previous Vault Installation	Off-Highway Trucks	1	4	450	0.57
Previous Vault Installation	Off-Highway Trucks	1	8	300	0.57
Previous Vault Installation	Plate Compactors	1	6	100	0.43
Previous Vault Installation	Tractors/Loaders/Back	1	4	125	0.55
Previous Vault Installation	Tractors/Loaders/Back	1	4	150	0.55
Previous Duct Bank Installation	Bore/Drill Rigs	1	4	210	0.75
Previous Duct Bank Installation	Cranes	1	6	350	0.43
Previous Duct Bank Installation	Cranes	2	8	350	0.43
Previous Duct Bank Installation	Graders	1	8	162	0.61
Previous Duct Bank Installation	Off-Highway Trucks	1	6	250	0.57
Previous Duct Bank Installation	Off-Highway Trucks	1	8	400	0.57
Previous Duct Bank Installation	Off-Highway Trucks	2	8	250	0.57

Phase Name	OffRoad Equipment Type	OffRoad Equipment Unit Amount	Usage Hours	Horse Power	Load Factor
Previous Duct Bank Installation	Off-Highway Trucks	1	6	350	0.57
Previous Duct Bank Installation	Off-Highway Trucks	2	4	450	0.57
Previous Duct Bank Installation	Other Construction Equipment	1	6	350	0.62
Previous Duct Bank Installation	Other Construction Equipment	1	6	300	0.62
Previous Duct Bank Installation	Tractors/Loaders/Back	1	8	125	0.55
Previous ROW Clearing	Graders	1	6	250	0.61
Previous ROW Clearing	Off-Highway Trucks	1	4	450	0.57
Previous ROW Clearing	Off-Highway Trucks	1	8	300	0.57
Previous ROW Clearing	Rubber Tired Dozers	1	6	150	0.55
Previous ROW Clearing	Tractors/Loaders/Back	1	6	100	0.59
Previous ROW Clearing	Tractors/Loaders/Back	1	6	125	0.55
Previous Roads and Landing	Excavators	1	4	250	0.57
Previous Roads and Landing	Graders	1	6	250	0.61
Previous Roads and Landing	Off-Highway Trucks	1	4	450	0.57
Previous Roads and Landing	Off-Highway Trucks	1	8	300	0.57
Previous Roads and Landing	Plate Compactors	1	6	100	0.43
Previous Roads and Landing	Rubber Tired Dozers	1	4	150	0.59
Previous Roads and Landing	Tractors/Loaders/Back	1	4	125	0.55
Previous Tree Trimming and	Off-Highway Trucks	1	8	380	0.57
Previous Tree Trimming and	Off-Highway Trucks	1	8	300	0.57
Previous Tree Trimming and	Off-Highway Trucks	1	8	50	0.57
Previous Tree Trimming and Removal	Other Construction Equipment	1	4	25	0.62
Previous Tree Trimming and Removal	Other Construction Equipment	1	6	50	0.62
Previous Tree Trimming and	Tractors/Loaders/Back	2	8	75	0.55
Previous Install Conductor	Cranes	1	8	350	0.43
Previous Install Conductor	Off-Highway Trucks	4	8	250	0.57
Previous Install Conductor	Off-Highway Trucks	1	2	350	0.57
Previous Install Conductor	Off-Highway Trucks	2	6	350	0.57
Previous Install Conductor	Off-Highway Trucks	1	6	350	0.57
Previous Install Conductor	Off-Highway Trucks	2	4	450	0.57
Previous Install Conductor	Off-Highway Trucks	1	6	400	0.57
Previous Install Conductor	Off-Highway Trucks	1	6	300	0.57
Previous Install Conductor	Other Construction Equipment	1	6	300	0.62
Previous Install Conductor	Other Construction Equipment	1	6	350	0.62
Previous Install Conductor	Tractors/Loaders/Back	1	2	125	0.55
Previous Restoration	Graders	1	6	250	0.61
Previous Restoration	Off-Highway Trucks	1	8	300	0.57
Previous Restoration	Off-Highway Trucks	1	4	450	0.57
Previous Restoration	Plate Compactors	1	4	100	0.43
Previous Restoration	Tractors/Loaders/Back	1	4	125	0.55
Future LST Foundation Removal	Air Compressors	1	8	60	0.48

Phase Name	OffRoad Equipment Type	OffRoad Equipment Unit Amount	Usage Hours	Horse Power	Load Factor
Future LST Foundation Removal	Excavators	1	4	250	0.57
Future LST Foundation Removal	Off-Highway Trucks	1	6	350	0.57
Future LST Foundation Removal	Tractors/Loaders/Back	1	6	125	0.55
Future Marshalling Yards	Cranes	1	2	350	0.43
Future Marshalling Yards	Forklifts	1	6	125	0.3
Future Marshalling Yards	Off-Highway Trucks	1	8	300	0.57
Future Marshalling Yards	Off-Highway Trucks	1	2	400	0.57
Future Wood Pole Removal	Air Compressors	1	4	60	0.48
Future Wood Pole Removal	Cranes	1	6	350	0.43
Future Wood Pole Removal	Off-Highway Trucks	1	6	250	0.57
Future Wood Pole Removal	Off-Highway Trucks	1	8	400	0.57
Future LST Removal	Air Compressors	1	8	60	0.48
Future LST Removal	Cranes	1	6	215	0.43
Future LST Removal	Cranes	1	6	350	0.43
Future LST Removal	Off-Highway Trucks	1	4	400	0.57
Future Install TSP Foundations	Bore/Drill Rigs	1	6	210	0.75
Future Install TSP Foundations	Cranes	1	4	350	0.43
Future Install TSP Foundations	Off-Highway Trucks	1	8	300	0.57
Future Install TSP Foundations	Off-Highway Trucks	1	4	350	0.57
Future Install TSP Foundations	Off-Highway Trucks	1	2	350	0.57
Future Install TSP Foundations	Tractors/Loaders/Back	1	6	125	0.55
Future TSP Haul	Cranes	1	6	350	0.43
Future TSP Haul	Off-Highway Trucks	1	8	400	0.57
Future TSP Assembly	Air Compressors	1	6	60	0.48
Future TSP Assembly	Cranes	1	8	350	0.43
Future TSP Erection	Air Compressors	1	4	60	0.48
Future TSP Erection	Cranes	1	8	350	0.43
Future TSP Erection	Off-Highway Trucks	1	8	250	0.57
Future LWS Pole Haul	Cranes	1	6	350	0.43
Future LWS Pole Haul	Off-Highway Trucks	1	8	400	0.57
Future LWS Pole Assembly	Air Compressors	1	6	60	0.48
Future LWS Pole Assembly	Cranes	1	8	350	0.43
Future Instal LWS Pole	Bore/Drill Rigs	1	4	210	0.75
Future Instal LWS Pole	Cranes	1	6	350	0.43
Future Instal LWS Pole	Off-Highway Trucks	1	6	250	0.57
Future Instal LWS Pole	Off-Highway Trucks	1	8	400	0.57
Future Instal LWS Pole	Tractors/Loaders/Back	1	8	125	0.55
Future Sub Electrical MP	Aerial Lifts	2	6	75	0.46
Future Sub Electrical MP	Forklifts	1	6	75	0.3
Future Sub Electrical MP	Off-Highway Trucks	1	8	100	0.57
Future Sub Test/Maint MP	Air Compressors	2	8	75	0.48
Future Sub Electrical NB	Aerial Lifts	2	6	75	0.46
Future Sub Electrical NB	Forklifts	1	6	75	0.3
Future Sub Electrical NB	Off-Highway Trucks	1	8	100	0.57
Future Sub Test/Maint NB	Air Compressors	2	8	75	0.48
Future ROW Clearing	Concrete/Industrial	1	8	81	0.73
Future ROW Clearing	Graders	1	6	250	0.61

Phase Name	OffRoad Equipment Type	OffRoad Equipment Unit Amount	Usage Hours	Horse Power	Load Factor
Future ROW Clearing	Off-Highway Trucks	1	4	450	0.57
Future ROW Clearing	Off-Highway Trucks	1	8	300	0.57
Future ROW Clearing	Off-Highway Trucks	1	8	300	0.57
Future ROW Clearing	Rubber Tired Dozers	1	1	358	0.59
Future ROW Clearing	Tractors/Loaders/Back	2	6	75	0.55
Future ROW Clearing	Tractors/Loaders/Back	1	6	125	0.55
Future ROW Clearing	Tractors/Loaders/Back	1	6	150	0.55
Future Roads and Landing Work	Excavators	1	4	250	0.57
Future Roads and Landing Work	Graders	1	6	250	0.61
Future Roads and Landing Work	Off-Highway Trucks	1	4	450	0.57
Future Roads and Landing Work	Off-Highway Trucks	1	8	300	0.57
Future Roads and Landing Work	Plate Compactors	1	6	100	0.43
Future Roads and Landing Work	Tractors/Loaders/Back	1	4	125	0.55
Future Roads and Landing Work	Tractors/Loaders/Back	1	4	150	0.55
Future Remove Existing	Cranes	2	8	350	0.43
Future Remove Existing	Off-Highway Trucks	2	8	250	0.57
Future Remove Existing	Off-Highway Trucks	1	6	350	0.57
Future Remove Existing	Off-Highway Trucks	2	4	450	0.57
Future Remove Existing Conductor	Other Construction Equipment	1	6	350	0.62
Future Remove Existing Conductor	Other Construction Equipment	1	6	300	0.62
Future Guard Structure	Air Compressors	1	4	60	0.48
Future Guard Structure	Bore/Drill Rigs	1	4	210	0.75
Future Guard Structure	Cranes	1	6	350	0.43
Future Guard Structure	Off-Highway Trucks	1	4	250	0.57
Future Guard Structure	Off-Highway Trucks	1	8	400	0.57
Future Install Conductor	Cranes	1	8	350	0.43
Future Install Conductor	Off-Highway Trucks	4	8	250	0.57
Future Install Conductor	Off-Highway Trucks	1	2	350	0.57
Future Install Conductor	Off-Highway Trucks	2	6	350	0.57
Future Install Conductor	Off-Highway Trucks	1	6	350	0.57
Future Install Conductor	Off-Highway Trucks	2	4	450	0.57
Future Install Conductor	Off-Highway Trucks	1	6	400	0.57
Future Install Conductor	Off-Highway Trucks	1	6	300	0.57
Future Install Conductor	Other Construction Equipment	1	6	300	0.62
Future Install Conductor	Other Construction Equipment	1	6	350	0.62
Future Install Conductor	Tractors/Loaders/Back	1	2	125	0.55
Future Guard Structure Removal	Air Compressors	1	4	60	0.48
Future Guard Structure Removal	Cranes	1	6	350	0.43
Future Guard Structure Removal	Off-Highway Trucks	1	4	250	0.57
Future Guard Structure Removal	Off-Highway Trucks	1	8	400	0.57
Future Restoration	Graders	1	6	250	0.61
Future Restoration	Off-Highway Trucks	1	8	300	0.57
Future Restoration	Off-Highway Trucks	1	4	450	0.57

Phase Name	OffRoad Equipment Type	OffRoad Equipment Unit Amount	Usage Hours	Horse Power	Load Factor
Future Restoration	Plate Compactors	1	4	100	0.43
Future Restoration	Tractors/Loaders/Back	1	4	125	0.55
Future Duct Bank Installation	Air Compressors	1	4	60	0.48
Future Duct Bank Installation	Cement and Mortar	3	2	350	0.56
Future Duct Bank Installation	Off-Highway Trucks	2	6	350	0.57
Future Duct Bank Installation	Off-Highway Trucks	1	6	275	0.57
Future Duct Bank Installation	Off-Highway Trucks	1	8	300	0.57
Future Duct Bank Installation	Off-Highway Trucks	1	4	450	0.57
Future Duct Bank Installation	Tractors/Loaders/Back	1	6	125	0.55
Future UG Cable Installation	Cranes	1	6	350	0.43
Future UG Cable Installation	Off-Highway Trucks	1	6	250	0.57
Future UG Cable Installation	Off-Highway Trucks	2	6	350	0.57
Future UG Cable Installation	Off-Highway Trucks	1	6	350	0.57
Future UG Cable Installation	Other Construction Equipment	1	6	300	0.62
Future Tree Trimming	Off-Highway Trucks	1	8	380	0.57
Future Tree Trimming	Off-Highway Trucks	1	8	300	0.57
Future Tree Trimming	Off-Highway Trucks	1	8	250	0.57
Future Tree Trimming	Other Construction Equipment	1	4	50	0.62
Future Tree Trimming	Other Construction Equipment	1	6	25	0.62

Phase Name	Worker Trip Number	Vendor Trip Number	Worker Trip Length	Vendor Trip Length	Worker Vehicle Class	Vendor Vehicle Class
Previous Survey	4	2	10.8	40	LD_Mix	MHDT
Previous Wood Pole Removal	6	2	10.8	80	LD_Mix	MHDT
Previous LWS Pole Haul	4	1	10.8	80	LD_Mix	MHDT
Previous LWS Pole Assembly	8	2	10.8	40	LD_Mix	MHDT
Previous Instal LWS Pole	6	1	10.8	80	LD_Mix	MHDT
Previous Sub Civil MP	1	5	10.8	20	LD_Mix	MHDT
Previous Sub Wiring MP	3	3	10.8	20	LD_Mix	MHDT
Previous Install TSP Foundation	6	1	10.8	40	LD_Mix	MHDT
Previous Drill&Fill TSP Foundation	6	1	10.8	40	LD_Mix	MHDT
Previous TSP Haul	4	1	10.8	80	LD_Mix	MHDT
Previous TSP Assembly	8	4	10.8	40	LD_Mix	MHDT
Previous TSP Erection	8	2	10.8	80	LD_Mix	MHDT
Previous Vault Installation	6	2	10.8	40	LD_Mix	MHDT
Previous Duct Bank Installation	6	2	10.8	40	LD_Mix	MHDT
Previous Sub Civil NB	3	8	10.8	20	LD_Mix	MHDT
Previous Sub Wiring NB	1	2	10.8	20	LD_Mix	MHDT
Previous ROW Clearing	5	1	10.8	80	LD_Mix	MHDT
Previous Roads and Landing Work	5	2	10.8	70	LD_Mix	MHDT
Previous Tree Trimming and Remo	5	0	10.8	80	LD_Mix	MHDT
Previous Install Conductor	20	3	10.8	40	LD_Mix	MHDT
Previous Restoration	7	2	10.8	40	LD_Mix	MHDT
Future Survey	4	2	10.8	80	LD_Mix	MHDT
Future LST Foundation Removal	4	1	10.8	40	LD_Mix	MHDT
Future Marshalling Yards	4	1	10.8	40	LD_Mix	MHDT
Future Wood Pole Removal	6	2	10.8	80	LD_Mix	MHDT
Future LST Removal	8	2	10.8	40	LD_Mix	MHDT
Future Install TSP Foundations	6	1	10.8	40	LD_Mix	MHDT
Future TSP Haul	4	1	10.8	80	LD_Mix	MHDT
Future TSP Assembly	8	1	10.8	80	LD_Mix	MHDT
Future TSP Erection	8	4	10.8	40	LD_Mix	MHDT
Future LWS Pole Haul	4	1	10.8	80	LD_Mix	MHDT
Future LWS Pole Assembly	8	4	10.8	40	LD_Mix	MHDT
Future Instal LWS Pole	6	1	10.8	80	LD_Mix	MHDT
Future Sub Electrical MP	25	5	10.8	20	LD_Mix	MHDT
Future Sub Wiring MP	3	3	10.8	20	LD_Mix	MHDT
Future Sub Test/Maint MP	5	2	10.8	20	LD_Mix	MHDT
Future Sub Electrical NB	25	5	10.8	20	LD_Mix	MHDT
Future Sub Wiring NB	2	2	10.8	100	LD_Mix	MHDT
Future Sub Test/Maint NB	5	2	10.8	20	LD_Mix	MHDT
Future ROW Clearing	5	1	10.8	80	LD_Mix	MHDT
Future Roads and Landing Work	5	1	10.8	80	LD_Mix	MHDT
Future Remove Existing Conductor	14	2	10.8	40	LD_Mix	MHDT
Future Guard Structure Installation	6	2	10.8	80	LD_Mix	MHDT
Future Install Conductor	20	3	10.8	40	LD_Mix	MHDT
Future Guard Structure Removal	6	4	10.8	80	LD_Mix	MHDT
Future Restoration	7	2	10.8	40	LD_Mix	MHDT
Future Duct Bank Installation	6	2	10.8	40	LD_Mix	MHDT
Future UG Cable Installation	8	2	10.8	40	LD_Mix	MHDT

Future Tree Trimming	5	0	10.8	7.3	LD_Mix	HDT_Mix

Phase Name	Acres Of Grading	Material Silt Content
Previous Survey	0	6.9
Previous Wood Pole Removal	1.49	6.9
Previous LWS Pole Haul	0	6.9
Previous LWS Pole Assembly	0	6.9
Previous Instal LWS Pole	6.71	6.9
Previous Sub Civil MP	0	6.9
Previous Sub Wiring MP	0	6.9
Previous Install TSP Foundation	30.3	6.9
Previous Drill&Fill TSP Foundation	0	6.9
Previous TSP Haul	0	6.9
Previous TSP Assembly	0	6.9
Previous TSP Erection	0	6.9
Previous Vault Installation	0	6.9
Previous Duct Bank Installation	0	6.9
Previous Sub Civil NB	0	6.9
Previous Sub Wiring NB	0	6.9
Previous ROW Clearing	0	6.9
Previous Roads and Landing Work	0	6.9
Previous Install Conductor	8.03	6.9
Previous Restoration	0	6.9
Future Survey	0	6.9
Future Marshalling Yards	0	6.9
Future Wood Pole Removal	0.34	6.9
Future LST Removal	1.21	6.9
Future Install TSP Foundations	0	6.9
Future TSP Haul	0	6.9
Future TSP Assembly	0	6.9
Future TSP Erection	0	6.9
Future LWS Pole Haul	0	6.9
Future LWS Pole Assembly	0	6.9
Future Instal LWS Pole	0.52	6.9
Future Sub Electrical MP	0	6.9
Future Sub Wiring MP	0	6.9
Future Sub Test/Maint MP	0	6.9
Future Sub Electrical NB	0	6.9
Future Sub Wiring NB	0	6.9
Future Sub Test/Maint NB	0	6.9
Future ROW Clearing	0	6.9
Future Roads and Landing Work	0	6.9
Future Install Conductor	8.03	6.9
Future Restoration	0	6.9
Future Duct Bank Installation	0	6.9
Future UG Cable Installation	0	6.9
Future Tree Trimming	0	6.9

Moorpark-Newbury Single-Circuit 66 kv T/L

Ventura County, Winter

1.0 Project

1.1 Land Usage

Land Uses	Size	Metric
User Defined Industrial	0	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Comp**	Southern California Edison
Climate Zone	8		2.6		
		Precipitation Freq (Days)			

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Year	lb/day								lb/day			
2010	78.91	726.64	22.49	29.79	52.28	8.41	29.79	38.20	0.00	6.93	0.00	82,077.39
2011	18.30	171.97	3.71	6.16	9.87	0.02	6.16	6.18	0.00	1.62	0.00	21,552.90
2014	62.57	504.24	6.82	20.40	27.22	0.60	20.40	21.00	0.00	5.45	0.00	81,021.55
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

3.0 Construction Detail

3.2 Previous Survey - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e

Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.45	0.19	0.03	0.22	0.00	0.03	0.03		0.00		234.77
Worker	0.04	0.03	0.10	0.00	0.10	0.00	0.00	0.00		0.00		39.05
Total	**0.12**	**1.48**	**0.29**	**0.03**	**0.32**	**0.00**	**0.03**	**0.03**		**0.00**		**273.82**

3.3 Previous Wood Pole Removal - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.40	0.00	0.40	0.00	0.00	0.00				0.00
Off-Road	4.59	42.76		1.69	1.69		1.69	1.69		0.41		4,636.49
Total	**4.59**	**42.76**	**0.40**	**1.69**	**2.09**	**0.00**	**1.69**	**1.69**		**0.41**		**4,636.49**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.17	2.89	0.38	0.05	0.43	0.01	0.05	0.06		0.01		469.40
Worker	0.05	0.05	0.15	0.00	0.16	0.00	0.00	0.00		0.00		58.58
Total	**0.22**	**2.94**	**0.53**	**0.05**	**0.59**	**0.01**	**0.05**	**0.06**		**0.01**		**527.98**

3.4 Previous LWS Pole Haul - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	3.23	30.56		1.16	1.16		1.16	1.16		0.29		3,419.49
Total	**3.23**	**30.56**	**0.00**	**1.16**	**1.16**	**0.00**	**1.16**	**1.16**		**0.29**		**3,419.49**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.45	0.19	0.03	0.22	0.00	0.03	0.03		0.00		234.70
Worker	0.04	0.03	0.10	0.00	0.10	0.00	0.00	0.00		0.00		39.05

Total	**0.12**	**1.48**	**0.29**	**0.03**	**0.32**	**0.00**	**0.03**	**0.03**		**0.00**		**273.75**

3.5 Previous LWS Pole Assembly - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	1.98	17.56		0.82	0.82		0.82	0.82		0.18		1,727.10
Total	**1.98**	**17.56**	**0.00**	**0.82**	**0.82**	**0.00**	**0.82**	**0.82**		**0.18**		**1,727.10**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.45	0.19	0.03	0.22	0.00	0.03	0.03		0.00		234.77
Worker	0.07	0.07	0.20	0.00	0.21	0.00	0.00	0.01		0.01		78.11
Total	**0.15**	**1.52**	**0.39**	**0.03**	**0.43**	**0.00**	**0.03**	**0.04**		**0.01**		**312.88**

3.6 Previous Instal LWS Pole - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.51	0.00	0.51	0.00	0.00	0.00				0.00
Off-Road	5.51	52.45		2.07	2.07		2.07	2.07		0.49		5,971.06
Total	**5.51**	**52.45**	**0.51**	**2.07**	**2.58**	**0.00**	**2.07**	**2.07**		**0.49**		**5,971.06**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.45	0.38	0.03	0.40	0.00	0.03	0.03		0.00		234.70
Worker	0.05	0.05	0.30	0.00	0.31	0.00	0.00	0.00		0.00		58.58
Total	**0.13**	**1.50**	**0.68**	**0.03**	**0.71**	**0.00**	**0.03**	**0.03**		**0.00**		**293.28**

3.7 Previous Sub Civil MP - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.11	1.82	0.47	0.03	0.50	0.01	0.03	0.04		0.00		293.64
Worker	0.01	0.01	0.05	0.00	0.05	0.00	0.00	0.00		0.00		9.76
Total	**0.12**	**1.83**	**0.52**	**0.03**	**0.55**	**0.01**	**0.03**	**0.04**		**0.00**		**303.40**

3.8 Previous Sub Wiring MP - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.07	1.09	0.07	0.02	0.09	0.00	0.02	0.02		0.00		176.18
Worker	0.03	0.03	0.04	0.00	0.04	0.00	0.00	0.00		0.00		29.29
Total	**0.10**	**1.12**	**0.11**	**0.02**	**0.13**	**0.00**	**0.02**	**0.02**		**0.00**		**205.47**

3.9 Previous Install TSP Foundation - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.52	0.00	0.52	0.00	0.00	0.00				0.00

Off-Road	4.92	47.11		1.84	1.84		1.84	1.84		0.44		5,672.66
Total	**4.92**	**47.11**	**0.52**	**1.84**	**2.36**	**0.00**	**1.84**	**1.84**		**0.44**		**5,672.66**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.04	0.72	0.10	0.01	0.11	0.00	0.01	0.02		0.00		117.39
Worker	0.05	0.05	0.15	0.00	0.16	0.00	0.00	0.00		0.00		58.58
Total	**0.09**	**0.77**	**0.25**	**0.01**	**0.27**	**0.00**	**0.01**	**0.02**		**0.00**		**175.97**

3.9 Previous Install TSP Foundation - 2011

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.52	0.00	0.52	0.00	0.00	0.00				0.00
Off-Road	4.65	42.87		1.65	1.65		1.65	1.65		0.42		5,672.20
Total	**4.65**	**42.87**	**0.52**	**1.65**	**2.17**	**0.00**	**1.65**	**1.65**		**0.42**		**5,672.20**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.04	0.66	0.10	0.01	0.11	0.00	0.01	0.02		0.00		117.62
Worker	0.05	0.05	0.15	0.00	0.16	0.00	0.00	0.00		0.00		57.85
Total	**0.09**	**0.71**	**0.25**	**0.01**	**0.27**	**0.00**	**0.01**	**0.02**		**0.00**		**175.47**

3.10 Previous Drill&Fill TSP Foundation - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	1.27	7.97		0.67	0.67		0.67	0.67		0.11		689.60

Total	**1.27**	**7.97**	**0.00**	**0.67**	**0.67**	**0.00**	**0.67**	**0.67**		**0.11**		**689.60**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.04	0.72	0.05	0.01	0.06	0.00	0.01	0.02		0.00		117.39
Worker	0.05	0.05	0.08	0.00	0.08	0.00	0.00	0.00		0.00		58.58
Total	**0.09**	**0.77**	**0.13**	**0.01**	**0.14**	**0.00**	**0.01**	**0.02**		**0.00**		**175.97**

3.11 Previous TSP Haul - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.45	0.10	0.03	0.12	0.00	0.03	0.03		0.00		234.70
Worker	0.04	0.03	0.05	0.00	0.05	0.00	0.00	0.00		0.00		39.05
Total	**0.12**	**1.48**	**0.15**	**0.03**	**0.17**	**0.00**	**0.03**	**0.03**		**0.00**		**273.75**

3.12 Previous TSP Assembly - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	1.26	8.12		0.65	0.65		0.65	0.65		0.11		693.33
Total	**1.26**	**8.12**	**0.00**	**0.65**	**0.65**	**0.00**	**0.65**	**0.65**		**0.11**		**693.33**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.17	2.89	0.19	0.05	0.25	0.01	0.05	0.06		0.01		469.54
Worker	0.07	0.07	0.10	0.00	0.11	0.00	0.00	0.01		0.01		78.11
Total	**0.24**	**2.96**	**0.29**	**0.05**	**0.36**	**0.01**	**0.05**	**0.07**		**0.02**		**547.65**

3.13 Previous TSP Erection - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	6.84	62.81		2.57	2.57		2.57	2.57		0.61		7,003.08
Total	**6.84**	**62.81**	**0.00**	**2.57**	**2.57**	**0.00**	**2.57**	**2.57**		**0.61**		**7,003.08**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.17	2.89	0.38	0.05	0.43	0.01	0.05	0.06		0.01		469.40
Worker	0.07	0.07	0.20	0.00	0.21	0.00	0.00	0.01		0.01		78.11
Total	**0.24**	**2.96**	**0.58**	**0.05**	**0.64**	**0.01**	**0.05**	**0.07**		**0.02**		**547.51**

3.14 Previous Vault Installation - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	10.06	94.10		3.74	3.74		3.74	3.74		0.89		10,259.48
Total	**10.06**	**94.10**	**0.00**	**3.74**	**3.74**	**0.00**	**3.74**	**3.74**		**0.89**		**10,259.48**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.45	0.19	0.03	0.22	0.00	0.03	0.03		0.00		234.77

Worker	0.05	0.05	0.15	0.00	0.16	0.00	0.00	0.00		0.00		58.58
Total	**0.13**	**1.50**	**0.34**	**0.03**	**0.38**	**0.00**	**0.03**	**0.03**		**0.00**		**293.35**

3.15 Previous Duct Bank Installation - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	18.50	178.80		6.92	6.92		6.92	6.92		1.65		19,946.66
Total	**18.50**	**178.80**	**0.00**	**6.92**	**6.92**	**0.00**	**6.92**	**6.92**		**1.65**		**19,946.66**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.45	0.19	0.03	0.22	0.00	0.03	0.03		0.00		234.77
Worker	0.05	0.05	0.15	0.00	0.16	0.00	0.00	0.00		0.00		58.58
Total	**0.13**	**1.50**	**0.34**	**0.03**	**0.38**	**0.00**	**0.03**	**0.03**		**0.00**		**293.35**

3.16 Previous Sub Civil NB - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.18	2.90	0.19	0.05	0.25	0.01	0.05	0.06		0.01		469.82
Worker	0.03	0.03	0.04	0.00	0.04	0.00	0.00	0.00		0.00		29.29
Total	**0.21**	**2.93**	**0.23**	**0.05**	**0.29**	**0.01**	**0.05**	**0.06**		**0.01**		**499.11**

3.17 Previous Sub Wiring NB - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.04	0.73	0.05	0.01	0.06	0.00	0.01	0.02		0.00		117.46
Worker	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00		0.00		9.76
Total	**0.05**	**0.74**	**0.06**	**0.01**	**0.07**	**0.00**	**0.01**	**0.02**		**0.00**		**127.22**

3.18 Previous ROW Clearing - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			9.03	0.00	9.03	4.97	0.00	4.97				0.00
Off-Road	6.46	55.74		2.62	2.62		2.62	2.62		0.58		5,733.14
Total	**6.46**	**55.74**	**9.03**	**2.62**	**11.65**	**4.97**	**2.62**	**7.59**		**0.58**		**5,733.14**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.45	0.19	0.03	0.22	0.00	0.03	0.03		0.00		234.70
Worker	0.05	0.04	0.13	0.00	0.13	0.00	0.00	0.00		0.00		48.82
Total	**0.13**	**1.49**	**0.32**	**0.03**	**0.35**	**0.00**	**0.03**	**0.03**		**0.00**		**283.52**

3.19 Previous Roads and Landing Work - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			6.19	0.00	6.19	3.31	0.00	3.31				0.00
Off-Road	5.80	53.53		2.17	2.17		2.17	2.17		0.52		5,653.65
Total	**5.80**	**53.53**	**6.19**	**2.17**	**8.36**	**3.31**	**2.17**	**5.48**		**0.52**		**5,653.65**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.15	2.53	0.33	0.05	0.38	0.01	0.05	0.05		0.01		410.74
Worker	0.05	0.04	0.13	0.00	0.13	0.00	0.00	0.00		0.00		48.82
Total	**0.20**	**2.57**	**0.46**	**0.05**	**0.51**	**0.01**	**0.05**	**0.05**		**0.01**		**459.56**

3.20 Previous Tree Trimming and Removal - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Off-Road	5.96	45.02		2.31	2.31		2.31	2.31		0.53		5,029.11
Total	**5.96**	**45.02**		**2.31**	**2.31**		**2.31**	**2.31**		**0.53**		**5,029.11**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Worker	0.05	0.04	0.13	0.00	0.13	0.00	0.00	0.00		0.00		48.82
Total	**0.05**	**0.04**	**0.13**	**0.00**	**0.13**	**0.00**	**0.00**	**0.00**		**0.00**		**48.82**

3.21 Previous Install Conductor - 2011

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			

Fugitive Dust			2.13	0.00	2.13	0.00	0.00	0.00				0.00
Off-Road	18.01	169.85		6.12	6.12		6.12	6.12		1.61		21,007.20
Total	**18.01**	**169.85**	**2.13**	**6.12**	**8.25**	**0.00**	**6.12**	**6.12**		**1.61**		**21,007.20**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.12	1.97	0.56	0.04	0.60	0.01	0.04	0.05		0.00		352.87
Worker	0.17	0.16	1.01	0.01	1.02	0.01	0.01	0.02		0.01		192.82
Total	**0.29**	**2.13**	**1.57**	**0.05**	**1.62**	**0.02**	**0.05**	**0.07**		**0.01**		**545.69**

3.22 Previous Restoration - 2011

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	4.10	37.45		1.44	1.44		1.44	1.44		0.37		4,493.89
Total	**4.10**	**37.45**	**0.00**	**1.44**	**1.44**	**0.00**	**1.44**	**1.44**		**0.37**		**4,493.89**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.31	0.28	0.03	0.31	0.00	0.03	0.03		0.00		235.25
Worker	0.06	0.06	0.27	0.00	0.27	0.00	0.00	0.01		0.00		67.49
Total	**0.14**	**1.37**	**0.55**	**0.03**	**0.58**	**0.00**	**0.03**	**0.04**		**0.00**		**302.74**

3.23 Future Survey - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00

Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.12	1.91	0.19	0.04	0.24	0.01	0.04	0.05		0.00		471.97
Worker	0.03	0.02	0.05	0.00	0.05	0.00	0.00	0.00		0.00		36.07
Total	**0.15**	**1.93**	**0.24**	**0.04**	**0.29**	**0.01**	**0.04**	**0.05**		**0.00**		**508.04**

3.24 Future LST Foundation Removal - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Off-Road	2.59	19.81		0.91	0.91		0.91	0.91		0.23		3,021.40
Total	**2.59**	**19.81**		**0.91**	**0.91**		**0.91**	**0.91**		**0.23**		**3,021.40**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.03	0.48	0.05	0.01	0.06	0.00	0.01	0.01		0.00		118.02
Worker	0.03	0.02	0.05	0.00	0.05	0.00	0.00	0.00		0.00		36.07
Total	**0.06**	**0.50**	**0.10**	**0.01**	**0.11**	**0.00**	**0.01**	**0.01**		**0.00**		**154.09**

3.25 Future Marshalling Yards - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	2.30	18.02		0.68	0.68		0.68	0.68		0.20		2,945.84
Total	**2.30**	**18.02**	**0.00**	**0.68**	**0.68**	**0.00**	**0.68**	**0.68**		**0.20**		**2,945.84**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.03	0.48	0.05	0.01	0.06	0.00	0.01	0.01		0.00		118.02
Worker	0.03	0.02	0.05	0.00	0.05	0.00	0.00	0.00		0.00		36.07
Total	**0.06**	**0.50**	**0.10**	**0.01**	**0.11**	**0.00**	**0.01**	**0.01**		**0.00**		**154.09**

3.26 Future Wood Pole Removal - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.36	0.00	0.36	0.00	0.00	0.00				0.00
Off-Road	3.73	30.03		1.13	1.13		1.13	1.13		0.33		4,634.85
Total	**3.73**	**30.03**	**0.36**	**1.13**	**1.49**	**0.00**	**1.13**	**1.13**		**0.33**		**4,634.85**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.12	1.91	0.19	0.04	0.24	0.01	0.04	0.05		0.00		471.97
Worker	0.04	0.03	0.08	0.00	0.08	0.00	0.00	0.00		0.00		54.11
Total	**0.16**	**1.94**	**0.27**	**0.04**	**0.32**	**0.01**	**0.04**	**0.05**		**0.00**		**526.08**

3.27 Future LST Removal - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.05	0.00	0.05	0.00	0.00	0.00				0.00
Off-Road	2.85	23.30		0.98	0.98		0.98	0.98		0.25		3,259.94
Total	**2.85**	**23.30**	**0.05**	**0.98**	**1.03**	**0.00**	**0.98**	**0.98**		**0.25**		**3,259.94**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		236.05
Worker	0.05	0.05	0.10	0.00	0.11	0.00	0.00	0.01		0.00		72.15
Total	**0.11**	**1.01**	**0.20**	**0.02**	**0.23**	**0.00**	**0.02**	**0.04**		**0.00**		**308.20**

3.28 Future Install TSP Foundations - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	3.98	31.73		1.17	1.17		1.17	1.17		0.35		5,670.88
Total	**3.98**	**31.73**	**0.00**	**1.17**	**1.17**	**0.00**	**1.17**	**1.17**		**0.35**		**5,670.88**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.03	0.48	0.05	0.01	0.06	0.00	0.01	0.01		0.00		118.02
Worker	0.04	0.03	0.08	0.00	0.08	0.00	0.00	0.00		0.00		54.11
Total	**0.07**	**0.51**	**0.13**	**0.01**	**0.14**	**0.00**	**0.01**	**0.01**		**0.00**		**172.13**

3.29 Future TSP Haul - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	2.65	21.51		0.77	0.77		0.77	0.77		0.23		3,418.40
Total	**2.65**	**21.51**	**0.00**	**0.77**	**0.77**	**0.00**	**0.77**	**0.77**		**0.23**		**3,418.40**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		235.99
Worker	0.03	0.02	0.05	0.00	0.05	0.00	0.00	0.00		0.00		36.07
Total	**0.09**	**0.98**	**0.15**	**0.02**	**0.17**	**0.00**	**0.02**	**0.03**		**0.00**		**272.06**

Moorpark-Newbury Single-Circuit 66 kv T/L

Ventura County, Winter

3.30 Future TSP Assembly - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	1.57	12.99		0.58	0.58		0.58	0.58		0.14		1,726.32
Total	**1.57**	**12.99**	**0.00**	**0.58**	**0.58**	**0.00**	**0.58**	**0.58**		**0.14**		**1,726.32**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		235.99
Worker	0.05	0.05	0.10	0.00	0.11	0.00	0.00	0.01		0.00		72.15
Total	**0.11**	**1.01**	**0.20**	**0.02**	**0.23**	**0.00**	**0.02**	**0.04**		**0.00**		**308.14**

3.31 Future TSP Erection - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	2.59	21.75		0.83	0.83		0.83	0.83		0.23		3,083.09
Total	**2.59**	**21.75**	**0.00**	**0.83**	**0.83**	**0.00**	**0.83**	**0.83**		**0.23**		**3,083.09**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.12	1.92	0.19	0.04	0.24	0.01	0.04	0.05		0.00		472.10
Worker	0.05	0.05	0.10	0.00	0.11	0.00	0.00	0.01		0.00		72.15
Total	**0.17**	**1.97**	**0.29**	**0.04**	**0.35**	**0.01**	**0.04**	**0.06**		**0.00**		**544.25**

3.32 Future LWS Pole Haul - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	2.65	21.51		0.77	0.77		0.77	0.77		0.23		3,418.40
Total	**2.65**	**21.51**	**0.00**	**0.77**	**0.77**	**0.00**	**0.77**	**0.77**		**0.23**		**3,418.40**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		235.99
Worker	0.03	0.02	0.05	0.00	0.05	0.00	0.00	0.00		0.00		36.07
Total	**0.09**	**0.98**	**0.15**	**0.02**	**0.17**	**0.00**	**0.02**	**0.03**		**0.00**		**272.06**

3.33 Future LWS Pole Assembly - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	1.57	12.99		0.58	0.58		0.58	0.58		0.14		1,726.32
Total	**1.57**	**12.99**	**0.00**	**0.58**	**0.58**	**0.00**	**0.58**	**0.58**		**0.14**		**1,726.32**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.12	1.92	0.19	0.04	0.24	0.01	0.04	0.05		0.00		472.10
Worker	0.05	0.05	0.10	0.00	0.11	0.00	0.00	0.01		0.00		72.15
Total	**0.17**	**1.97**	**0.29**	**0.04**	**0.35**	**0.01**	**0.04**	**0.06**		**0.00**		**544.25**

3.34 Future Instal LWS Pole - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			

Fugitive Dust			0.55	0.00	0.55	0.00	0.00	0.00				0.00
Off-Road	4.44	36.05		1.34	1.34		1.34	1.34		0.39		5,969.02
Total	**4.44**	**36.05**	**0.55**	**1.34**	**1.89**	**0.00**	**1.34**	**1.34**		**0.39**		**5,969.02**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		235.99
Worker	0.04	0.03	0.08	0.00	0.08	0.00	0.00	0.00		0.00		54.11
Total	**0.10**	**0.99**	**0.18**	**0.02**	**0.20**	**0.00**	**0.02**	**0.03**		**0.00**		**290.10**

3.35 Future Sub Electrical MP - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.89	6.13		0.47	0.47		0.47	0.47		0.08		688.88
Total	**0.89**	**6.13**	**0.00**	**0.47**	**0.47**	**0.00**	**0.47**	**0.47**		**0.08**		**688.88**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.20	0.24	0.03	0.27	0.01	0.03	0.03		0.00		295.21
Worker	0.17	0.15	0.64	0.01	0.65	0.01	0.01	0.02		0.01		225.46
Total	**0.25**	**1.35**	**0.88**	**0.04**	**0.92**	**0.02**	**0.04**	**0.05**		**0.01**		**520.67**

3.36 Future Sub Wiring MP - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.05	0.72	0.14	0.02	0.16	0.00	0.02	0.02		0.00		177.13
Worker	0.02	0.02	0.08	0.00	0.08	0.00	0.00	0.00		0.00		27.05
Total	**0.07**	**0.74**	**0.22**	**0.02**	**0.24**	**0.00**	**0.02**	**0.02**		**0.00**		**204.18**

3.37 Future Sub Test/Maint MP - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	1.14	7.11		0.63	0.63		0.63	0.63		0.10		723.16
Total	**1.14**	**7.11**	**0.00**	**0.63**	**0.63**	**0.00**	**0.63**	**0.63**		**0.10**		**723.16**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.03	0.48	0.10	0.01	0.11	0.00	0.01	0.01		0.00		118.09
Worker	0.03	0.03	0.13	0.00	0.13	0.00	0.00	0.00		0.00		45.09
Total	**0.06**	**0.51**	**0.23**	**0.01**	**0.24**	**0.00**	**0.01**	**0.01**		**0.00**		**163.18**

3.38 Future Sub Electrical NB - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.89	6.13		0.47	0.47		0.47	0.47		0.08		688.88
Total	**0.89**	**6.13**	**0.00**	**0.47**	**0.47**	**0.00**	**0.47**	**0.47**		**0.08**		**688.88**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.08	1.20	0.12	0.03	0.15	0.01	0.03	0.03		0.00		295.21
Worker	0.17	0.15	0.33	0.01	0.33	0.01	0.01	0.02		0.01		225.46
Total	**0.25**	**1.35**	**0.45**	**0.04**	**0.48**	**0.02**	**0.04**	**0.05**		**0.01**		**520.67**

3.39 Future Sub Wiring NB - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.15	2.39	0.24	0.05	0.30	0.01	0.05	0.07		0.01		589.94
Worker	0.01	0.01	0.03	0.00	0.03	0.00	0.00	0.00		0.00		18.04
Total	**0.16**	**2.40**	**0.27**	**0.05**	**0.33**	**0.01**	**0.05**	**0.07**		**0.01**		**607.98**

3.40 Future Sub Test/Maint NB - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	1.14	7.11		0.63	0.63		0.63	0.63		0.10		723.16
Total	**1.14**	**7.11**	**0.00**	**0.63**	**0.63**	**0.00**	**0.63**	**0.63**		**0.10**		**723.16**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.03	0.48	0.05	0.01	0.06	0.00	0.01	0.01		0.00		118.09

Worker	0.03	0.03	0.07	0.00	0.07	0.00	0.00	0.00		0.00		45.09
Total	**0.06**	**0.51**	**0.12**	**0.01**	**0.13**	**0.00**	**0.01**	**0.01**		**0.00**		**163.18**

3.41 Future ROW Clearing - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.75	0.00	0.75	0.41	0.00	0.41				0.00
Off-Road	7.39	57.16		2.63	2.63		2.63	2.63		0.65		8,480.18
Total	**7.39**	**57.16**	**0.75**	**2.63**	**3.38**	**0.41**	**2.63**	**3.04**		**0.65**		**8,480.18**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		235.99
Worker	0.03	0.03	0.07	0.00	0.07	0.00	0.00	0.00		0.00		45.09
Total	**0.09**	**0.99**	**0.17**	**0.02**	**0.19**	**0.00**	**0.02**	**0.03**		**0.00**		**281.08**

3.42 Future Roads and Landing Work - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	4.43	35.98		1.35	1.35		1.35	1.35		0.39		5,621.01
Total	**4.43**	**35.98**	**0.00**	**1.35**	**1.35**	**0.00**	**1.35**	**1.35**		**0.39**		**5,621.01**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		235.99
Worker	0.03	0.03	0.07	0.00	0.07	0.00	0.00	0.00		0.00		45.09
Total	**0.09**	**0.99**	**0.17**	**0.02**	**0.19**	**0.00**	**0.02**	**0.03**		**0.00**		**281.08**

3.43 Future Remove Existing Conductor - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Off-Road	9.45	80.48		2.78	2.78		2.78	2.78		0.83		12,979.24
Total	**9.45**	**80.48**		**2.78**	**2.78**		**2.78**	**2.78**		**0.83**		**12,979.24**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		236.05
Worker	0.09	0.08	0.18	0.00	0.19	0.01	0.00	0.01		0.01		126.26
Total	**0.15**	**1.04**	**0.28**	**0.02**	**0.31**	**0.01**	**0.02**	**0.04**		**0.01**		**362.31**

3.44 Future Guard Structure Installation - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Off-Road	3.76	30.24		1.13	1.13		1.13	1.13		0.33		5,066.75
Total	**3.76**	**30.24**		**1.13**	**1.13**		**1.13**	**1.13**		**0.33**		**5,066.75**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.12	1.91	0.19	0.04	0.24	0.01	0.04	0.05		0.00		471.97
Worker	0.04	0.03	0.08	0.00	0.08	0.00	0.00	0.00		0.00		54.11
Total	**0.16**	**1.94**	**0.27**	**0.04**	**0.32**	**0.01**	**0.04**	**0.05**		**0.00**		**526.08**

3.45 Future Install Conductor - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.09	0.00	0.09	0.00	0.00	0.00				0.00
Off-Road	15.57	127.78		4.43	4.43		4.43	4.43		1.37		21,002.32
Total	**15.57**	**127.78**	**0.09**	**4.43**	**4.52**	**0.00**	**4.43**	**4.43**		**1.37**		**21,002.32**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.09	1.44	0.15	0.03	0.18	0.01	0.03	0.04		0.00		354.07
Worker	0.13	0.12	0.26	0.01	0.27	0.01	0.01	0.02		0.01		180.36
Total	**0.22**	**1.56**	**0.41**	**0.04**	**0.45**	**0.02**	**0.04**	**0.06**		**0.01**		**534.43**

3.46 Future Guard Structure Removal - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Off-Road	3.45	27.67		1.05	1.05		1.05	1.05		0.30		4,277.58
Total	**3.45**	**27.67**		**1.05**	**1.05**		**1.05**	**1.05**		**0.30**		**4,277.58**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.24	3.83	0.39	0.09	0.48	0.02	0.09	0.10		0.01		943.95
Worker	0.04	0.03	0.08	0.00	0.08	0.00	0.00	0.00		0.00		54.11
Total	**0.28**	**3.86**	**0.47**	**0.09**	**0.56**	**0.02**	**0.09**	**0.10**		**0.01**		**998.06**

3.47 Future Restoration - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			

Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	3.52	28.52		1.05	1.05		1.05	1.05		0.31		4,492.75
Total	**3.52**	**28.52**	**0.00**	**1.05**	**1.05**	**0.00**	**1.05**	**1.05**		**0.31**		**4,492.75**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		236.05
Worker	0.05	0.04	0.09	0.00	0.09	0.00	0.00	0.01		0.00		63.13
Total	**0.11**	**1.00**	**0.19**	**0.02**	**0.21**	**0.00**	**0.02**	**0.04**		**0.00**		**299.18**

3.48 Future Duct Bank Installation - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	6.14	47.05		1.81	1.81		1.81	1.81		0.54		7,842.49
Total	**6.14**	**47.05**	**0.00**	**1.81**	**1.81**	**0.00**	**1.81**	**1.81**		**0.54**		**7,842.49**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		236.05
Worker	0.04	0.03	0.08	0.00	0.08	0.00	0.00	0.00		0.00		54.11
Total	**0.10**	**0.99**	**0.18**	**0.02**	**0.20**	**0.00**	**0.02**	**0.03**		**0.00**		**290.16**

3.49 Future UG Cable Installation - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	5.94	48.95		1.70	1.70		1.70	1.70		0.52		8,103.47
Total	**5.94**	**48.95**	**0.00**	**1.70**	**1.70**	**0.00**	**1.70**	**1.70**		**0.52**		**8,103.47**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.06	0.96	0.10	0.02	0.12	0.00	0.02	0.03		0.00		236.05
Worker	0.05	0.05	0.10	0.00	0.11	0.00	0.00	0.01		0.00		72.15
Total	**0.11**	**1.01**	**0.20**	**0.02**	**0.23**	**0.00**	**0.02**	**0.04**		**0.00**		**308.20**

3.50 Future Tree Trimming - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00				0.00
Off-Road	4.59	34.45		1.26	1.26		1.26	1.26		0.41		5,588.51
Total	**4.59**	**34.45**	**0.00**	**1.26**	**1.26**	**0.00**	**1.26**	**1.26**		**0.41**		**5,588.51**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	lb/day								lb/day			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Worker	0.03	0.03	0.07	0.00	0.07	0.00	0.00	0.00		0.00		45.09
Total	**0.03**	**0.03**	**0.07**	**0.00**	**0.07**	**0.00**	**0.00**	**0.00**		**0.00**		**45.09**

Moorpark-Newbury Single-Circuit 66 kv T/L

Ventura County, Annual

1.0 Project

1.1 Land Usage

Land Uses	Size	Metric
User Defined Industrial	0	User Defined Unit

1.2 Other Project

Urbanization	Urban	**Wind Speed (m/s)**		**Utility Comp**	Southern California Edison
Climate Zone	8		2.6		
		Precipitation Freq (Days)			

2.0 Emissions Summary

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Year	tons/yr								MT/yr			
2010	0.60	5.51	0.17	0.23	0.40	0.06	0.23	0.29	577.34	0.05	0.00	578.35
2011	0.05	0.49	0.02	0.02	0.04	0.00	0.02	0.02	56.62	0.00	0.00	56.71
2014	1.30	10.55	0.07	0.39	0.45	0.00	0.39	0.39	1,585.17	0.10	0.00	1,587.35
Total	**1.95**	**16.55**	**0.26**	**0.64**	**0.89**	**0.06**	**0.64**	**0.70**	**2,219.13**	**0.15**	**0.00**	**2,222.41**

3.0 Construction Detail

3.2 Previous Survey - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.96

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.12**	**0.00**	**0.00**	**1.12**

3.3 Previous Wood Pole Removal - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.09		0.00	0.00		0.00	0.00	8.39	0.00	0.00	8.41
Total	**0.01**	**0.09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**8.39**	**0.00**	**0.00**	**8.41**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.85
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.96**	**0.00**	**0.00**	**0.96**

3.4 Previous LWS Pole Haul - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.21		0.01	0.01		0.01	0.01	21.67	0.00	0.00	21.71
Total	**0.02**	**0.21**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**21.67**	**0.00**	**0.00**	**21.71**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.49	0.00	0.00	1.49
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.74**	**0.00**	**0.00**	**1.74**

3.5 Previous LWS Pole Assembly - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.12		0.01	0.01		0.01	0.01	10.94	0.00	0.00	10.96
Total	**0.01**	**0.12**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**10.94**	**0.00**	**0.00**	**10.96**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.49	0.00	0.00	1.49
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.50
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.99**	**0.00**	**0.00**	**1.99**

3.6 Previous Instal LWS Pole - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.37		0.01	0.01		0.01	0.01	37.84	0.00	0.00	37.91
Total	**0.04**	**0.37**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**37.84**	**0.00**	**0.00**	**37.91**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.49	0.00	0.00	1.49
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.38
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.87**	**0.00**	**0.00**	**1.87**

3.7 Previous Sub Civil MP - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			

Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.26	0.00	0.00	2.26
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.08
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.34**	**0.00**	**0.00**	**2.34**

3.8 Previous Sub Wiring MP - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	4.39	0.00	0.00	4.40
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.74
Total	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.13**	**0.00**	**0.00**	**5.14**

3.9 Previous Install TSP Foundation - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.14	1.34		0.05	0.05		0.05	0.05	146.39	0.01	0.00	146.63
Total	**0.14**	**1.34**	**0.02**	**0.05**	**0.07**	**0.00**	**0.05**	**0.05**	**146.39**	**0.01**	**0.00**	**146.63**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	3.03	0.00	0.00	3.03
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53	0.00	0.00	1.53
Total	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.56**	**0.00**	**0.00**	**4.56**

3.9 Previous Install TSP Foundation - 2011

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.11		0.00	0.00		0.00	0.00	12.84	0.00	0.00	12.86
Total	**0.01**	**0.11**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**12.84**	**0.00**	**0.00**	**12.86**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.13
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.00**	**0.00**	**0.40**

3.10 Previous Drill&Fill TSP Foundation - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.02		0.00	0.00		0.00	0.00	1.87	0.00	0.00	1.88
Total	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.87**	**0.00**	**0.00**	**1.88**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.32
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.48**	**0.00**	**0.00**	**0.48**

3.11 Previous TSP Haul - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.75**	**0.00**	**0.00**	**0.75**

3.12 Previous TSP Assembly - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.09		0.01	0.01		0.01	0.01	6.89	0.00	0.00	6.92
Total	**0.01**	**0.09**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**6.89**	**0.00**	**0.00**	**6.92**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	4.68	0.00	0.00	4.69
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.00	0.79
Total	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.47**	**0.00**	**0.00**	**5.48**

3.13 Previous TSP Erection - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.08	0.72		0.03	0.03		0.03	0.03	72.91	0.01	0.00	73.04
Total	**0.08**	**0.72**	**0.00**	**0.03**	**0.03**	**0.00**	**0.03**	**0.03**	**72.91**	**0.01**	**0.00**	**73.04**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	4.90	0.00	0.00	4.90
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.82
Total	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.72**	**0.00**	**0.00**	**5.72**

3.14 Previous Vault Installation - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.28		0.01	0.01		0.01	0.01	27.86	0.00	0.00	27.91
Total	**0.03**	**0.28**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**27.86**	**0.00**	**0.00**	**27.91**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.80**	**0.00**	**0.00**	**0.80**

3.15 Previous Duct Bank Installation - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.54		0.02	0.02		0.02	0.02	54.18	0.00	0.00	54.27
Total	**0.06**	**0.54**	**0.00**	**0.02**	**0.02**	**0.00**	**0.02**	**0.02**	**54.18**	**0.00**	**0.00**	**54.27**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.80**	**0.00**	**0.00**	**0.80**

3.16 Previous Sub Civil NB - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.28	0.00	0.00	1.28
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.08
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.36**	**0.00**	**0.00**	**1.36**

3.17 Previous Sub Wiring NB - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00

Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.53
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.57**	**0.00**	**0.00**	**0.57**

3.18 Previous ROW Clearing - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.02	0.00	0.02	0.01	0.00	0.01	0.00	0.00	0.00	0.00
Off-Road	0.01	0.11		0.01	0.01		0.01	0.01	10.38	0.00	0.00	10.40
Total	**0.01**	**0.11**	**0.02**	**0.01**	**0.03**	**0.01**	**0.01**	**0.02**	**10.38**	**0.00**	**0.00**	**10.40**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00	0.43
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.52**	**0.00**	**0.00**	**0.52**

3.19 Previous Roads and Landing Work - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.09	0.00	0.09	0.05	0.00	0.05	0.00	0.00	0.00	0.00
Off-Road	0.08	0.75		0.03	0.03		0.03	0.03	71.65	0.01	0.00	71.79
Total	**0.08**	**0.75**	**0.09**	**0.03**	**0.12**	**0.05**	**0.03**	**0.08**	**71.65**	**0.01**	**0.00**	**71.79**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	5.22	0.00	0.00	5.22
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.63
Total	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.85**	**0.00**	**0.00**	**5.85**

3.20 Previous Tree Trimming and Removal - 2010

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Off-Road	0.08	0.63		0.03	0.03		0.03	0.03	63.71	0.01	0.00	63.86
Total	**0.08**	**0.63**		**0.03**	**0.03**		**0.03**	**0.03**	**63.71**	**0.01**	**0.00**	**63.86**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.63
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.63**	**0.00**	**0.00**	**0.63**

3.21 Previous Install Conductor - 2011

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.34		0.01	0.01		0.01	0.01	38.04	0.00	0.00	38.10
Total	**0.04**	**0.34**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**38.04**	**0.00**	**0.00**	**38.10**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.35
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.99**	**0.00**	**0.00**	**0.99**

3.22 Previous Restoration - 2011

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.04		0.00	0.00		0.00	0.00	4.07	0.00	0.00	4.08
Total	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.07**	**0.00**	**0.00**	**4.08**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.06
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.27**	**0.00**	**0.00**	**0.27**

3.23 Future Survey - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.14	0.00	0.00	2.14
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.17
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.31**	**0.00**	**0.00**	**2.31**

3.24 Future LST Foundation Removal - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Off-Road	0.01	0.07		0.00	0.00		0.00	0.00	9.58	0.00	0.00	9.59
Total	**0.01**	**0.07**		**0.00**	**0.00**		**0.00**	**0.00**	**9.58**	**0.00**	**0.00**	**9.59**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.37
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.49**	**0.00**	**0.00**	**0.49**

3.25 Future Marshalling Yards - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.17	1.37		0.05	0.05		0.05	0.05	202.75	0.01	0.00	203.05
Total	**0.17**	**1.37**	**0.00**	**0.05**	**0.05**	**0.00**	**0.05**	**0.05**	**202.75**	**0.01**	**0.00**	**203.05**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	8.14	0.00	0.00	8.14
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.51	0.00	0.00	2.52
Total	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**10.65**	**0.00**	**0.00**	**10.66**

3.26 Future Wood Pole Removal - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			

Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.02		0.00	0.00		0.00	0.00	2.10	0.00	0.00	2.10
Total	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.10**	**0.00**	**0.00**	**2.10**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.23**	**0.00**	**0.00**	**0.23**

3.27 Future LST Removal - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.04	0.33		0.01	0.01		0.01	0.01	41.32	0.00	0.00	41.39
Total	**0.04**	**0.33**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**41.32**	**0.00**	**0.00**	**41.39**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	3.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.93
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.93**	**0.00**	**0.00**	**3.93**

3.28 Future Install TSP Foundations - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.06	0.44		0.02	0.02		0.02	0.02	71.91	0.00	0.00	72.00
Total	**0.06**	**0.44**	**0.00**	**0.02**	**0.02**	**0.00**	**0.02**	**0.02**	**71.91**	**0.00**	**0.00**	**72.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.50
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.70
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.19**	**0.00**	**0.00**	**2.20**

3.29 Future TSP Haul - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06		0.00	0.00		0.00	0.00	9.29	0.00	0.00	9.30
Total	**0.01**	**0.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**9.29**	**0.00**	**0.00**	**9.30**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.10
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.74**	**0.00**	**0.00**	**0.74**

3.30 Future TSP Assembly - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.14		0.01	0.01		0.01	0.01	17.19	0.00	0.00	17.22
Total	**0.02**	**0.14**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**17.19**	**0.00**	**0.00**	**17.22**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	2.35	0.00	0.00	2.35
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.73
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.08**	**0.00**	**0.00**	**3.08**

3.31 Future TSP Erection - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.24		0.01	0.01		0.01	0.01	30.71	0.00	0.00	30.76
Total	**0.03**	**0.24**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**30.71**	**0.00**	**0.00**	**30.76**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	4.71	0.00	0.00	4.71
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.73
Total	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.44**	**0.00**	**0.00**	**5.44**

3.32 Future LWS Pole Haul - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.01		0.00	0.00		0.00	0.00	1.55	0.00	0.00	1.55
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.55**	**0.00**	**0.00**	**1.55**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.13**	**0.00**	**0.00**	**0.13**

3.33 Future LWS Pole Assembly - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.01		0.00	0.00		0.00	0.00	0.78	0.00	0.00	0.78
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.78**	**0.00**	**0.00**	**0.78**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.24**	**0.00**	**0.00**	**0.24**

3.34 Future Instal LWS Pole - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.02		0.00	0.00		0.00	0.00	2.70	0.00	0.00	2.71
Total	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.70**	**0.00**	**0.00**	**2.71**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.13**	**0.00**	**0.00**	**0.13**

3.35 Future Sub Electrical MP - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e

Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.03		0.00	0.00		0.00	0.00	3.12	0.00	0.00	3.12
Total	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.12**	**0.00**	**0.00**	**3.12**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.34	0.00	0.00	1.34
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00	1.04
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.37**	**0.00**	**0.00**	**2.38**

3.36 Future Sub Wiring MP - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	4.42	0.00	0.00	4.42
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.00	0.68
Total	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.10**	**0.00**	**0.00**	**5.10**

3.37 Future Sub Test/Maint MP - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.12		0.01	0.01		0.01	0.01	11.44	0.00	0.00	11.48
Total	**0.02**	**0.12**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**11.44**	**0.00**	**0.00**	**11.48**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.87	0.00	0.00	1.87
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.72
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.59**	**0.00**	**0.00**	**2.59**

3.38 Future Sub Electrical NB - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.03		0.00	0.00		0.00	0.00	3.12	0.00	0.00	3.12
Total	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.12**	**0.00**	**0.00**	**3.12**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.34	0.00	0.00	1.34
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00	1.04
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.37**	**0.00**	**0.00**	**2.38**

3.39 Future Sub Wiring NB - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	8.03	0.00	0.00	8.03
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25
Total	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**8.28**	**0.00**	**0.00**	**8.28**

3.40 Future Sub Test/Maint NB - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00		0.00	0.00		0.00	0.00	0.33	0.00	0.00	0.33
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.33**	**0.00**	**0.00**	**0.33**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.07**	**0.00**	**0.00**	**0.07**

3.41 Future ROW Clearing - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06		0.00	0.00		0.00	0.00	7.68	0.00	0.00	7.69
Total	**0.01**	**0.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**7.68**	**0.00**	**0.00**	**7.69**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.25**	**0.00**	**0.00**	**0.25**

3.42 Future Roads and Landing Work - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.11		0.00	0.00		0.00	0.00	15.27	0.00	0.00	15.29
Total	**0.01**	**0.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**15.27**	**0.00**	**0.00**	**15.29**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.76**	**0.00**	**0.00**	**0.76**

3.43 Future Remove Existing Conductor - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Off-Road	0.07	0.60		0.02	0.02		0.02	0.02	88.17	0.01	0.00	88.29
Total	**0.07**	**0.60**		**0.02**	**0.02**		**0.02**	**0.02**	**88.17**	**0.01**	**0.00**	**88.29**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.61	0.00	0.00	1.61
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.87
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.48**	**0.00**	**0.00**	**2.48**

3.44 Future Guard Structure Installation - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Off-Road	0.01	0.05		0.00	0.00		0.00	0.00	6.88	0.00	0.00	6.89
Total	**0.01**	**0.05**		**0.00**	**0.00**		**0.00**	**0.00**	**6.88**	**0.00**	**0.00**	**6.89**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.71**	**0.00**	**0.00**	**0.71**

3.45 Future Install Conductor - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.75	6.13		0.21	0.21		0.21	0.21	913.04	0.06	0.00	914.29
Total	**0.75**	**6.13**	**0.00**	**0.21**	**0.21**	**0.00**	**0.21**	**0.21**	**913.04**	**0.06**	**0.00**	**914.29**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.06	0.01	0.00	0.01	0.00	0.00	0.00	15.41	0.00	0.00	15.42
Worker	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	7.94	0.00	0.00	7.95
Total	**0.01**	**0.07**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**23.35**	**0.00**	**0.00**	**23.37**

3.46 Future Guard Structure Removal - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Off-Road	0.00	0.03		0.00	0.00		0.00	0.00	3.87	0.00	0.00	3.88
Total	**0.00**	**0.03**		**0.00**	**0.00**		**0.00**	**0.00**	**3.87**	**0.00**	**0.00**	**3.88**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.86
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.91**	**0.00**	**0.00**	**0.91**

3.47 Future Restoration - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.04		0.00	0.00		0.00	0.00	6.10	0.00	0.00	6.11
Total	**0.01**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.10**	**0.00**	**0.00**	**6.11**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.32
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.41**	**0.00**	**0.00**	**0.41**

3.48 Future Duct Bank Installation - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.05		0.00	0.00		0.00	0.00	7.10	0.00	0.00	7.11
Total	**0.01**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**7.10**	**0.00**	**0.00**	**7.11**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e

Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.26**	**0.00**	**0.00**	**0.26**

3.49 Future UG Cable Installation - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.12		0.00	0.00		0.00	0.00	18.35	0.00	0.00	18.37
Total	**0.01**	**0.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**18.35**	**0.00**	**0.00**	**18.37**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.54
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.17
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.71**	**0.00**	**0.00**	**0.71**

3.50 Future Tree Trimming - 2014

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Fugitive Dust			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.03	0.21		0.01	0.01		0.01	0.01	30.36	0.00	0.00	30.41
Total	**0.03**	**0.21**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**30.36**	**0.00**	**0.00**	**30.41**

	ROG	NOx	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Total CO2	CH4	N2O	CO2e
Category	tons/yr								MT/yr			
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.25**	**0.00**	**0.00**	**0.25**

Operational GHG Emissions

Equipment	Quantity	SF6 content (lbs)	Rate of leakage (per year)	Total SF6 emisisons (lbs/yr)	SF6 Emissions (MT/yr)	SF6 GWP	CO2e (MT/yr)
1200 amp circuit breaker	4	30	0.50%	0.6	2.73E-04	22,800	6.22
						Annual Operational Emissions	6.22

Amortized (30 years) Construction Emissions	53

Total Emissions	59

CO2e = Carbon dioxide equivalent
GWP = Global Warming Potential
lbs = pounds
MT = metric tons
SF = Sulfur Hexafluoride
yr = years

Appendix F

Biological Resources Studies

Appendix F1

Surveys and USFWS Correspondence

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July 15, 2008

Mr. Chris Kofron
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

VIA EMAIL
Chris_Kofron@fws.gov

Subject: Results of Coastal California Gnatcatcher Survey for the Proposed Moorpark-Newbury Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Kofron:

This letter report presents the results of focused surveys for the coastal California gnatcatcher (*Polioptila californica californica*) at the Proposed Moorpark-Newbury Transmission Line project site (hereafter referred to as the project site) in the Cities of Moorpark and Thousand Oaks, Ventura County, California (Exhibit 1). The purpose of the surveys was to determine the presence or absence of the coastal California gnatcatcher (CAGN) on or immediately adjacent to the project site. Surveys were conducted according to guidelines established by the U.S. Fish and Wildlife Service (USFWS) by biologists holding the necessary federal Endangered Species Act (ESA) survey permit.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the cities of Moorpark and Thousand Oaks, Ventura County, California (Exhibit 1). A biological constraints survey performed in May 2007 resulted in a determination that there was potentially suitable habitat for the CAGN within the three segments of the project site. Potentially suitable coastal sage scrub vegetation occurs throughout the project site with the suitability for CAGN decreasing from Segment 1 to Segment 3. Segment 1 involves installation of 32 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves replacement of 36 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles) (Exhibit 2). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the Thousand Oaks and Simi Valley West U.S. Geological Survey (USGS) 7.5-minute quadrangle maps.

Vegetation types within the study area include coastal sage scrub and chaparral (Exhibit 3). The Segment 1 towers located within the survey area were surrounded by coastal sage scrub, dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and segment 3 also contained coastal sage scrub characterized by the

species listed above, but were also co-dominated by coastal prickly pear (*Opuntia littoralis*), and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Segments 2 and 3 also supported chaparral, dominated by chamise (*Adenostoma fasciculatum*), and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type included laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Disturbed areas generally devoid of vegetation due to mechanical disturbance were also present, including dirt roads and a large clearing at the southern end of the survey area. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contained abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*). Photos of representative habitat on the project site are provided in Exhibit 3.

Background

Recent taxonomic studies indicate the California gnatcatcher consists of four subspecies that extend from southwestern California to southern Baja California, Mexico (Atwood and Lerman 2006; Mellink and Rea 1994). The coastal California gnatcatcher, the northern-most gnatcatcher subspecies, is restricted to lowland areas from central Ventura County through Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties to the Baja California, Mexico border (Atwood and Lerman 2006; Mellink and Rea 1994). Formerly, the coastal California gnatcatcher was common from the San Fernando Valley east along the base of the San Gabriel Mountains to Claremont (Atwood 1990). The coastal California gnatcatcher is now rare in the northern part of its range with a handful of sightings from Santa Clarita to Tujunga Wash, though a small population persists near Moorpark, Ventura County. The coastal California gnatcatcher has been recorded from sea level to approximately 3,000 feet above msl (USFWS 2003); however, greater than 90 percent of gnatcatcher records are from elevations below 820 feet msl along the coast (Atwood and Bolsinger 1992, MBA 1991), and below 1,800 feet above msl inland. Recent estimates by the USFWS regarding the population size of the coastal California gnatcatcher in southern California have been about 3,000 pairs (Atwood and Bontrager 2001).

The coastal California gnatcatcher typically occurs within coastal and inland sage scrub vegetation types. Sage scrub often occurs in a patchy distribution pattern throughout the range of the gnatcatcher. Coastal California gnatcatchers also use chaparral, grassland, and riparian habitats that are in proximity to sage scrub. These non-sage scrub habitats are used for dispersal and foraging (Atwood *et al.* 1998, Campbell *et al.* 1998, USFWS 2003). Availability of these non-sage scrub areas is essential during certain times of the year, particularly during drought conditions, or for dispersal, foraging, or nesting (USFWS 2003).

The coastal California gnatcatcher was designated a Threatened species by the USFWS on March 25, 1993. A Special Rule was issued that would allow incidental take of coastal California gnatcatcher under Section 9 of the federal ESA if the take results from activities conducted in accordance with the state's Natural Community Conservation Plan (NCCP) Act (USFWS 1993). For those not participating in the state's NCCP, any activity that may result in the take of coastal California gnatcatcher requires formal consultation with the USFWS under Sections 7 or 10 of the federal ESA. On December 19, 2007, the USFWS published a final rule revising critical habitat for the coastal California gnatcatcher. The revised critical habitat designates

197,303 acres of land in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura counties as critical habitat for the coastal California gnatcatcher (USFWS 2007). Although distant from the survey area, proposed USFWS Critical Habitat for the coastal California gnatcatcher is located adjacent to the northern terminus of Segment 1.

Survey Methodology

The USFWS coastal California gnatcatcher survey protocol recommends six visits to all potentially occupied habitat areas for surveys conducted entirely within the breeding season, which extends from March 15 to June 30 (USFWS 1997ab). All visits must take place during the morning hours, and no more than 80 acres of suitable habitat may be surveyed per visit. Following the USFWS protocol for the species, BonTerra Consulting Ecologist Lindsay Messett (USFWS Permit #067064-1) conducted all surveys on the project site. Surveys for the coastal California gnatcatcher were conducted on May 2, 13, 14, 30, June 6, 13 and 20, 2008.

Weather conditions met the USFWS survey protocol requirements for optimal gnatcatcher detection. Weather conditions that were too cold (below 55 degrees Fahrenheit), too hot (above 95 degrees Fahrenheit), or too windy (wind speed greater than 15 miles per hour) were avoided. Surveys were conducted by slowly walking through all appropriate habitats while listening and watching for gnatcatcher activity. A combination of taped recordings of gnatcatcher vocalizations and "pishing" sounds were used to elicit responses from any gnatcatchers present. The frequency of vocalization playback and "pishing" varied depending on conditions such as habitat patch size and topography in each area. All bird species detected during the survey were recorded, including notable observations of special status species or other birds (Appendix A).

Survey Results

No coastal California gnatcatchers were detected during the focused surveys. A complete list of wildlife species observed or detected during the surveys is included as Appendix A. No special status bird species were observed during these surveys.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact Marc Blain or Lindsay Messett at (626) 351-2000 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Marc T. Blain
Biological Resources Manager

Lindsay A. Messett
Ecologist

Attachments: Exhibits 1-3
Appendix A – Wildlife Compendium

I certify that the information in this survey report and enclosed exhibits fully and accurately present my work.

Lindsay A. Messett
Ecologist
(TE-067064-1)

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REFERENCES

Atwood, J. L. 1990. Status Review of the California Gnatcatcher (*Polioptila californica*). Manomet Bird Observatory, Manomet, Massachusetts.

Atwood, J. L., and J. S. Bolsinger. 1992. *Elevational distribution of California Gnatcatchers in the United States.* Journal of Field Ornithology 63: 159 – 168.

Atwood, J. L., D. R. Bontrager, and A. L. Gorospe. 1998. *Use of Refugia by California Gnatcatchers Displaced by Habitat Loss.* Western Birds 29: 406-412.

Atwood, J. L., and D. R. Bontrager. 2001. California Gnatcatcher (*Polioptila* californica). *In* The Birds of North America, No. 574 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Atwood, J. L., and S. B. Lerman. 2006. Family Polioptilidae (Gnatcatchers). Pp. 350 – 377 in: del Hoyo, J., A. Elliott, and D. A. Christie, eds. (2006). *Handbook of the Birds of the World.* Vol. 11. Old World Flycatchers to Old World Warblers. Lynx Edicions, Barcelona.

Campbell, K. F., R. A. Erickson, W. E. Haas, and M. A. Patten. 1998. *California Gnatcatcher Use of Habitats Other Than Coastal Sage Scrub: Conservation and Management Implications.* Western Birds 29: 421-433.

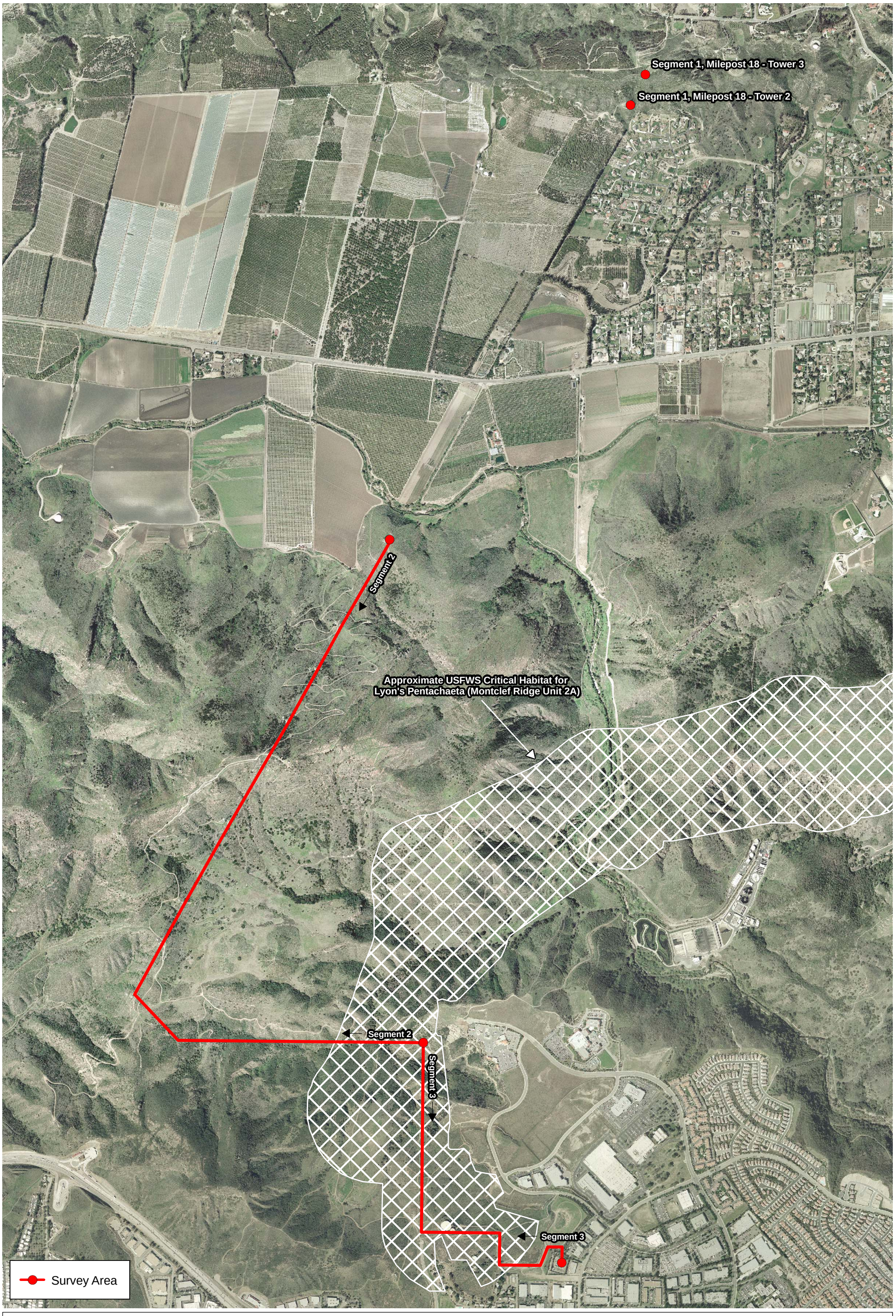
Mellink, E., and A. M. Rea. 1994. *Taxonomic Status of the California Gnatcatchers of Northwestern Baja California, Mexico.* Western Birds 25: 50 – 62.

U.S. Fish and Wildlife Service (USFWS). 1993. Endangered and Threatened Wildlife and Plants; Threatened Coastal California Gnatcatcher; Final Rule and Proposed Special Rule. Federal Register, Vol. 58, No. 59: 16742-16759.

U.S. Fish and Wildlife Service (USFWS). 1997a (February 28). Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines.

U.S. Fish and Wildlife Service (USFWS). 1997b (July 28). Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol.

U.S. Fish and Wildlife Service (USFWS). 2007 (December 19). Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*); Final Rule. *Federal Register* 72(243): 72009–72213.



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Survey Area and Critical Habitat

Exhibit 1

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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Feet

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Segment 1, Milepost 18 - Tower 3

Segment 1, Milepost 18 - Tower 2

Segment 2

Approximate USFWS Critical Habitat for Lyon's Pentachaeta (Montclef Ridge Unit 2A)

Segment 2

Segment 3

Segment 3

Survey Area

Source: USGS 7.5-Minute Quadrangle
Newbury Park, CA

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Local Vicinity

Exhibit 2

Moorpark-Newbury 66-kV Project, Ventura County, California

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BonTerra CONSULTING

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Representative site photograph depicting coastal sage scrub vegetation within the survey area.

Representative site photograph depicting coastal sage scrub vegetation within the survey area.

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Site Photographs

Exhibit 3

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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APPENDIX A
WILDLIFE COMPENDIUM

Species
Amphibians
HYLIDAE - TREEFROGS
Pseudacris [Hyla] regilla Pacific treefrog
Reptiles
PHRYNOSOMATIDAE - ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Uta stansburiana side-blotched lizard
TEIIDAE - WHIPTAIL LIZARDS
Aspidoscelis [Cnemidophorus] tigris stejnegeri coastal western whiptail
Birds
ODONTOPHORIDAE - QUAILS
Callipepla californica California quail
CATHARTIDAE - NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE - HAWKS
Accipiter striatus sharp-shinned hawk
Buteo jamaicensis red-tailed hawk
CHARADRIIDAE - PLOVERS
Charadrius vociferus killdeer
COLUMBIDAE - PIGEONS & DOVES
Zenaida macroura mourning dove
CUCULIDAE - CUCKOOS & ROADRUNNERS
Geococcyx californianus greater roadrunner
APODIDAE - SWIFTS
Aeronautes saxatalis white-throated swift
TROCHILIDAE - HUMMINGBIRDS
Calypte anna Anna's hummingbird
Calypte costae Costa's hummingbird
PICIDAE - WOODPECKERS
Melanerpes formicivorus acorn woodpecker
TYRANNIDAE - TYRANT FLYCATCHERS
Sayornis nigricans black phoebe

WILDLIFE COMPENDIUM (Continued)

Species
Myiarchus cinerascens ash-throated flycatcher
Tyrannus verticalis western kingbird
CORVIDAE - JAYS & CROWS
Aphelocoma californica western scrub-jay
Corvus brachyrhynchos American crow
Corvus corax common raven
HIRUNDINIDAE - SWALLOWS
Petrochelidon pyrrhonota cliff swallow
AEGITHALIDAE - BUSHTITS
Psaltriparus minimus bushtit
TROGLODYTIDAE - WRENS
Campylorhynchus brunneicapillus cactus wren
Catherpes mexicanus canyon wren
Thryomanes bewickii Bewick's wren
TURDIDAE - THRUSHES & ROBINS
Turdus migratorius American robin
TIMALIIDAE - WRENTITS
Chamaea fasciata wrentit
MIMIDAE - THRASHERS
Mimus polyglottos northern mockingbird
Toxostoma redivivum California thrasher
EMBERIZIDAE - SPARROWS & JUNCOS
Pipilo maculatus spotted towhee
Pipilo crissalis California towhee
Aimophila ruficeps rufous-crowned sparrow
Amphispiza belli sage sparrow
CARDINALIDAE - GROSBEAKS & BUNTINGS
Passerina amoena lazuli bunting
ICTERIDAE - BLACKBIRDS
Euphagus cyanocephalus Brewer's blackbird
Icterus bullockii Bullock's oriole

WILDLIFE COMPENDIUM (Continued)

Species
FRINGILLIDAE - FINCHES
Carpodacus mexicanus house finch
Carduelis psaltria lesser goldfinch
PASSERIDAE - OLD WORLD SPARROWS
Passer domesticus house sparrow *
Mammals
LEPORIDAE - HARES & RABBITS
Sylvilagus audubonii desert cottontail
SCIURIDAE - SQUIRRELS
Spermophilus beecheyi California ground squirrel
GEOMYIDAE - POCKET GOPHERS
Thomomys bottae Botta's pocket gopher
CANIDAE - WOLVES & FOXES
Canis latrans coyote
CERVIDAE - DEER
Odocoileus hemionus mule deer
Invertebrates
PAPILIONIDAE - SWALLOWTAIL BUTTERFLIES
Papilio eurymedon pale tiger swallowtail
Papilio zelicaon anise swallowtail
PIERIDAE - WHITES, SULFURS, & ORANGETIPS
Anthocharis sara Sara orangetip
Pontia protodice common (checkered) white
Colias eurytheme alfalfa butterfly (orange sulphur)
NYMPHALIDAE - BRUSH-FOOTED BUTTERFLIES
Vanessa cardui painted lady
DANAIDAE - MILKWEED BUTTERFLIES
Danaus plexippus monarch
HESPERIIDAE - SKIPPERS
Pyrgus ablescens western checkered skipper
* introduced species

BonTerra CONSULTING

MEMORANDUM

July 16, 2008

To: Paul A. Yamazaki
Natural/Cultural Resources Group
Southern California Edison
G.O.1, Quad 3A, 304B
2244 Walnut Grove Avenue
Rosemead, CA 91770

From: Marc T. Blain
Biological Resources Manager
BonTerra Consulting

Subject: Summary of Spring 2008 Biological Surveys and Recommendations for the Moorpark-Newbury Transmission Line Project, Ventura County, California

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This memo presents a summary of recent (spring 2008) biological presence/absence surveys conducted for federally and state-listed Endangered Lyon's pentachaeta (*Pentachaeta lyonii*), federally listed Threatened Conejo dudleya (*Dudleya parva*), and other special status plant species, and federally listed Threatened coastal California gnatcatcher (*Polioptila californica californica*) along the Moorpark-Newbury Transmisson Line project alignment in Ventura County, California. The project site is located along existing transmission lines that traverse open space and agricultural areas in the cities of Moorpark and Thousand Oaks.

The project site is located along existing transmission lines that traverse open space and agricultural areas in the cities of Moorpark and Thousand Oaks, Ventura County, California (Exhibit 1). A biological constraints survey performed in May 2007 resulted in a determination that there was potentially suitable habitat for the CAGN within the three segments of the project site. Potentially suitable coastal sage scrub vegetation occurs throughout the project site with the suitability for CAGN decreasing from Segment 1 to Segment 3. Segment 1 involves installation of 32 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves replacement of 36 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles) (Exhibit 2). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the Thousand Oaks and Simi Valley West U.S. Geological Survey (USGS) 7.5-minute quadrangle maps.

METHODS

Focused botanical surveys for Lyon's pentachaeta and Conejo dudleya were conducted along the project alignment in Spring, 2008 by BonTerra Consulting Botanist Andrea Edwards. A known reference population for each species was visited in the project vicinity immediately prior to the surveys. The survey area excluded agricultural, residential, and urban areas and included only those tower locations within or immediately adjacent to open spaces. The plant survey area included a minimum 30-foot buffer around each tower location, and the route between the main dirt access road and each tower. Meandering transects were used to search the survey area; slopes that were too steep to access on foot were carefully examined using binoculars. All plant species observed were recorded in field notes.

The U.S. Fish and Wildlife Service (USFWS) coastal California gnatcatcher survey protocol recommends six visits to all potentially occupied habitat areas for surveys conducted entirely within the breeding season, which extends from March 15 to June 30. All visits must take place during the morning hours, and no more than 80 acres of suitable habitat may be surveyed per visit. Following the USFWS protocol for the species, BonTerra Consulting Ecologist Lindsay Messett (USFWS Permit #067064-1) conducted all surveys on the project site on May 2, 13, 14, and 30, June 6, 13 and 20, 2008. Weather conditions during all surveys met the USFWS survey protocol requirements for optimal gnatcatcher detection. Surveys were conducted by slowly walking through all appropriate habitats while listening and watching for gnatcatcher activity. A combination of taped recordings of gnatcatcher vocalizations and "pishing" sounds were used to elicit responses from any gnatcatchers present. All bird species detected during the survey were recorded.

SURVEY RESULTS

Lyon's pentachaeta and Conejo dudleya were not observed within the survey area. One special status plant species was observed during the surveys: Catalina mariposa lily (*Calochortus catalinae*). This is a California Native Plant Society (CNPS) List 4.2 species, meaning it is on a "watch list" for plants of limited distribution, and considered "fairly threatened" in California (moderate degree/immediacy of threat). CNPS List 4 species often occur in large numbers on project sites and are considered relatively common within their range. Although it is considered special status species, impacts to Catalina mariposa lily would be considered adverse but would not meet the significance criteria under the California Environmental Quality Act (CEQA) to require mitigation. No coastal California gnatcatchers (or any other special status bird species) were observed in the survey area during the focused surveys.

RECOMMENDATIONS

The following recommendations may be implemented to avoid or minimize impacts to biological resources as a result of project-related activities within the survey area.

- Crews and project vehicles should remain on existing paved roads, parking lots, and dirt access roads to the extent feasible. Where portions of the project cannot be directly accessed by a vehicle from existing roads, off-road activities and overland travel should be minimized or be limited to previously disturbed areas and should avoid impacting vegetation to the extent practical.

- To protect migratory birds in compliance with the Migratory Bird Treaty Act, the vegetation within the survey area should be cleared between September 1 and January 31. If clearing occurs between February 1 and August 31, the applicant should have a pre-construction survey conducted by a qualified biologist to identify any active nesting locations. If the biologist finds an active nest within the construction area and determines that the nest may be impacted, the biologist will delineate an appropriate buffer zone around the nest depending on the species and the type of construction activity. Any active nests observed during the survey will be mapped on an aerial photograph. The biologist shall serve as a construction monitor during those periods when construction activities shall occur near active nest areas to ensure that no inadvertent impacts on these nests shall occur. Results of the pre-construction survey and any subsequent monitoring shall be provided to the California Department of Fish and Game.

- A survey for active raptor nests is recommended 30 days prior to commencement of any construction activities during the raptor nesting season (February 1 to June 30). Restrictions may be placed on construction activities in the vicinity of any active nest observed until the nest is no longer active as determined by a qualified biologist. Typically, a 300- to 500-foot buffer zone is designated around a nest to allow construction to proceed while minimizing disturbance to the active nest. Once the nest is no longer active (chicks have fledged), construction can proceed within the buffer zone.

If you have any comments or questions, please call Marc Blain at (626) 351-2000.

Attachments
Exhibit 1 – Survey Area and Critical Habitat
Exhibit 2 – Local Vicinity

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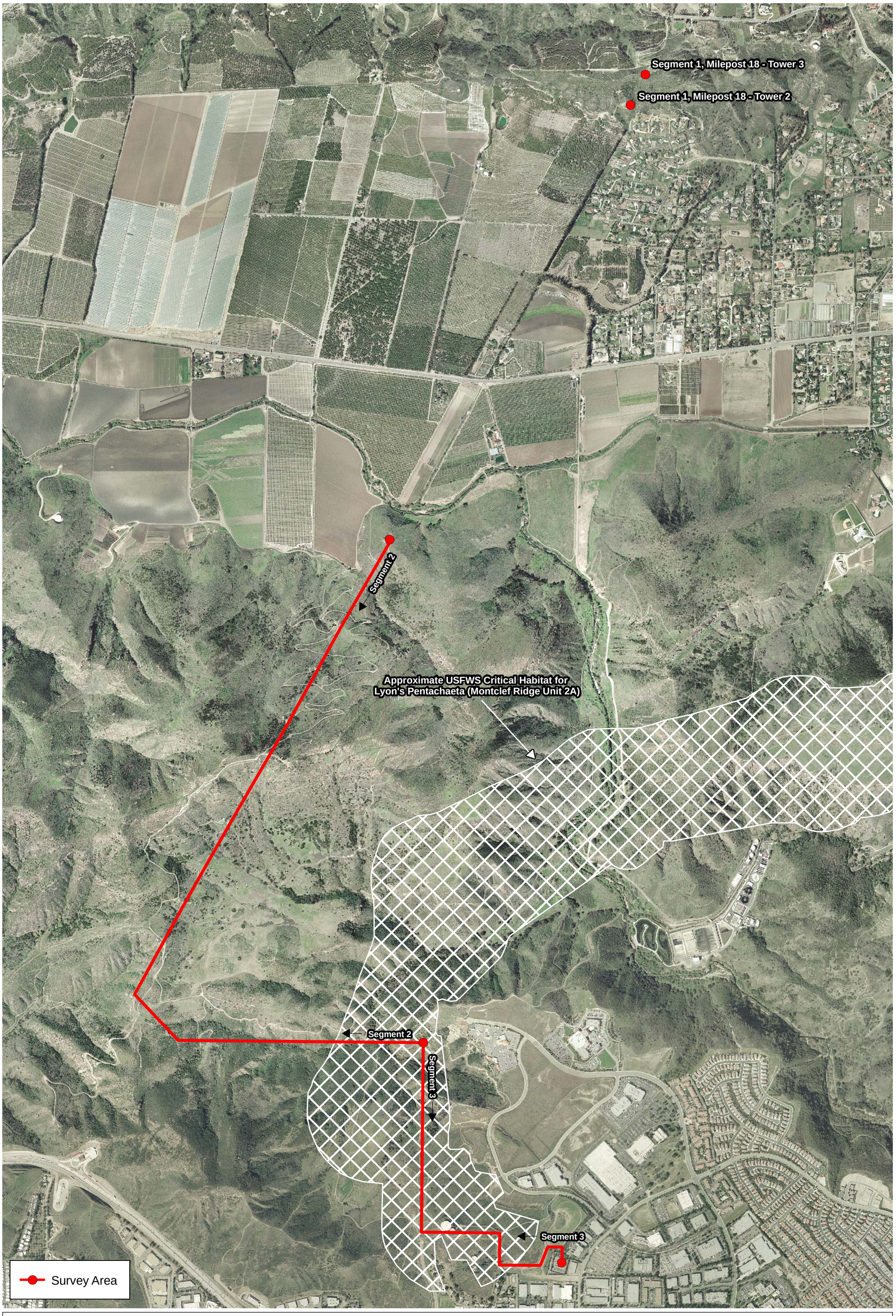

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Survey Area and Critical Habitat

Exhibit 1

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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BonTerra CONSULTING

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Segment 1, Milepost 18 - Tower 3

Segment 1, Milepost 18 - Tower 2

Segment 2

Approximate USFWS Critical Habitat for Lyon's Pentachaeta (Montclef Ridge Unit 2A)

Segment 2

Segment 3

Segment 3

Survey Area

Source: USGS 7.5-Minute Quadrangle
Newbury Park, CA

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Local Vicinity

Exhibit 2

Moorpark-Newbury 66-kV Project, Ventura County, California

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July 21, 2010

Paul A. Yamazaki
Corporate Environment, Health & Safety
Southern California Edison
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL AND U.S. MAIL
paul.yamazaki@sce.com

Subject: Results of Focused Plant Surveys for the Moorpark-Newbury 66-kilovolt Project, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the findings of focused plant surveys conducted for federally and State-listed Endangered Lyon's pentachaeta (*Pentachaeta lyonii*) and federally listed Threatened Conejo dudleya (*Dudleya parva*) along the Moorpark-Newbury 66-kilovolt (kV) project alignment in Ventura County, California (Exhibits 1 and 2). The project alignment is located along existing transmission lines that traverse open space and agricultural areas, and crosses two potentially jurisdictional drainages: Arroyo Simi and Arroyo Santa Rosa. The alignment is located in the Cities of Moorpark and Thousand Oaks on the U.S. Geological Survey (USGS) Newbury Park 7.5-minute quadrangle; the alignment has an approximate elevation range of 240 to 1,150 feet above mean sea level (msl) (BonTerra Consulting 2007).

The proposed Moorpark-Newbury 66-kV project involves the installation of 46 engineered steel poles and 36 double-circuit lightweight steel poles along the existing 8.8-mile electrical transmission line. New poles to be installed will replace lattice steel towers and single-circuit wood poles along the transmission line while others will be installed adjacent to an existing alignment of steel transmission towers. The project is divided into three segments that are shown on Exhibit 3. Special status plant surveys associated with this project were conducted along these segments around existing pole or tower locations in areas of potentially suitable habitat. Focused plant surveys were previously conducted for this project in spring 2008, and one special status species was observed within the survey area at that time: Catalina mariposa lily (*Calochortus catalinae*) (BonTerra Consulting 2008).

METHODS

Botanical surveys were floristic in nature and consistent with the current protocols created by the California Department of Fish and Game (CDFG) (CDFG 2009). Reference populations were monitored for annual and difficult-to-detect target species to ensure that the scheduled surveys were comprehensive. A known reference population of Lyon's pentachaeta was visited and observed to be flowering in the Thousand Oaks area on April 28, 2010. Since a known reference population of Conejo dudleya was not available to monitor, any small dudleya plant found within the survey area that was not yet flowering was monitored weekly until it flowered and could thereafter be identified. To confirm that it was an appropriate season to conduct the surveys, BonTerra Consulting referred to the National Weather Service's data, which indicates that downtown Los Angeles (located about 40 miles from the survey areas) has received

16.3 inches of precipitation for Water Year 2010 (October 1, 2009 through spring 2010), which is about 114 percent of the normal average precipitation (National Weather Service 2010).

A literature review was conducted to identify special status plants known from the survey area vicinity. This included a review of the USGS Newbury Park, Thousand Oaks, Moorpark, and Simi 7.5-minute quadrangles in the California Department of Fish and Game's (CDFG's) California Natural Diversity Database (CNDDB) (CDFG 2010) and the California Native Plant Society's (CNPS') Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2010). Table 1 lists the special status plant species known to occur in the vicinity of the survey area. In addition, a review of current Critical Habitat documents indicates that a portion of the survey area (the southeastern end of Segment 2 and most of Segment 3—see Exhibit 3) overlaps with Critical Habitat (Montclef Ridge Unit 2a) for Lyon's pentachaeta, as designated by the U.S. Fish and Wildlife Service (USFWS) (USFWS 2006).

BonTerra Consulting Botanist Andrea Edwards and Biologist Lindsay Messett conducted focused surveys for Lyon's pentachaeta and Conejo dudleya along the project alignment on May 3 and 5, and June 21, 2010, which were comprised of 25 total person-hours. As stated above, the overall project alignment includes three linear segments, and the plant surveys were conducted around existing pole or tower locations that were located within potentially suitable habitat for the target special status species. Most of Segment 1 was excluded from the survey as this segment is dominated by agricultural areas. Therefore, only two tower locations within Segment 1 were included in the survey (Milepost 18 - Tower 2 and Milepost 18 - Tower 3), though all of Segments 2 and 3 were included. The plant survey area included a minimum 50-foot buffer around each pole or tower location described above (expanded from the 30-foot buffer used during the 2008 plant surveys), and the route between the main dirt access road and each tower.

The survey area was systematically examined; slopes that were too steep to access on foot were carefully examined using binoculars. All plant species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Hickman (1993) and Munz (1974). Taxonomy follows Hickman (1993) and current scientific data (e.g., scientific journals) for scientific and common names.

SITE DESCRIPTION

The two Segment 1 towers located within the survey area were surrounded by coastal sage scrub vegetation. Segment 2 and 3 towers were surrounded by both coastal sage scrub and chaparral vegetation. Disturbed areas generally devoid of vegetation were also present, including dirt roads and a large clearing at the southern end of the survey area. The southern portion of the project alignment contained abundant non-native plant species in the scrub habitat and edges of dirt access roads. Soil types along the project alignment are dominated by Gilroy very rocky clay loam, Hambright very rocky loam, and igneous rock land, but also include badland, Castaic-Balcom complex, Cropley clay, Diablo clay, Gilroy clay loam, and San Benito clay loam as shown in Exhibit 4 (USDA NRCS 2007).

SURVEY RESULTS

Lyon's pentachaeta and Conejo dudleya were both observed within and adjacent to the survey area along Segment 3. Exhibits 5 and 6A/6B show the locations and photographs of these species. A list of all plants observed within the survey area during focused surveys can be found in Attachment A, and the CNDDB forms for the Lyon's pentachaeta and Conejo dudleya occurrences can be found in Attachment B. A voucher specimen was collected for each of these

two species and will be deposited in the herbarium at the Rancho Santa Ana Botanic Garden in Claremont, California. An additional special status plant species was observed during the surveys: Catalina mariposa lily, which is a CNPS List 4 species, indicating that it is on a "watch list" for plants of limited distribution. Although reference populations and regional rainfall amounts were monitored to ensure the scientific adequacy of these focused surveys, there is always a minimal potential for false negative survey results as species could possibly be present on a site but may not be detectable at the time of survey. As noted above, Table 1 identifies the special status plants with potential to occur within the survey area. It is important to note that the purpose of these surveys was to survey only for Threatened and Endangered species; therefore, the surveys are not conclusive for all special status species with potential to occur within the survey area.

TABLE 1
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR
IN THE SURVEY AREA VICINITY

Species	Status			Habitat Suitability Within the Survey Area
	USFWS	CDFG	CNPS	
Astragalus brauntonii Braunton's milk—vetch	FE	—	1B.1	Limited suitable habitat present.** Not observed; however, this disturbance-following plant has potential to appear after soil disturbance, wildfire, or other disturbing event.
California macrophylla Round-leaved filaree	—	—	1B.1	No suitable habitat present.
Calochortus catalinae **Catalina mariposa lily**	**—**	**—**	**4.2**	**Suitable habitat present. Observed within the survey area.**
Calochortus plummerae Plummer's mariposa lily	—	—	1B.2	Suitable habitat present.
Centromadia parryi ssp. *australis* southern tarplant	—	—	1B.1	No suitable habitat present.
Deinandra minthornii Santa Susana tarplant	—	SR	1B.2	No suitable habitat present.
Delphinium parryi ssp. *blochmaniae* dune larkspur	—	—	1B.2	No suitable habitat present.
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya	—	—	1B.1	Limited suitable habitat present.**
Dudleya cymosa ssp. *agourensis* Agoura Hills dudleya	FT	—	1B.2	Limited suitable habitat present.**
Dudleya cymosa ssp. *marcescens* marcescent dudleya	FT	SR	1B.2	Limited suitable habitat present.**
Dudleya parva **Conejo dudleya**	**FT**	**—**	**1B.2**	**Suitable habitat present. Observed within the survey area.**
Dudleya verityi Verity's dudleya	FT	—	1B.2	Limited suitable habitat present.**
Eriogonum crocatum Conejo buckwheat	—	SR	1B.2	Limited suitable habitat present.**
Hordeum intercedens vernal barley	—	—	3.2	No suitable habitat present.
Horkelia cuneata ssp. *puberula* mesa horkelia	—	—	1B.1	Suitable habitat present.**
Juglans californica var. *californica* Southern California black walnut	—	—	4.2	Suitable habitat present.**

TABLE 1 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR
IN THE SURVEY AREA VICINITY

Species	Status			Habitat Suitability Within the Survey Area
	USFWS	CDFG	CNPS	
Nolina cismontana chaparral nolina	—	—	1B.2	Suitable habitat present.**
Orcuttia californica California Orcutt grass	FE	SE	1B.1	No suitable habitat present.
***Pentachaeta lyonii* Lyon's pentachaeta**	**FE**	**SE**	**1B.1**	**Suitable habitat present. Observed within the survey area.**
Pseudognaphalium leucocephalum white rabbit-tobacco	—	—	2.2	Suitable habitat present.
Senecio aphanactis chaparral ragwort	—	—	2.2	Suitable habitat present.

*** Focused plant surveys were conducted only for Lyon's pentachaeta and Conejo dudleya.**
**** If present within the survey area, this perennial species would have been observed during focused plant surveys.**

LEGEND:

Federal (USFWS)
FE Endangered
FT Threatened
FC Candidate

State (CDFG)
SE Endangered
ST Threatened
SR Rare
SC Candidate

California Native Plant Society (CNPS) List Categories
List 1A Plants Presumed Extinct in California
List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
List 3 Plants About Which We Need More Information — A Review List
List 4 Plants of Limited Distribution – A Watch List

California Native Plant Society (CNPS) Threat Rank Extensions
.1 Seriously threatened in California (high degree/immediacy of threat)
.2 Fairly threatened in California (moderate degree/immediacy of threat)
.3 Not very threatened in California (low degree/immediacy of threat or no current threats known)

Lyon's pentachaeta typically blooms between March and August (CNPS 2010). This low slender annual herb occurs at elevations between approximately 100 and 2,100 feet above msl; it prefers coastal habitats, including chaparral, coastal scrub, and rocky clay grasslands, and is known to occur in Los Angeles and Ventura Counties (CNPS 2010). Of the estimated 4,000 individuals observed adjacent to the survey area, only one flowering individual is located within the survey area (within 50 feet of a tower location). The dense population is positioned along and adjacent to dirt roads immediately west of two fenced water tanks in open, disturbed areas with coastal sage scrub and non-native grassland vegetation. Associated species include fascicled tarweed (*Hemizonia fasciculata*), California goldfields (*Lasthenia californica*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), foxtail chess (*Bromus madritensis* ssp. *rubens*), slender wild oat (*Avena barbata*), and tocalote (*Centaurea melitensis*). This population is located within USFWS-designated Critical Habitat for this species.

Conejo dudleya typically blooms between May and June (CNPS 2010). This perennial herb occurs at elevations around 1,000 feet above msl on bare rocky slopes in chaparral and coastal sage scrub (Munz 1974). It is only known to occur in Ventura County (CNPS 2010). A total of

25 flowering individuals are located within and adjacent to the survey area; several individuals are located within the survey area. The population is located on rock outcrops with coastal sage scrub and non-native grassland vegetation on a moderate northwest-facing slope. Associated species include common goldenstar (*Bloomeria crocea*), California buckwheat, wand buckwheat (*Eriogonum elongatum*), foxtail chess, and wild oats (*Avena* sp.).

Any potential threats or impacts to these two listed special status plant species would be considered significant and would require appropriate mitigation. Therefore, complete avoidance of the plant populations is recommended, and the areas have already been clearly marked with orange and red flagging in the field. The presence of a Biological Monitor during project construction would further ensure that any potential impacts to these species are avoided.

Catalina mariposa lily typically blooms between March and June (CNPS 2010). This bulbiferous perennial herb occurs in heavy soils on open grassy slopes and openings in brush at elevations below about 2,000 feet above msl and in valley grassland and chaparral habitats (Munz 1974). It is known from Ventura, Los Angeles, Orange, Santa Barbara, San Bernardino, San Diego, and San Luis Obispo Counties and from Santa Catalina, Santa Cruz, and Santa Rosa Islands (CNPS 2010). Hundreds of Catalina mariposa lilies were observed scattered along sides of the dirt access roads in Segments 2 and 3, and a few are located within the survey area (within 50 feet of a tower location).

CNPS List 4 species often occur in large numbers on project sites and are considered relatively common within their range; therefore, the observation of a List 4 species is noted during focused surveys but not quantified or mapped in the survey results. Although it is considered a special status species, impacts to Catalina mariposa lily would be considered adverse but would not meet the significance criteria under the California Environmental Quality Act (CEQA) to require mitigation.

In summary, based on overall species distribution and listing status, the observed populations of Lyon's pentachaeta and Conejo dudleya are considered highly significant and complete avoidance of the plant populations is recommended through biological monitoring during project construction. These measures will eliminate any potential threats or direct, indirect, or cumulative impacts to these species from the proposed project. However, future threats to these species still exist due to unforeseeable utility improvement project needs, possible plant collection or damage by vehicular activity, and/or increased distribution of non-native invasive plant species. Also, although the proposed project is designed to avoid special status biological resources and minimize the size of impact areas as poles and towers are replaced, there will be some small impacts to habitat areas that could support these plant species but are currently unoccupied.

If you have any comments or questions, please call David Hughes at (626) 351-2000.

Sincerely,

BONTERRA CONSULTING

for David T. Hughes
Project Manager

Andrea D. Edwards
Biologist

Enclosures:
Exhibit 1 – Regional Location
Exhibit 2 – Local Vicinity
Exhibit 3 – Survey Area and Critical Habitat
Exhibit 4 – Soil Types
Exhibit 5 – Special Status Plant Species Locations
Exhibits 6A/6B – Special Status Plant Species Photographs
Attachment A – Plant Compendium
Attachment B – California Natural Diversity Database Forms

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REFERENCES

BonTerra Consulting. 2008 (August 4). *Results of Focused Plant Surveys for the Moorpark-Newbury 66 kV Project, Ventura County, California*. Pasadena, CA: BonTerra Consulting.

———. 2007 (May 24). *Field Survey Results for Moorpark-Newbury 66-kV Transmission Line Project*. Pasadena, CA: BonTerra Consulting.

California Department of Fish and Game (CDFG). 2010. California Natural Diversity Database. Records of Occurrence for Newbury Park, Thousand Oaks, Moorpark, and Simi quadrangle maps. Sacramento, CA: CDFG, Natural Heritage Division.

———. 2009 (November 24). *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. Sacramento, CA: CDFG.

California Native Plant Society (CNPS). 2010. Electronic Inventory of Rare and Endangered Vascular Plants of California. Records of Occurrence for Newbury Park, Thousand Oaks, Moorpark, and Simi quadrangle maps. Sacramento, CA: CNPS. http://www.cnps.org/inventory.

Hickman, J.C., Ed. 1993. *The Jepson Manual of Higher Plants of California*. Berkeley, CA: University of California Press.

Munz, P.A. 1974. *A Flora of Southern California*. Berkeley, CA: University of California Press.

National Weather Service. 2010 (May 18). Monthly Precipitation Summary Water Year 2010. Sacramento, CA: National Weather Service, California-Nevada River Forecast Center. http://www.cnrfc.noaa.gov/monthly_precip.php.

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA NRCS). 2007 (March 6). Soil Survey Geographic (SSURGO) Database for Ventura Area, California. Fort Worth, TX: USDA, NRCS.

U.S. Fish and Wildlife Service (USFWS). 2006 (November 14). Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Astragalus brauntonii* and *Pentachaeta lyonii*; Final Rule. *Federal Register* 71(219): 66373–66423. Washington, D.C.: USFWS.

Regional Location

Exhibit 1

Moorpark-Newbury 66-kV Project, Ventura County, California

N
W E
S

10 5 0 10
Miles

BonTerra CONSULTING

(Rev 07/15/10 CJS) PAS\Projects\Edison\J050\Graphics\Plant_Rpt\Ex1_RL.pdf

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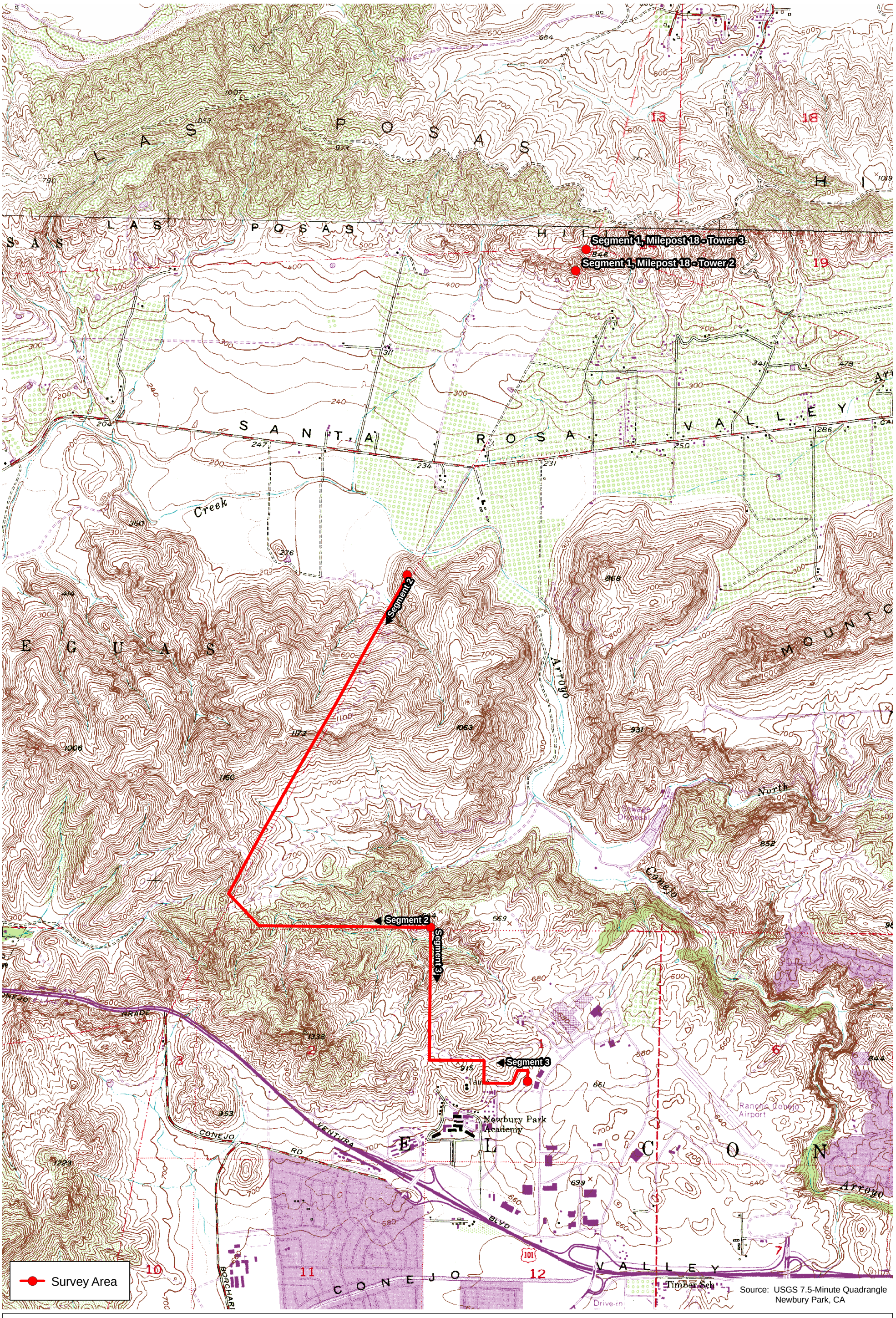

Source: USGS 7.5-Minute Quadrangle
Newbury Park, CA

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Local Vicinity

Exhibit 2

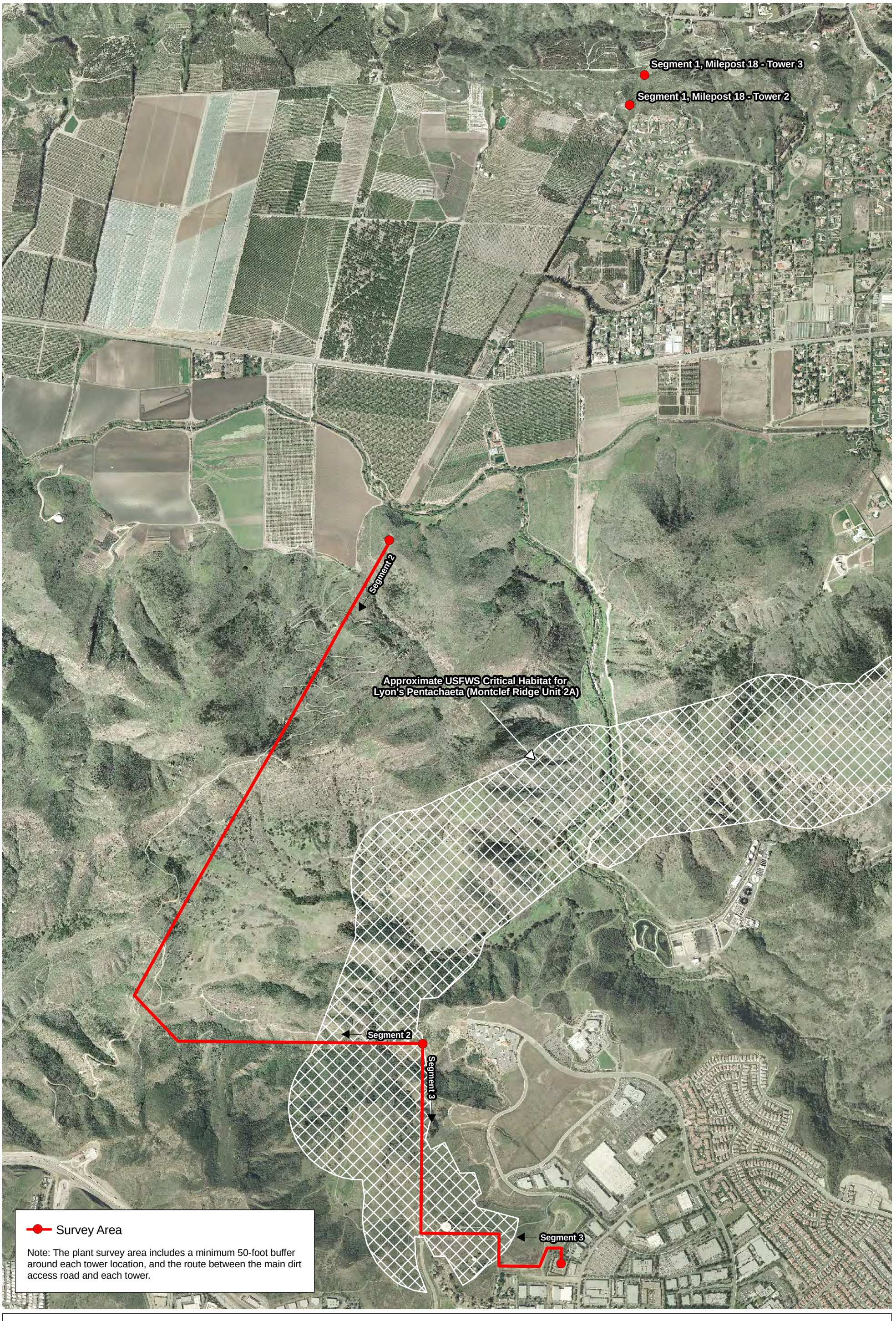
Moorpark-Newbury 66-kV Project, Ventura County, California

N W E S

2,000 1,000 0 2,000 Feet

BonTerra CONSULTING

PAS R:/Projects/Edison/J016/Graphics/Plant_Report/Ex2_LV_quad_070308.pdf



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Survey Area and Critical Habitat

Exhibit 3

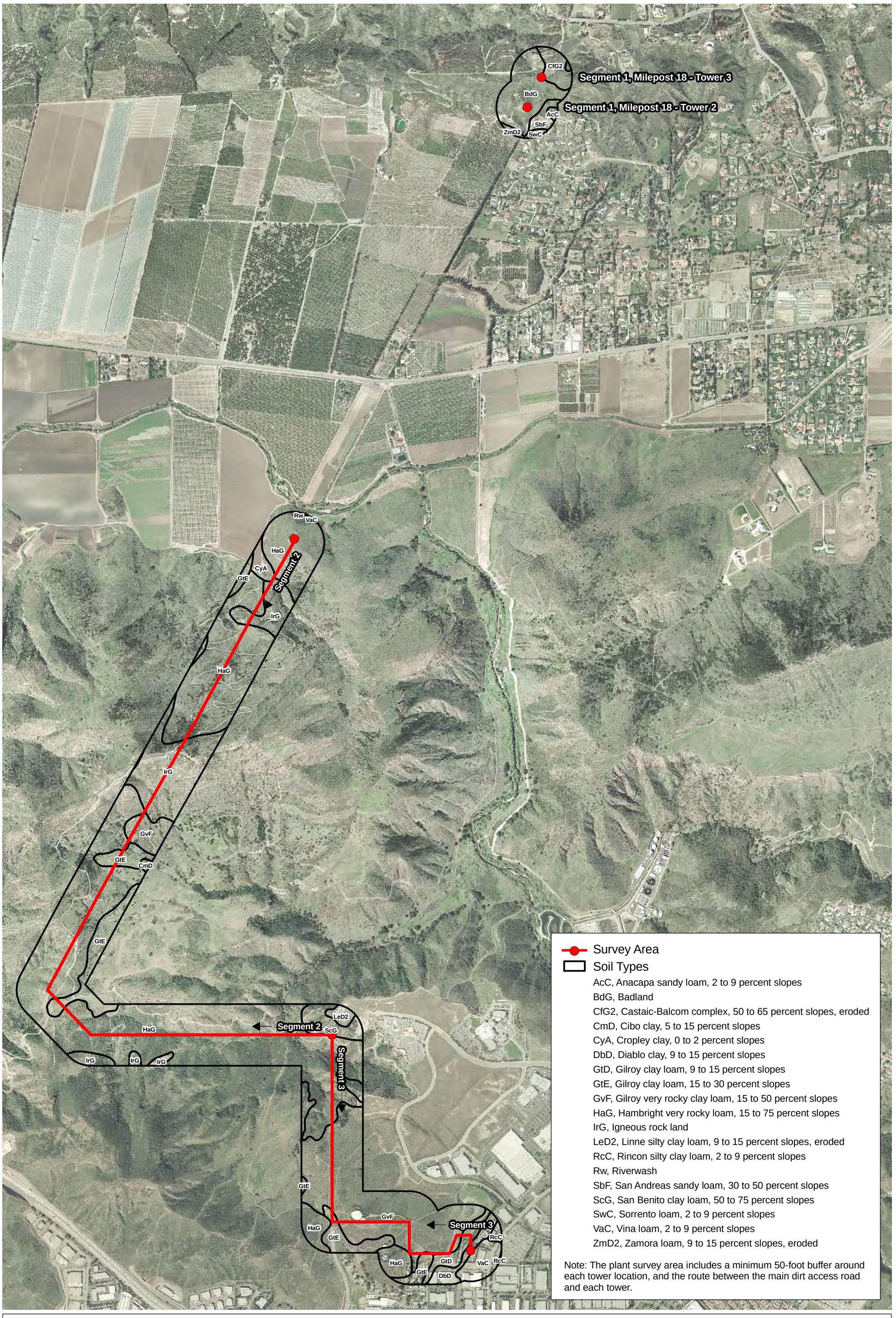
Moorpark-Newbury 66-kV Project, Ventura County, California

N W E S

1,400 700 0 1,400 Feet

BonTerra CONSULTING

(Rev 07/15/10 CJS) PAS/Projects/Edison/J050/Graphics/Plant_Report/Ex3_critical_habitat.pdf



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Soil Types

Exhibit 4

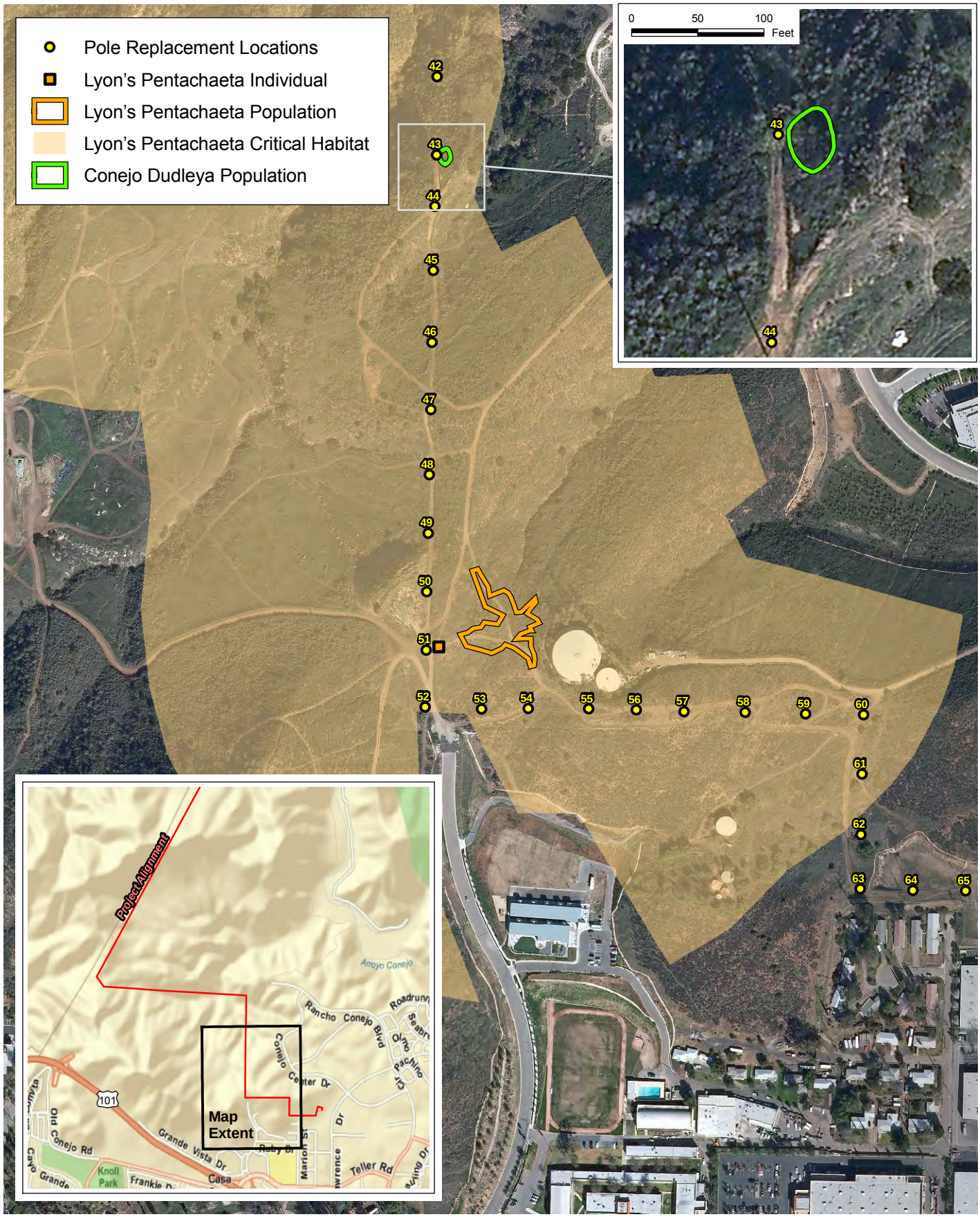
Moorpark-Newbury 66-kV Project, Ventura County, California

N W E S

1,400 700 0 1,400 Feet

BonTerra CONSULTING

(Rev 07/15/10 CJS) PAS/Projects/Edison/J050/Graphics/Plant_Report/Ex4_soils.pdf



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Special Status Plant Species Locations

Exhibit 5

Moorpark-Newbury 66-kV Project, Ventura County, California

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400 200 0 400

Feet

BonTerra CONSULTING

(Rev 07/09/10 CJS) Projects\Edison\J050\Graphics\Plant_Report\Ex5_aerial_plantRpt.pdf

Lyon's Pentachaeta Occurrence

Lyon's Pentachaeta Habitat

Special Status Plant Species Photographs

Exhibit 6a

Moorpark-Newbury 66-kV Project, Ventura County, California

BonTerra CONSULTING

Conejo Dudleya Occurrence

Conejo Dudleya Habitat

Special Status Plant Species Photographs

Exhibit 6b

Moorpark-Newbury 66-kV Project, Ventura County, California

BonTerra CONSULTING

ATTACHMENT A

PLANT COMPENDIUM
MOORPARK-NEWBURY 66kV PROJECT

July 21, 2010

FERNS AND FERN ALLIES
PTERIDACEAE - BRAKE FAMILY
Adiantum jordanii **   California maiden-hair
Pentagramma triangularis ssp. *triangularis*   goldenback fern
SELAGINELLACEAE - SPIKE-MOSS FAMILY
Selaginella bigelovii   Bigelow's spike-moss / bushy spike-moss
GYMNOSPERMS
PINACEAE - PINE FAMILY
Pinus sp.*   ornamental pine
FLOWERING PLANTS
CLASS DICOTYLEDONES (DICOTS)
ANACARDIACEAE - SUMAC FAMILY
Malosma laurina   laurel sumac
Rhus integrifolia   lemonadeberry
Rhus ovata   sugar bush
*Schinus molle**   Peruvian pepper tree
Toxicodendron diversilobum   western poison oak
APIACEAE (UMBELLIFERAE) - CARROT FAMILY
Apiastrum angustifolium   wild celery
*Conium maculatum**   poison hemlock
Daucus pusillus   rattlesnake weed
*Foeniculum vulgare**   sweet fennel
Lomatium dasycarpum ssp. *dasycarpum* **   woolly-fruited lomatium
Sanicula tuberosa   tuberous sanicle
APOCYNACEAE - DOGBANE FAMILY
*Nerium oleander**   oleander
ASCLEPIADACEAE - MILKWEED FAMILY
Asclepias fascicularis   narrow-leaved milkweed

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
ASTERACEAE (COMPOSITAE) - SUNFLOWER FAMILY
Acourtia microcephala sacapellote
Ambrosia acanthicarpa annual bursage
Ambrosia psilostachya western ragweed
Artemisia californica California sagebrush
Artemisia douglasiana mugwort
Baccharis pilularis coyote brush
Baccharis salicifolia mule fat
Brickellia californica California brickellbush
*Carduus pycnocephalus** Italian thistle
*Centaurea melitensis** tocalote
*Chamomilla suaveolens** common pineapple weed
*Chrysanthemum coronarium** garland daisy
*Cirsium vulgare** bull thistle
Conyza canadensis common horseweed
Encelia californica bush sunflower
Erigeron foliosus fleabane daisy
Eriophyllum confertiflorum golden yarrow
Filago californica fluffweed
*Filago gallica** narrow-leaved filago
*Gazania linearis** gazania
Gnaphalium californicum California everlasting
Gnaphalium canescens everlasting
Grindelia camporum var. *bracteosum* white-stem gum-plant
Hazardia squarrosa saw-toothed goldenbush
Hemizonia fasciculata fascicled tarweed

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
Heterotheca grandiflora telegraph weed
*Hypochaeris glabra** smooth cat's ear
*Lactuca serriola** prickly lettuce
Lasthenia californica California goldfields
Malacothrix saxatilis cliff malacothrix
Pentachaeta lyonii **Lyon's pentachaeta**
*Picris echioides** bristly ox tongue
Rafinesquia californica California chicory
*Senecio vulgaris** common groundsel
*Silybum marianum** milk thistle
*Sonchus asper** prickly sow-thistle
*Sonchus oleraceus** common sow-thistle
Stylocline gnaphaloides everlasting nest straw
Uropappus lindleyi silver puffs
BORAGINACEAE - BORAGE FAMILY
Amsinckia menziesii rancher's fiddleneck
Cryptantha or *Plagiobothrys* sp. popcornflower
Heliotropium curassavicum ** salt heliotrope / alkali heliotrope
BRASSICACEAE (CRUCIFERAE) - MUSTARD FAMILY
*Brassica nigra** black mustard
*Hirschfeldia incana** shortpod mustard
*Sisymbrium altissimum** tumble mustard
CACTACEAE - CACTUS FAMILY
Opuntia littoralis coastal prickly pear
Opuntia prolifera proliferous prickly pear / coastal cholla
CAPPARACEAE - CAPER FAMILY
Isomeris arborea bladderpod

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY
Sambucus mexicana elderberry
CARYOPHYLLACEAE - PINK FAMILY
*Silene gallica** ** windmill pink / common catchfly
Silene laciniata ssp. *major* Mexican pink / southern pink
CHENOPODIACEAE - GOOSEFOOT FAMILY
*Chenopodium album** lamb's quarters
*Salsola tragus** Russian thistle
CONVOLVULACEAE - MORNING-GLORY FAMILY
Calystegia macrostegia morning-glory
*Convolvulus arvensis** bindweed
CRASSULACEAE - STONECROP FAMILY
Crassula connata ** pigmy-weed
*Crassula ovata** ornamental jade plant
Dudleya lanceolata lance-leaved dudleya / coastal live-forever
Dudleya parva **Conejo dudleya**
Dudleya pulverulenta chalk dudleya / chalky live-forever
CUCURBITACEAE - GOURD FAMILY
Cucurbita foetidissima coyote melon / calabazilla
Marah macrocarpus wild cucumber / man-root
EUPHORBIACEAE - SPURGE FAMILY
Chamaesyce albomarginata rattlesnake weed
Croton californicus California croton
FABACEAE (LEGUMINOSAE) - LEGUME FAMILY
Lotus salsuginosus ssp. *salsuginosus* alkali lotus
Lotus scoparius deerweed / California broom
Lupinus bicolor miniature lupine
Lupinus succulentus arroyo lupine
*Medicago polymorpha** California burclover

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
*Melilotus alba** ** white sweet-clover
*Melilotus indica** sourclover
*Vicia villosa** winter vetch
FAGACEAE - OAK / BEECH FAMILY
Quercus agrifolia coast live oak
Quercus berberidifolia scrub oak / California scrub oak
GERANIACEAE - GERANIUM FAMILY
*Erodium cicutarium** red-stemmed filaree
GROSSULARIACEAE - GOOSEBERRY FAMILY
Ribes speciosum fuchsia-flowered gooseberry
HYDROPHYLLACEAE - WATERLEAF FAMILY
Emmenanthe penduliflora ** whispering bells
Eucrypta chrysanthemifolia common eucrypta
Phacelia distans common phacelia
Phacelia viscida viscid phacelia
LAMIACEAE (LABIATAE) - MINT FAMILY
*Marrubium vulgare** common horehound
Salvia columbariae chia
Salvia leucophylla purple sage
Salvia mellifera black sage
Stachys bullata California hedge-nettle
MALVACEAE - MALLOW FAMILY
Malacothamnus fasciculatus chaparral bushmallow
*Malva parviflora** cheeseweed
MYRTACEAE - MYRTLE FAMILY
Eucalyptus sp.* gum
NYCTAGINACEAE - FOUR-O'CLOCK FAMILY
Mirabilis californica wishbone bush / California wishbone bush
ONAGRACEAE - EVENING PRIMROSE FAMILY
Camissonia bistorta California sun cup

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
Camissonia californica mustard-like evening primrose
Clarkia purpurea ssp. *quadrivulnera* four-spot clarkia
Clarkia unguiculata elegant clarkia
PAPAVERACEAE - POPPY FAMILY
Eschscholzia californica California poppy
PLANTAGINACEAE - PLANTAIN FAMILY
Plantago erecta dwarf plantain / California plantain
*Plantago lanceolata** English plantain
POLEMONIACEAE - PHLOX FAMILY
Eriastrum densifolium ssp. *elongatum* ** woolly-star
Leptodactylon californicum prickly phlox
POLYGONACEAE - BUCKWHEAT FAMILY
Eriogonum cinereum gray coast buckwheat
Eriogonum elongatum var. *elongatum* wand buckwheat
Eriogonum fasciculatum var. *polifolium* rosemary flat-topped buckwheat
Pterostegia drymarioides pterostegia / notch leaf
*Rumex crispus** curly dock
PORTULACACEAE - PURSLANE FAMILY
Claytonia sp. miner's-lettuce
PRIMULACEAE - PRIMROSE FAMILY
*Anagallis arvensis** scarlet pimpernel
RANUNCULACEAE - CROWFOOT FAMILY
Delphinium parryi ssp. *parryi* Parry's larkspur / blue larkspur
RHAMNACEAE - BUCKTHORN FAMILY
Ceanothus megacarpus ssp. *megacarpus* bigpod ceanothus
Rhamnus crocea spiny redberry
Rhamnus ilicifolia holly-leaf redberry
ROSACEAE - ROSE FAMILY
Adenostoma fasciculatum chamise
Cercocarpus betuloides mountain mahogany

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
Heteromeles arbutifolia toyon / christmas berry
Prunus ilicifolia holly-leaved cherry
Rosa californica California wild rose
RUBIACEAE - MADDER FAMILY
Galium angustifolium narrow-leaved bedstraw
Galium nuttallii ssp*. nuttallii* San Diego bedstraw
SALICACEAE - WILLOW FAMILY
Salix laevigata red willow
SCROPHULARIACEAE - FIGWORT FAMILY
Castilleja affinis ssp. *affinis* coastal / Indian paintbrush
Keckiella cordifolia heart-leaved bush-penstemon
Mimulus aurantiacus bush monkeyflower
Mimulus brevipes slope semaphore
Scrophularia californica California figwort
SOLANACEAE - NIGHTSHADE FAMILY
*Nicotiana glauca** tree tobacco
Solanum xanti chaparral nightshade
URTICACEAE - NETTLE FAMILY
Urtica dioica ssp*. holosericea* hoary nettle
CLASS MONOCOTYLEDONES (MONOCOTS)
IRIDACEAE - IRIS FAMILY
Sisyrinchium bellum blue-eyed grass
LILIACEAE - LILY FAMILY
Allium peninsulare var. *peninsulare* peninsular onion
Bloomeria crocea common goldenstar
Calochortus catalinae **Catalina mariposa lily**
Calochortus clavatus ssp. *pallidus* yellow mariposa lily
Chlorogalum pomeridianum wavy-leaved soap plant
Dichelostemma capitatum blue dicks

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
Yucca whipplei Our Lord's candle
POACEAE [GRAMINEAE] - GRASS FAMILY
*Avena barbata** slender wild oat
*Avena fatua** wild oat
*Bromus diandrus** ripgut grass
*Bromus hordeaceus** soft chess
Bromus madritensis ssp. *rubens** foxtail chess
*Hordeum murinum** foxtail barley
Koeleria macrantha Junegrass
*Lamarckia aurea** goldentop grass
Leymus condensatus giant wild rye
*Lolium multiflorum** Italian ryegrass
Melica imperfecta small-flowered melic grass
Nassella cernua nodding needlegrass
Nassella lepida foothill needlegrass
*Pennisetum setaceum** African fountain grass
Phalaris minor *** little-seed canary grass
*Schismus barbatus** Mediterranean schismus
Vulpia microstachys fescue
*Vulpia myuros** foxtail fescue
** denotes non-native species* *** denotes species observed in 2008 but not in 2010* *Special status species are shown in **bold** font*

ATTACHMENT B

CALIFORNIA NATURAL DIVERSITY DATABASE FORMS

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 05/05/2010

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Pentachaeta lyonii*

Common Name: Lyon's pentachaeta

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals Est. 4,000 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: 2010-1 Number Rancho Santa Ana Botanic Garden Museum / Herbarium

Reporter: Andrea Edwards, BonTerra Consulting
Address: 3452 E. Foothill Blvd, Suite 420
Pasadena, California 91107
E-mail Address: aedwards@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative 95 % flowering 5 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Ventura County Landowner / Mgr.: Unknown

Quad Name: Newbury Park Elevation: 860-890 ft

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Geko 301

DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 15 ft meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐

Coordinates: 3785801.80, 321449.03

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Along and adjacent to dirt roads, close to utility alignment, immediately west of two fenced water tanks. In open disturbed areas with coastal sage scrub and non-native grassland vegetation. On gravelly clay loam; flat area to gentle slope (all aspects). Associated species: Hemizonia fasciculata, Lasthenia californica, Artemisia californica, Eriogonum fasciculatum, Bromus madritensis ssp. rubens, Avena barbata, and Centaurea melitensis.

Other rare taxa seen at THIS site on THIS date: Dudleya parva, Calochortus catalinae
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☑ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space and utilities

Visible disturbances: Existing dirt roads

Threats: N/A

Comments: This population is located within USFWS-designated Critical Habitat for this species. CDFG Plant Voucher Collecting Permit No. 08010.

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☑ Other: Familiar with species

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☑ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/21/2010

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Dudleya parva*

Common Name: Conejo dudleya

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 25 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: 2010-2 Number; Rancho Santa Ana Botanic Garden Museum / Herbarium

Reporter: Andrea Edwards, BonTerra Consulting
Address: 3452 E. Foothill Blvd, Suite 420
Pasadena, California 91107
E-mail Address: aedwards@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative; 100 % flowering; _____% fruiting

Animal Information

_____ # adults; _____ # juveniles; _____ # larvae; _____ # egg masses; _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: Ventura County Landowner / Mgr.: Unknown
Quad Name: Newbury Park Elevation: 635 ft
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Geko 301
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 15 ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 3786237.71, 321401.49

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Close to utility alignment, on rock outcrops with coastal sage scrub and non-native grassland vegetation. On rocky clay soil; moderate northwest-facing slope. Associated species: Bloomeria crocea, Eriogonum fasciculatum, Eriogonum elongatum, Bromus madritensis ssp. rubens, and Avena sp.

Other rare taxa seen at THIS site on THIS date: Pentachaeta lyonii
(separate form preferred)

Site Information

Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space and utilities

Visible disturbances: Existing dirt roads

Threats: N/A

Comments:

Determination: (check one or more, and fill in blanks)

- ☑ Keyed (cite reference): Jepson (Hickman 1993)
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☑ By another person (name): Botanist Rick Burgess (using photographs)
- ☐ Other: _____

Photographs: (check one or more)

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☑ no ☐

BonTerra CONSULTING
COSTA MESA PASADENA
T: (626) 351-2000 F: (626) 351-2030 | 3452 E. Foothill Blvd., Suite 420
www.BonTerraConsulting.com | Pasadena, CA 91107

July 28, 2010

Mr. Paul A. Yamazaki
Southern California Edison
Natural/Cultural Resources Group
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of the Coastal California Gnatcatcher Survey for the Proposed Moorpark-Newbury 66-kV Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for the coastal California gnatcatcher (*Polioptila californica californica*) at the Proposed Moorpark-Newbury 66-kV Transmission Line project site (hereafter referred to as "the project site") in the Cities of Moorpark and Thousand Oaks, Ventura County, California (Exhibit 1). The purpose of the surveys was to determine the presence or absence of the coastal California gnatcatcher on or immediately adjacent to the project site. Surveys were conducted by biologists that hold the necessary Federal Endangered Species Act (FESA) survey permit and according to guidelines established by the U.S. Fish and Wildlife Service (USFWS).

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the cities of Moorpark and Thousand Oaks, Ventura County, California (Exhibit 1). A biological constraints survey performed in May 2007 resulted in a determination that there was potentially suitable habitat for the coastal California gnatcatcher within the three segments of the project site. Potentially suitable coastal sage scrub vegetation occurs throughout the project site with the suitability for coastal California gnatcatcher decreasing from Segment 1 to Segment 3. Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kilovolt (kV) towers with the same approximate span lengths (5.1 miles). Segment 2 involves replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles) (Exhibit 2). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Vegetation types within the study area include coastal sage scrub and chaparral. The Segment 1 towers located within the survey area are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*),

black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub characterized by the species listed above, but that are also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Segments 2 and 3 also support chaparral, which is dominated by chamise (*Adenostoma fasciculatum*), and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type include laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*). Photos of representative habitat on the project site are provided in Exhibits 3a and 3b.

Background

Recent taxonomic studies indicate the California gnatcatcher consists of four subspecies that extend from southwestern California to southern Baja California, Mexico (Atwood and Lerman 2006; Mellink and Rea 1994). The coastal California gnatcatcher, the northernmost gnatcatcher subspecies, is restricted to lowland areas from central Ventura County through Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties to the Baja California, Mexico border (Atwood and Lerman 2006; Mellink and Rea 1994). Formerly, the coastal California gnatcatcher was common from the San Fernando Valley east along the base of the San Gabriel Mountains to Claremont (Atwood 1990). The coastal California gnatcatcher is now rare in the northern part of its range with a handful of sightings from Santa Clarita to Tujunga Wash, though a small population persists near Moorpark in Ventura County. The coastal California gnatcatcher has been recorded from sea level to approximately 3,000 feet above msl (USFWS 2003); however, greater than 90 percent of gnatcatcher records are from elevations below 820 feet msl along the coast (Atwood and Bolsinger 1992; MBA 1991) and between sea level and 1,800 feet above msl inland. Recent estimates by the USFWS regarding the population size of the coastal California gnatcatcher in Southern California have been about 3,000 pairs (Atwood and Bontrager 2001).

The coastal California gnatcatcher typically occurs within coastal and inland sage scrub vegetation types. Sage scrub often occurs in a patchy distribution pattern throughout the range of the gnatcatcher. Coastal California gnatcatchers also use chaparral, grassland, and riparian habitats that are near sage scrub. These non-sage scrub habitats are used for dispersal and foraging (Atwood et al. 1998; Campbell et al. 1998; USFWS 2003). Availability of these non-sage scrub areas is essential during certain times of the year, particularly during drought conditions, or for dispersal, foraging, or nesting (USFWS 2003).

The coastal California gnatcatcher was designated as a Threatened species by the USFWS on March 25, 1993. A Special Rule was issued that would allow incidental take of coastal California gnatcatcher under Section 9 of the FESA if the take results from activities conducted in accordance with the state's Natural Community Conservation Plan (NCCP) Act (USFWS 1993). For those not participating in the state's NCCP, any activity that may result in the take of coastal California gnatcatcher requires formal consultation with the USFWS under Sections 7 or 10 of

the FESA. On December 19, 2007, the USFWS published a final rule revising critical habitat for the coastal California gnatcatcher. The revised critical habitat designates 197,303 acres of land in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura counties as critical habitat for the coastal California gnatcatcher (USFWS 2007). Although distant from the survey area, proposed USFWS Critical Habitat for the coastal California gnatcatcher is located adjacent to the northern terminus of Segment 1.

Survey Methodology

The USFWS Coastal California Gnatcatcher Survey Protocol recommends six visits to all potentially occupied habitat areas for surveys conducted entirely within the breeding season, which extends from March 15 to June 30 (USFWS 1997a, 1997b). All visits must take place during the morning hours, and no more than 80 acres of suitable habitat may be surveyed per visit. Because the survey area was greater than 80 acres, 2 days were required to complete each survey visit. Following the USFWS protocol for the species, BonTerra Consulting Ecologist Lindsay Messett (USFWS Permit #067064-1) conducted all surveys on the project site. Surveys for the coastal California gnatcatcher were conducted on April 26 and 28; May 3, 5, 10, 12, 18, 19, 26, and 28; and June 11 and 14, 2010.

Weather conditions met the USFWS survey protocol requirements for optimal gnatcatcher detection. Weather conditions that were too cold (below 55 degrees Fahrenheit [°F]), too hot (above 95°F), or too windy (wind speed greater than 15 miles per hour) were avoided. Surveys were conducted by slowly walking through all appropriate habitats while listening and watching for gnatcatcher activity. A combination of taped recordings of gnatcatcher vocalizations and "pishing" sounds were used to elicit responses from any gnatcatchers present. The frequency of vocalization playback and "pishing" varied depending on conditions such as habitat patch size and topography in each area. All bird species detected during the survey were recorded, including notable observations of special status species or other birds (Appendix A).

Survey Results

A total of three coastal California gnatcatcher territories consisting of two breeding pairs, and one solitary juvenile were present on the project site during the surveys (Exhibit 4). As Exhibit 4 shows, all coastal California gnatcatchers were located in the southern portion of the project site within Segment 3. Both gnatcatcher pairs observed during the surveys exhibited behavior consistent with breeding; this was confirmed by observing adults feeding fledglings or adults building nests. One juvenile gnatcatcher was also observed in Segment 3. California Natural Diversity Database (CNDDB) forms will be submitted to the California Department of Fish and Game (CDFG). Survey dates, times and weather data for the focused coastal California gnatcatcher surveys are shown in Table 1.

TABLE 1
SUMMARY OF COASTAL CALIFORNIA GNATCATCHER SURVEYS

Survey Number	Date	Time	Surveyor	Weather Conditions			Gnatcatchers Observed and/or Detected
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%) (Start/End)	
1	4/26/2010	0710–1215	Messett	55/74	0–1/0–2	100/clear	None observed or detected
	4/28/2010	0900–1240	Messett	57/65	0–1/0–7	25/20	None observed or detected
2	5/3/2010	0730–1225	Messett	56/76	0–1/0–8	clear/clear	None observed or detected
	5/5/2010	0700–1210	Messett	58/72	0–1/0–4	5/clear	None observed or detected
3	5/10/2010	0630–1200	Messett	57/65	0–1/0–6	clear/clear	None observed or detected
	5/12/2010	0730–1150	Messett	55/71	0–1/0–5	clear/clear	None observed or detected
4	5/18/2010	0610–1145	Messett	56/63	0–3/0–5	100/100	None observed or detected
	5/19/2010	0615–1200	Messett	58/64	0–2/0–6	100/85	None observed or detected
5	5/26/2010	0720–1150	Messett	56/65	0–1/0–6	100/50	None observed or detected
	5/28/2010	0700–1155	Messett	57/70	0–1/0–5	clear/clear	None observed or detected
6	6/11/2010	0615–1210	Messett	56/66	0–1/0–5	100/80	None observed or detected
	6/14/2010	0700–1240	Messett	56/86	0–1/0–1	100/clear	1 pair feeding 2–3 fledglings; 1 pair observed building a nest, and 1 solitary juvenile observed in Segment 3.

°F: degrees Fahrenheit; mph: miles per hour

Additional Sensitive Species

Two additional sensitive species were observed and/or detected on the project site during the surveys: coastal cactus wren (*Campylorhynchus brunneicapillus*) and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*).

Coastal cactus wren is a California Species of Special Concern. Some authorities consider the taxonomic status of cactus wrens in the southwestern U.S. to be uncertain (Proudfoot et al. 2000). Coastal populations of the cactus wren are found in Southern California from San Diego County north to Ventura County (Garrett and Dunn 1981), and are declining due to loss of habitat. Except for the Banning Pass area west of Palm Springs, the coastal populations of cactus wren appear to be isolated from interior populations. On the coastal slope of Southern California, cactus wrens inhabit coastal sage scrub and alluvial sage scrub habitats that have sufficient amounts of prickly pear cactus and/or cholla. Cactus wrens were observed and/or detected through vocalization throughout the project site in all Segments (1, 2, and 3).

Southern California rufous-crowned sparrow is a CDFG Watch List species. In coastal Southern California, rufous-crowned sparrows are considered fairly common in scrub vegetation types and other habitats with grasses and widely spaced, low shrubs. They also prefer slopes with rock outcroppings (Garrett and Dunn 1981). This subspecies is present throughout the year in Southern California, but is threatened by loss of habitat due to development. Southern California rufous-crowned sparrows were observed and/or detected through vocalization throughout the project site in all Segments (1, 2, and 3).

Additionally, several brown-headed cowbirds (*Molothrus ater*) were observed during the course of the gnatcatcher surveys. Brown-headed cowbirds were consistently detected on the project site, near the south end of Segment 1 and along the north end of Segment 2.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact David Hughes or Lindsay Messett at (626) 351-2000 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

David T. Hughes
Project Manager

Lindsay A. Messett
Biologist

Attachments: Exhibits 1, 2, 3A, 3B, and 4
Appendix A – Wildlife Compendium

I certify that the information in this survey report and enclosed exhibits fully and accurately present my work.

Lindsay A. Messett
Ecologist
(TE-067064-1)

cc: Ms. Diane Noda, USFWS
Marc Blain, BonTerra Consulting

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REFERENCES

Atwood, J. L. 1990. Status Review of the California Gnatcatcher (*Polioptila californica*). Manomet Bird Observatory, Manomet, Massachusetts.

Atwood, J. L., and J. S. Bolsinger. 1992. *Elevational distribution of California Gnatcatchers in the United States.* Journal of Field Ornithology 63: 159 – 168.

Atwood, J. L., D. R. Bontrager, and A. L. Gorospe. 1998. *Use of Refugia by California Gnatcatchers Displaced by Habitat Loss.* Western Birds 29: 406-412.

Atwood, J. L., and D. R. Bontrager. 2001. California Gnatcatcher (*Polioptila* californica). *In* The Birds of North America, No. 574 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Atwood, J. L., and S. B. Lerman. 2006. Family Polioptilidae (Gnatcatchers). Pp. 350 – 377 in: del Hoyo, J., A. Elliott, and D. A. Christie, eds. (2006). *Handbook of the Birds of the World.* Vol. 11. Old World Flycatchers to Old World Warblers. Lynx Edicions, Barcelona.

Campbell, K. F., R. A. Erickson, W. E. Haas, and M. A. Patten. 1998. *California Gnatcatcher Use of Habitats Other Than Coastal Sage Scrub: Conservation and Management Implications.* Western Birds 29: 421-433.

Garrett, K. and J. Dunn. 1981. *Birds of Southern California: Status and Distribution.* Los Angeles, CA: Los Angeles Audubon Society.

Mellink, E., and A. M. Rea. 1994. *Taxonomic Status of the California Gnatcatchers of Northwestern Baja California, Mexico.* Western Birds 25: 50 – 62.

Michael Brandman Associates (MBA). 1991 (July). A Rangewide Assessment of the California Gnatcatcher (*Polioptila californica*) (an Unpublished Report prepared for the Building Industry Association of Southern California).

Proudfoot, G.A., D.A. Sherry, and S. Johnson. 2000. Cactus Wren (*Campylorhynchus brunneicapillus*). *The Birds of North America, No. 558* (A. Poole and F. Gills, eds.). Philadelphia, PA and Washington, D.C.: The Academy of Natural Sciences and The American Ornithologists' Union (respectively).

U.S. Fish and Wildlife Service (USFWS). 2007 (December 19). Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*); Final Rule. *Federal Register* 72(243): 72009–72213.

———. 2003 (April 24). Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*) and Determination of Distinct Vertibrate Population Segment for the California Gnatcatcher (*Polioptila californica*); Proposed Rule. *Federal Register* 68(79): 20227–20312. Washington, D.C.: USFWS. http://policy.fws.gov/library/03-9435.pdf.

———. 1997a (February 28). *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Guidelines.*

———. 1997b (July 28). *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol.*

———. 1993 (March 30). Endangered and Threatened Wildlife and Plants: Determination of Threatened Status for the Coastal California Gnatcatcher. *Federal Register* 58(59): 16742–16757. Washington, D.C.: USFWS.

Regional Location

Exhibit 1

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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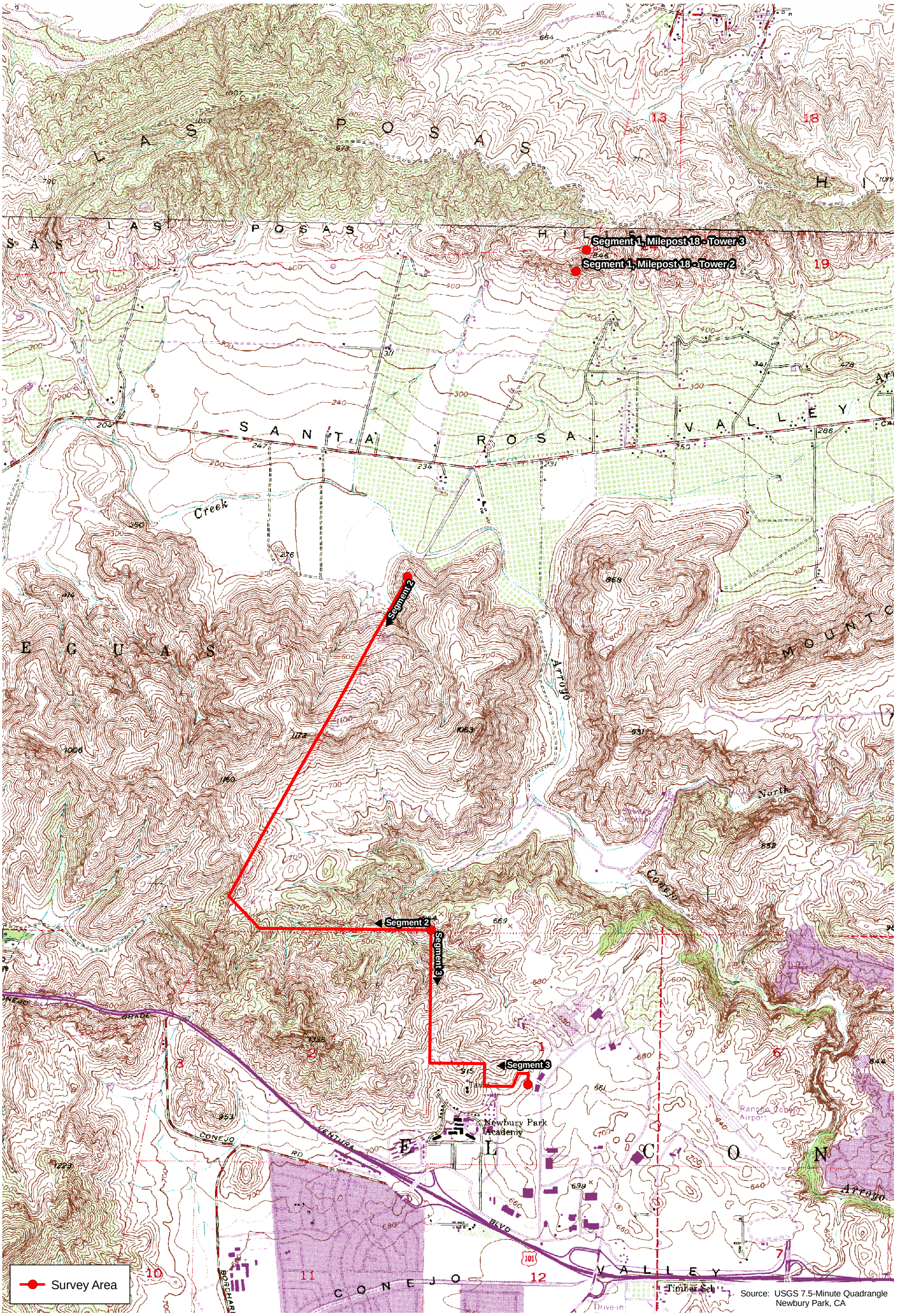

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Local Vicinity

Exhibit 2

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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Representative site photograph depicting coastal sage scrub vegetation located within Segment 1 of the project site.

Representative site photograph depicting coastal sage scrub vegetation located within Segment 2 of the project site.

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Site Photographs

Exhibit 3A

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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Representative site photograph depicting the western portion of coastal California gnatcatcher Territory 2, located within Segment 3 of the project site.

Representative site photograph depicting the northern portion of coastal California gnatcatcher Territory 3 located within Segment 3 of the project site.

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Site Photographs

Exhibit 3B

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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Coastal California Gnatcatcher (CAGN) Locations

Exhibit 4

Moorpark-Newbury 66kV Transmission Line Project, Ventura County, California

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APPENDIX A
WILDLIFE COMPENDIUM

Species
Reptiles
PHRYNOSOMATIDAE – ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Uta stansburiana side-blotched lizard
COLUBRIDAE – COLUBRID SNAKES
Masticophis flagellum coachwhip
VIPERIDAE – VIPERS
Crotalus atrox western diamond-backed rattlesnake
Birds
ODONTOPHORIDAE – QUAILS
Callipepla californica California quail
CATHARTIDAE – NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE – HAWKS
Accipiter cooperii Cooper's hawk
Buteo jamaicensis red-tailed hawk
FALCONIDAE – FALCONS
Falco sparverius American kestrel
CHARADRIIDAE – PLOVERS
Charadrius vociferus killdeer
COLUMBIDAE – PIGEONS & DOVES
*Columba livia** rock pigeon
Zenaida macroura mourning dove
CUCULIDAE – CUCKOOS & ROADRUNNERS
Geococcyx californianus greater roadrunner
TROCHILIDAE – HUMMINGBIRDS
Calypte anna Anna's hummingbird
Selasphorus sasin Allen's hummingbird
PICIDAE – WOODPECKERS
Melanerpes formicivorus acorn woodpecker
Picoides nuttallii Nuttall's woodpecker

WILDLIFE COMPENDIUM (Continued)

Species
Colaptes auratus northern flicker
TYRANNIDAE – TYRANT FLYCATCHERS
Empidonax difficilis Pacific-slope flycatcher
Sayornis saya Say's phoebe
Myiarchus cinerascens ash-throated flycatcher
Tyrannus vociferans Cassin's kingbird
Tyrannus verticalis western kingbird
CORVIDAE – JAYS & CROWS
Aphelocoma californica western scrub-jay
Corvus brachyrhynchos American crow
Corvus corax common raven
HIRUNDINIDAE – SWALLOWS
Stelgidopteryx serripennis northern rough-winged swallow
Petrochelidon pyrrhonota cliff swallow
Hirundo rustica barn swallow
PARIDAE – TITMICE
Baeolophus inornatus oak titmouse
AEGITHALIDAE – BUSHTITS
Psaltriparus minimus bushtit
TROGLODYTIDAE – WRENS
Campylorhynchus brunneicapillus cactus wren
Catherpes mexicanus canyon wren
Thryomanes bewickii Bewick's wren
REGULIDAE – KINGLETS
Regulus calendula ruby-crowned kinglet
SYLVIIDAE – GNATCATCHERS
Polioptila caerulea blue-gray gnatcatcher
Polioptila californica californica coastal California gnatcatcher

WILDLIFE COMPENDIUM (Continued)

Species
TURDIDAE – THRUSHES & ROBINS
Turdus migratorius American robin
TIMALIIDAE – WRENTITS
Chamaea fasciata wrentit
MIMIDAE – THRASHERS
Mimus polyglottos northern mockingbird
Toxostoma redivivum California thrasher
STURNIDAE – STARLINGS
*Sturnus vulgaris** European starling
EMBERIZIDAE – SPARROWS & JUNCOS
Pipilo maculatus spotted towhee
Pipilo crissalis California towhee
Aimophila ruficeps rufous-crowned sparrow
Melospiza melodia song sparrow
CARDINALIDAE – GROSBEAKS & BUNTINGS
Pheucticus melanocephalus black-headed grosbeak
Passerina caerulea blue grosbeak
Passerina amoena lazuli bunting
ICTERIDAE – BLACKBIRDS
Euphagus cyanocephalus Brewer's blackbird
Molothrus ater brown-headed cowbird
Icterus cucullatus hooded oriole
Icterus bullockii Bullock's oriole
FRINGILLIDAE – FINCHES
Carpodacus mexicanus house finch
Spinus [Carduelis] psaltria lesser goldfinch
PASSERIDAE – OLD WORLD SPARROWS
*Passer domesticus** house sparrow

WILDLIFE COMPENDIUM (Continued)

Species
Mammals
LEPORIDAE – HARES & RABBITS
Sylvilagus audubonii desert cottontail
SCIURIDAE – SQUIRRELS
Spermophilus beecheyi California ground squirrel
GEOMYIDAE – POCKET GOPHERS
Thomomys bottae Botta's pocket gopher
MURIDAE – MICE, RATS, AND VOLES
Neotoma fuscipes dusky-footed woodrat
CANIDAE – WOLVES & FOXES
Canis latrans coyote
FELIDAE – CATS
Lynx rufus bobcat
Invertebrates
PAPILIONIDAE – SWALLOWTAIL BUTTERFLIES
Papilio zelicaon anise swallowtail
PIERIDAE – WHITES, SULFURS, & ORANGETIPS
Anthocharis sara Sara orangetip
*Pieris rapae** mustard white
Pontia protodice common (checkered) white
SATYRIDAE – WOOD NYMPHS
Coenonympha californica California ringlet
NYMPHALIDAE – BRUSH-FOOTED BUTTERFLIES
Vanessa annabella west coast lady
Basilarchia lorquini Lorquin's admiral
DANAIDAE – MILKWEED BUTTERFLIES
Danaus plexippus monarch
RIODINIDAE – METALMARKS
Apodemia mormo virgulti Behr's (Mormon) metalmark
* introduced species

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL™ Company

August 30, 2010

Ms. Diane K. Noda
Field Supervisor, Ventura Fish and Wildlife Office
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

Subject: Protocol Survey Results for the Southern California Edison Moorpark-Newbury 66 kilovolt Subtransmission Line Project, Moorpark/Newbury Park, Ventura County, California

Dear Ms. Noda:

This letter provides project information regarding the Southern California Edison (SCE) Moorpark-Newbury 66 kilovolt (kV) Subtransmission Line project and the biological resources present within the project site. Focused surveys for the coastal California gnatcatcher and rare plants (particularly Lyon's pentachaeta and Conejo dudleya) conducted in the spring and summer of 2008 confirmed their absence from the project area. However, recent focused surveys conducted in 2010 found both species to be present adjacent to the project alignment. SCE will avoid potential direct and indirect impacts to these biological resources along and adjacent to the project area with the implementation of the avoidance measures described below. No federal regulatory permits are needed for the project that would create a nexus for Section 7 consultation. The anticipated start date for the project is September 13, 2010 or soon thereafter, and Section 4 of the project alignment will be completed first (see below for details regarding the project).

PROJECT SITE AND DESCRIPTION

SCE proposes to construct the new Moorpark-Newbury 66 kV subtransmission line to address a base case overload on the Moorpark tap of the existing Moorpark-Newbury-Pharmacy 66 kV subtransmission line. The new Moorpark-Newbury subtransmission line will be constructed between SCE's Moorpark Substation, located at the northwest corner of Gabbert Road and Los Angeles Avenue in the City of Moorpark, and SCE's Newbury Substation, located at 1295 Lawrence Drive in the City of Thousand Oaks. The project, which will involve both the installation of new power poles and replacement and reconductor of existing power poles, is approximately nine miles in length, and will traverse portions of the City of Moorpark, unincorporated areas of Ventura County, and the City of Thousand Oaks, all within existing easements, rights-of-way (ROW) and SCE fee-owned property. The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the Thousand Oaks and Simi Valley West U.S. Geological survey (USGS) 7.5-minute quadrangle maps.

The new Moorpark-Newbury line will be constructed as follows:

Section 1: Construction of approximately 2,000 feet of underground 66 kV line, entirely within the existing Moorpark Substation.

Section 2: Construction of 27 engineered tubular steel poles (TSPs) in the existing SCE Ormond Beach-Moorpark 220 kV ROW for approximately 5 miles:

- This portion of the project will extend from the Moorpark Substation east and then south to a point adjacent to SCE's existing 220 kV tower M16-T5. From this point, the new line will transition to an existing 66 kV ROW as described as follows.

- The new TSPs, which will be approximately 75 to 125 feet tall and strung with 954 aluminum conductor, steel reinforced (ACSR), will be installed adjacent to the existing 220 kV towers. The new subtransmission line will have approximately the same span lengths as the existing Ormond Beach-Moorpark 220 kV lines in the ROW.

Section 3: Replacement of 14 existing double-circuit 66 kV lattice steel towers (LSTs) with 13 double-circuit TSPs for approximately 2.5 miles on the existing Moorpark-Newbury-Pharmacy 66 kV subtransmission line.

- Section 3 begins where the existing Moorpark-Newbury-Pharmacy 66 kV subtransmission line crosses SCE's existing Ormond Beach-Moorpark 220 kV ROW at a point approximately 4,150 feet south of the intersection of Santa Rosa Road and Gerry Road.

- The new double-circuit TSPs, which will be approximately 75 to 125 feet tall, will carry both the existing Moorpark-Newbury-Pharmacy 66 kV subtransmission line and the new Moorpark-Newbury 66kV line. Both circuits will be strung with 954 ACSR (the existing Moorpark-Newbury-Pharmacy 66 kV line currently is strung with 653.9 ACSR, but will be reconductored as part of this project to avoid conductor swing and rise conflict with the new Moorpark-Newbury 66 kV line).

Section 4: Replacement of 31 single-circuit wood poles with 31 double-circuit lightweight steel (LWS) poles for approximately 1.2 miles in existing ROW.

- This section begins at a point approximately 0.3 miles west of the intersection of Conejo Center Drive and Rancho Conejo Boulevard and ends at the Newbury Substation.

- This section will involve the transfer of the existing Moorpark-Newbury-Pharmacy 66 kV subtransmission line from existing 70 to 90 foot tall wood poles to new 75 to 95 foot tall double-circuit LWS poles carrying both the new Moorpark-Newbury 66 kV subtransmission line and the existing Moorpark-Newbury-Pharmacy 66 kV subtransmission line.

- The replacement poles will be placed in line with the existing alignment approximately three feet from the existing poles, and approximately 10 feet of vegetation will be cleared around each pole during replacement activities (except for Pole 42, please see Appendix A, Exhibit 5, which will be replaced and re-conductored via helicopter due to access limitations.

- The following additional clearing will take place: 1) The existing dirt power line access roads will be scraped to allow for easier access during project implementation; 2) the access road just south of Pole 43 (Please see Appendix A, Exhibit 5 for pole locations)

needs to be widened a few feet in order to allow access for construction equipment; however, this can be accomplished with avoidance of all flagged areas; 3) Poles 58, 59, and 54 will need additional clearing of native habitat since these are set back from the access road 15 feet, 20 feet, and 30 feet, respectively; and 4) the corners of the access road that loops around from Pole 47 to Pole 44 will likely be widened. It is anticipated that three to four poles will be replaced per week.

BIOLOGICAL RESOURCES WITHIN THE PROJECT SITE

Biological presence/absence surveys for the federally and state listed Endangered Lyon's pentachaeta (*Pentachaeta lyonii*), federally listed Threatened Conejo dudleya (*Dudleya parva*), and federally listed Threatened coastal California gnatcatcher (*Polioptila californica californica)* were initially conducted in 2008 and found to be absent from the project site. Due to initial project delays a subsequent survey in 2010 was conducted to refresh the original surveys. The subsequent 2010 survey indicated that the Lyon's pentachaeta, Conejo dudleya, and the coastal California gnatcatcher are all present within the vicinity of the Project site. However, with the implementation of the avoidance measures listed below, no impacts (direct or indirect) to these species are anticipated as a result of the proposed project. Monitoring for the coastal California gnatcatcher during the breeding period (February 15 to August 30) will ensure that this species is not harmed or harassed as a result of project activities.

Survey Methodology

Focused botanical surveys were conducted along the project alignment in Spring 2010 by BonTerra Consulting Botanist Andrea Edwards and Biologist Lindsay Messett. A known reference population for each species was visited in the project vicinity immediately prior to the surveys. The survey area excluded agricultural, residential, and urban areas and included only those tower locations within or immediately adjacent to open spaces. The plant survey area included a minimum 50-foot buffer around each tower location, and the route between the main dirt access road and each tower. Transects were used to search the survey area; slopes that were too steep to access on foot were carefully examined using binoculars. All plant species were recorded in field notes.

The U.S. Fish and Wildlife Service (USFWS) coastal California gnatcatcher survey protocol requires six visits to all potentially occupied habitat areas for surveys conducted entirely within the peak breeding season, which extends from March 15 to June 30. All visits must take place during the morning hours, and no more than 80 acres of suitable habitat may be surveyed per visit. Following the USFWS protocol for the species, BonTerra Consulting Ecologist Lindsay Messett (USFWS Permit #067064-1) conducted all surveys on the project site. Weather conditions during all surveys met the USFWS survey protocol requirements for optimal gnatcatcher detection. Surveys were conducted by slowly walking through all appropriate habitats while listening and watching for gnatcatcher activity. A combination of taped recordings of gnatcatcher vocalizations and "pishing" sounds were used to elicit responses from any gnatcatchers present. All bird species detected during the survey were recorded.

Survey Results and Potential Impacts

<u>Special Status Wildlife</u>

Coastal California gnatcatchers were observed within three territories in the project vicinity. One pair occupied territory 1 and was observed constructing a nest the week of June 30, 2010. Territory 2 was occupied by one pair and one to two fledglings. One fledgling occupied Territory 3. A copy of the *Results of the Coastal California Gnatcatcher Survey for the Proposed Moorpark-Newbury 66-kV Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California*, prepared by BonTerra Consulting, dated July 28, 2010 is included as Appendix B to this report[1].

Potential indirect impacts to the coastal California gnatcatcher may occur as a result of the proposed project; however, implementation of the avoidance and minimization measures outlined below will ensure that no impacts occur. Portions of all three coastal California gnatcatcher territories are within 500 feet of construction areas; however, the nest being constructed the week of June 30, 2010 was approximately 800 feet east of the project alignment. In addition, the majority (all poles except for 3-4 in the southeastern end of the alignment) of the construction will be occurring outside of the coastal California gnatcatcher breeding season.

Least Bell's vireo surveys were conducted by BonTerra Consulting within a riparian area that crosses the alignment just north of Pole 26. No least Bell's vireos were observed within the project site. The last survey was conducted on July 22, 2010.

Special Status Plants and Habitats

Lyon's pentachaeta was observed within the project area. The Lyon's pentachaeta was observed along and adjacent to dirt roads in open disturbed areas with coastal sage scrub and non-native grassland vegetation east of Poles 50 and 51 and north of Poles 53 and 54. This species is located closest to Pole 51 where it is present approximately 30 feet to the west. Approximately 4,000 individuals were observed with one flowering individual located within 50 feet of a tower location.

A total of 25 Conejo dudleya were located within and adjacent to the 50-foot buffer area around Pole 43. The population was located on rock outcrops with coastal sage scrub and non-native grassland vegetation, on a moderate northwest-facing slope (Exhibit 3).

Potential direct impacts to Lyon's pentachaeta and Conejo dudleya may occur as a result of the proposed project; however, implementation of the avoidance and minimization measures outlined below will ensure that no impacts occur. These two species occur in close proximity to the project area; therefore, potential direct impacts may include trampling via equipment or personnel or removal due to road scraping/grading. Lyon's pentachaeta critical habitat (Montclef Ridge Unit 2A) is present within the project area and covers a portion of Segments 2 and 3 approximately from Poles 61 to 40 (just east of Pole 39). Critical habitat was established for this species on November 14, 2006 and includes 3,396 acres in Ventura and Los Angeles Counties. Lyon's pentachaeta occurs along the edges of clearings in chaparral usually at the ecotone between grassland and chaparral or along the edges of firebreaks.

A copy of the Results of Focused Plant Surveys for the Moorpark-Newbury 66-kilivolt Project, Ventura County, California, prepared by BonTerra Consulting, dated July 21, 2010 is included as Appendix A of this report[2].

Impact Avoidance and Minimization Measures

The following avoidance and minimization measures will be implemented to avoid or minimize impacts to biological resources as a result of the project:

Special Status Plants and Habitats

- Areas supporting Lyon's pentachaeta shall be flagged prior to project activities by a qualified biologist and avoided during construction. In addition, a biological monitor shall be present during project activities occurring within the vicinity of these resources to ensure that no sensitive species are impacted. The replacement pole for Pole 51 shall be placed in line with the existing pole (no closer to the Lyon's pentachaeta than the existing pole), and all Lyon's pentachaeta shall be avoided during project activities.

- Areas supporting Conejo dudleya shall be flagged prior to project activities by a qualified biologist and avoided during construction. In addition, a biological monitor shall be present during project activities occurring within the vicinity of these resources to ensure that no sensitive species are impacted. The access road just south of Pole 43 needs to be widened a few feet in order to allow access for SCE;s construction equipment; however, this can be accomplished with avoidance of all flagged areas.

- A portion of the project site falls within Lyon's pentachaeta critical habitat. Areas that support Lyon's pentachaeta within Lyon's pentachaeta critical habitat shall be avoided. Removal of small amount of habitat (that does not support the species) within Lyon's pentachaeta critical habitat will be necessary for pole replacement; it is estimated that approximately 0.1 acre of habitat in Section 4 will be disturbed in patches around the new and existing poles. In addition, existing access roads will be scraped to allow easier access to work areas. Because this species occurs along fire roads, disturbed areas, and ecotones between chaparral and grasslands, this minimal amount of disturbance is not expected to impact potential habitat for the species and may actually be helpful in creating new potential habitat areas for the plant. Additionally, because existing poles will be replaced with new poles in this segment, and existing access roads will be used, no net loss of habitat will take place in critical habitat for this species.

- In order to maintain the native seed bank when digging holes for pole replacements within Lyon's pentachaeta critical habitat, the upper six (6) inches of topsoil will be salvaged/stockpiled at each pole location within Lyon's pentachaeta critical habitat. The topsoil will be stored on a protective surface (such as a tarp), piled no more than three

[1,2] Please note that the biological survey reports did not include Section 1 within the project alignment since this section is entirely within the developed Moorpark Substation. Section 1 referenced in the biological survey reports corresponds with Section 2 in the above project description, Section 2 in the biological survey reports corresponds with Section 3 above, and Section 3 in the biological survey reports corresponds with Section 4 above.

feet high, and will be replaced (within two weeks) as the top layer when ground disturbing work is completed.

Special Status Wildlife

- The coastal California gnatcatcher was observed within the project vicinty. No grading of habitat that is occupied by nesting coastal California gnatcatchers (including a 500-foot buffer area in all direction from the nest) shall occur during the breeding season (February 15 through August 30).

- Should project activities occur during the breeding season (February 15 through August 30), a preconstruction survey for the coastal California gnatcatcher will be conducted. The monitor must possess a valid recovery permit from the USFWS for the coastal California gnatcatcher. Should coastal California gnatcatchers be observed nesting within the vicinity of the project work areas, a 500-foot buffer shall be established around the nest site, and this area shall be avoided until the young have fledged or until the birds have abandoned the nest. In addition, project activities occurring within 500 feet of a mapped coastal California gnatcatcher territory shall be monitored by a qualified biologist possessing a valid recovery permit for the species. Should the coastal California gnatcatchers appear disturbed by project activities, the project shall cease in the area at the discretion of the monitoring biologist and will not continue until impacts can be avoided or the U.S. Fish and Wildlife Service is consulted.

- Removal of a small amount of unoccupied coastal California gnatcatcher habitat will be necessary for pole replacement. A qualified biologist shall be present during clearing and replacement activities to ensure that native habitat (coastal sage scrub) removal is minimized to the maximum extent practicable. As described above, it is anticipated that for a majority of the poles in Section 3, the replacement pole will be placed approximately three feet from the existing pole and a 10-foot wide area will be cleared around the existing and replacement pole for fire safety purposes. Poles 58, 59, and 54 will likely need additional clearing of native habitat since these are set back from the access road. Pole 58 is set back approximately 15 feet and is level with the access road; this pole will likely require a small amount of additional habitat to be removed outside of the 10-foot buffer. Pole 59 is approximately 20 feet from the access road and Pole 54 is approximately 30 feet from the access road. Both Poles 59 and 54 are upslope from the access road and will require an approximately 10 foot wide pathway and leveling of the slope to the existing poles. In addition, the corners of the access road that loops around from Pole 47 to Pole 44 will likely be widened. Pole 42 shall be replaced via helicopter and no new access roads will be built in this area. It is estimated that approximately 0.5 acre of potentially suitable coastal California habitat along the length of the project will be disturbed as a result of the proposed project within Section 3.

SCE believes that the project can be constructed without resulting in a take to the listed species observed adjacent to the project, with the implementation of the proposed avoidance measures.

As a result, the attached reports are being provided for information only and a concurrence is not being requested at this time. The project is scheduled to begin September 13, 2010, or soon after, starting with Segment 4 at the southern end of the project.

Should you have any questions or concerns with the project please feel free to call me at (626) 302-1117.

Sincerely,

Paul Yamazaki
Senior Biologist
Southern California Edison

Enclosures:

Appendix A: SCE Moorpark-Newbury Project Rare Plant Survey Report, July 21, 2010.

Appendix B: SCE Moorpark-Newbury coastal California Gnatcatcher Protocol Survey Report, July 28, 2010

cc: Mary Meyers, California Department of Fish and Game

Appendix A

SCE Moorpark-Newbury Project
Rare Plant Survey Report

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July 21, 2010

Paul A. Yamazaki
Corporate Environment, Health & Safety
Southern California Edison
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL AND U.S. MAIL
paul.yamazaki@sce.com

Subject: Results of Focused Plant Surveys for the Moorpark-Newbury 66-kilovolt Project, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the findings of focused plant surveys conducted for federally and State-listed Endangered Lyon's pentachaeta (*Pentachaeta lyonii*) and federally listed Threatened Conejo dudleya (*Dudleya parva*) along the Moorpark-Newbury 66-kilovolt (kV) project alignment in Ventura County, California (Exhibits 1 and 2). The project alignment is located along existing transmission lines that traverse open space and agricultural areas, and crosses two potentially jurisdictional drainages: Arroyo Simi and Arroyo Santa Rosa. The alignment is located in the Cities of Moorpark and Thousand Oaks on the U.S. Geological Survey (USGS) Newbury Park 7.5-minute quadrangle; the alignment has an approximate elevation range of 240 to 1,150 feet above mean sea level (msl) (BonTerra Consulting 2007).

The proposed Moorpark-Newbury 66-kV project involves the installation of 39 engineered steel poles and 31 double-circuit lightweight steel poles along the existing 8.8-mile electrical transmission line. New poles to be installed will replace lattice steel towers and single-circuit wood poles along the transmission line while others will be installed adjacent to an existing alignment of steel transmission towers. The project is divided into three segments that are shown on Exhibit 3. Special status plant surveys associated with this project were conducted along these segments around existing pole or tower locations in areas of potentially suitable habitat. Focused plant surveys were previously conducted for this project in spring 2008, and one special status species was observed within the survey area at that time: Catalina mariposa lily (*Calochortus catalinae*) (BonTerra Consulting 2008).

METHODS

Botanical surveys were floristic in nature and consistent with the current protocols created by the California Department of Fish and Game (CDFG) (CDFG 2009). Reference populations were monitored for annual and difficult-to-detect target species to ensure that the scheduled surveys were comprehensive. A known reference population of Lyon's pentachaeta was visited and observed to be flowering in the Thousand Oaks area on April 28, 2010. Since a known reference population of Conejo dudleya was not available to monitor, any small dudleya plant found within the survey area that was not yet flowering was monitored weekly until it flowered and could thereafter be identified. To confirm that it was an appropriate season to conduct the surveys, BonTerra Consulting referred to the National Weather Service's data, which indicates that downtown Los Angeles (located about 40 miles from the survey areas) has received

16.3 inches of precipitation for Water Year 2010 (October 1, 2009 through spring 2010), which is about 114 percent of the normal average precipitation (National Weather Service 2010).

A literature review was conducted to identify special status plants known from the survey area vicinity. This included a review of the USGS Newbury Park, Thousand Oaks, Moorpark, and Simi 7.5-minute quadrangles in the California Department of Fish and Game's (CDFG's) California Natural Diversity Database (CNDDB) (CDFG 2010) and the California Native Plant Society's (CNPS') Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2010). Table 1 lists the special status plant species known to occur in the vicinity of the survey area. In addition, a review of current Critical Habitat documents indicates that a portion of the survey area (the southeastern end of Segment 2 and most of Segment 3—see Exhibit 3) overlaps with Critical Habitat (Montclef Ridge Unit 2a) for Lyon's pentachaeta, as designated by the U.S. Fish and Wildlife Service (USFWS) (USFWS 2006).

BonTerra Consulting Botanist Andrea Edwards and Biologist Lindsay Messett conducted focused surveys for Lyon's pentachaeta and Conejo dudleya along the project alignment on May 3 and 5, and June 21, 2010, which were comprised of 25 total person-hours. As stated above, the overall project alignment includes three linear segments, and the plant surveys were conducted around existing pole or tower locations that were located within potentially suitable habitat for the target special status species. Most of Segment 1 was excluded from the survey as this segment is dominated by agricultural areas. Therefore, only two tower locations within Segment 1 were included in the survey (Milepost 18 - Tower 2 and Milepost 18 - Tower 3), though all of Segments 2 and 3 were included. The plant survey area included a minimum 50-foot buffer around each pole or tower location described above (expanded from the 30-foot buffer used during the 2008 plant surveys), and the route between the main dirt access road and each tower.

The survey area was systematically examined; slopes that were too steep to access on foot were carefully examined using binoculars. All plant species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Hickman (1993) and Munz (1974). Taxonomy follows Hickman (1993) and current scientific data (e.g., scientific journals) for scientific and common names.

SITE DESCRIPTION

The two Segment 1 towers located within the survey area were surrounded by coastal sage scrub vegetation. Segment 2 and 3 towers were surrounded by both coastal sage scrub and chaparral vegetation. Disturbed areas generally devoid of vegetation were also present, including dirt roads and a large clearing at the southern end of the survey area. The southern portion of the project alignment contained abundant non-native plant species in the scrub habitat and edges of dirt access roads. Soil types along the project alignment are dominated by Gilroy very rocky clay loam, Hambright very rocky loam, and igneous rock land, but also include badland, Castaic-Balcom complex, Cropley clay, Diablo clay, Gilroy clay loam, and San Benito clay loam as shown in Exhibit 4 (USDA NRCS 2007).

SURVEY RESULTS

Lyon's pentachaeta and Conejo dudleya were both observed within and adjacent to the survey area along Segment 3. Exhibits 5 and 6A/6B show the locations and photographs of these species. A list of all plants observed within the survey area during focused surveys can be found in Attachment A, and the CNDDB forms for the Lyon's pentachaeta and Conejo dudleya occurrences can be found in Attachment B. A voucher specimen was collected for each of these

two species and will be deposited in the herbarium at the Rancho Santa Ana Botanic Garden in Claremont, California. An additional special status plant species was observed during the surveys: Catalina mariposa lily, which is a CNPS List 4 species, indicating that it is on a "watch list" for plants of limited distribution. Although reference populations and regional rainfall amounts were monitored to ensure the scientific adequacy of these focused surveys, there is always a minimal potential for false negative survey results as species could possibly be present on a site but may not be detectable at the time of survey. As noted above, Table 1 identifies the special status plants with potential to occur within the survey area. It is important to note that the purpose of these surveys was to survey only for Threatened and Endangered species; therefore, the surveys are not conclusive for all special status species with potential to occur within the survey area.

TABLE 1
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR
IN THE SURVEY AREA VICINITY

Species	Status			Habitat Suitability Within the Survey Area
	USFWS	CDFG	CNPS	
Astragalus brauntonii Braunton's milk—vetch	FE	—	1B.1	Limited suitable habitat present.** Not observed; however, this disturbance-following plant has potential to appear after soil disturbance, wildfire, or other disturbing event.
California macrophylla Round-leaved filaree	—	—	1B.1	No suitable habitat present.
Calochortus catalinae **Catalina mariposa lily**	**—**	**—**	**4.2**	**Suitable habitat present. Observed within the survey area.**
Calochortus plummerae Plummer's mariposa lily	—	—	1B.2	Suitable habitat present.
Centromadia parryi ssp. *australis* southern tarplant	—	—	1B.1	No suitable habitat present.
Deinandra minthornii Santa Susana tarplant	—	SR	1B.2	No suitable habitat present.
Delphinium parryi ssp. *blochmaniae* dune larkspur	—	—	1B.2	No suitable habitat present.
Dudleya blochmaniae ssp. *blochmaniae* Blochman's dudleya	—	—	1B.1	Limited suitable habitat present.**
Dudleya cymosa ssp. *agourensis* Agoura Hills dudleya	FT	—	1B.2	Limited suitable habitat present.**
Dudleya cymosa ssp. *marcescens* marcescent dudleya	FT	SR	1B.2	Limited suitable habitat present.**
Dudleya parva **Conejo dudleya**	**FT**	**—**	**1B.2**	**Suitable habitat present. Observed within the survey area.**
Dudleya verityi Verity's dudleya	FT	—	1B.2	Limited suitable habitat present.**
Eriogonum crocatum Conejo buckwheat	—	SR	1B.2	Limited suitable habitat present.**
Hordeum intercedens vernal barley	—	—	3.2	No suitable habitat present.
Horkelia cuneata ssp. *puberula* mesa horkelia	—	—	1B.1	Suitable habitat present.**
Juglans californica var. *californica* Southern California black walnut	—	—	4.2	Suitable habitat present.**

TABLE 1 (Continued)
SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR
IN THE SURVEY AREA VICINITY

Species	Status			Habitat Suitability Within the Survey Area
	USFWS	CDFG	CNPS	
Nolina cismontana chaparral nolina	—	—	1B.2	Suitable habitat present.**
Orcuttia californica California Orcutt grass	FE	SE	1B.1	No suitable habitat present.
***Pentachaeta lyonii* Lyon's pentachaeta**	**FE**	**SE**	**1B.1**	**Suitable habitat present. Observed within the survey area.**
Pseudognaphalium leucocephalum white rabbit-tobacco	—	—	2.2	Suitable habitat present.
Senecio aphanactis chaparral ragwort	—	—	2.2	Suitable habitat present.

*** Focused plant surveys were conducted only for Lyon's pentachaeta and Conejo dudleya.**
**** If present within the survey area, this perennial species would have been observed during focused plant surveys.**

LEGEND:

Federal (USFWS)
FE Endangered
FT Threatened
FC Candidate

State (CDFG)
SE Endangered
ST Threatened
SR Rare
SC Candidate

California Native Plant Society (CNPS) List Categories
List 1A Plants Presumed Extinct in California
List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
List 3 Plants About Which We Need More Information — A Review List
List 4 Plants of Limited Distribution – A Watch List

California Native Plant Society (CNPS) Threat Rank Extensions
.1 Seriously threatened in California (high degree/immediacy of threat)
.2 Fairly threatened in California (moderate degree/immediacy of threat)
.3 Not very threatened in California (low degree/immediacy of threat or no current threats known)

Lyon's pentachaeta typically blooms between March and August (CNPS 2010). This low slender annual herb occurs at elevations between approximately 100 and 2,100 feet above msl; it prefers coastal habitats, including chaparral, coastal scrub, and rocky clay grasslands, and is known to occur in Los Angeles and Ventura Counties (CNPS 2010). Of the estimated 4,000 individuals observed adjacent to the survey area, only one flowering individual is located within the survey area (within 50 feet of a tower location). The dense population is positioned along and adjacent to dirt roads immediately west of two fenced water tanks in open, disturbed areas with coastal sage scrub and non-native grassland vegetation. Associated species include fascicled tarweed (*Hemizonia fasciculata*), California goldfields (*Lasthenia californica*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), foxtail chess (*Bromus madritensis* ssp. *rubens*), slender wild oat (*Avena barbata*), and tocalote (*Centaurea melitensis*). This population is located within USFWS-designated Critical Habitat for this species.

Conejo dudleya typically blooms between May and June (CNPS 2010). This perennial herb occurs at elevations around 1,000 feet above msl on bare rocky slopes in chaparral and coastal sage scrub (Munz 1974). It is only known to occur in Ventura County (CNPS 2010). A total of

25 flowering individuals are located within and adjacent to the survey area; several individuals are located within the survey area. The population is located on rock outcrops with coastal sage scrub and non-native grassland vegetation on a moderate northwest-facing slope. Associated species include common goldenstar (*Bloomeria crocea*), California buckwheat, wand buckwheat (*Eriogonum elongatum*), foxtail chess, and wild oats (*Avena* sp.).

Any potential threats or impacts to these two listed special status plant species would be determined to be significant under the California Environmental Quality Act (CEQA) and would require appropriate mitigation. Therefore, complete avoidance of the plant populations is recommended, and the areas have already been clearly marked with orange and red flagging in the field. The presence of a Biological Monitor during project construction would further ensure that any potential impacts to these species are avoided.

Catalina mariposa lily typically blooms between March and June (CNPS 2010). This bulbiferous perennial herb occurs in heavy soils on open grassy slopes and openings in brush at elevations below about 2,000 feet above msl and in valley grassland and chaparral habitats (Munz 1974). It is known from Ventura, Los Angeles, Orange, Santa Barbara, San Bernardino, San Diego, and San Luis Obispo Counties and from Santa Catalina, Santa Cruz, and Santa Rosa Islands (CNPS 2010). Hundreds of Catalina mariposa lilies were observed scattered along sides of the dirt access roads in Segments 2 and 3, and a few are located within the survey area (within 50 feet of a tower location).

CNPS List 4 species often occur in large numbers on project sites and are considered relatively common within their range; therefore, the observation of a List 4 species is noted during focused surveys but not quantified or mapped in the survey results. Although it is considered a special status species, impacts to Catalina mariposa lily would be considered adverse but would not meet the significance criteria under CEQA to require mitigation.

In summary, based on overall species distribution and listing status, the observed populations of Lyon's pentachaeta and Conejo dudleya are considered highly significant and complete avoidance of the plant populations is recommended through biological monitoring during project construction. The presence of a biological monitor will eliminate any potential threats or direct, indirect, or cumulative impacts to these species from the proposed project. However, future threats to these species may still exist due to possible plant collection, damage by vehicular activity, and/or increased distribution of non-native invasive plant species as a result of future development and/or utility projects and human activities. Also, although the proposed project is designed to avoid special status biological resources and minimize the size of impact areas as poles and towers are replaced, there will be some small impacts to habitat areas that could support these plant species but are currently unoccupied.

If you have any comments or questions, please call David Hughes at (626) 351-2000.

Sincerely,

BONTERRA CONSULTING

for David T. Hughes
Project Manager

Andrea D. Edwards
Biologist

Enclosures:
Exhibit 1 – Regional Location
Exhibit 2 – Local Vicinity
Exhibit 3 – Survey Area and Critical Habitat
Exhibit 4 – Soil Types
Exhibit 5 – Special Status Plant Species Locations
Exhibits 6A/6B – Special Status Plant Species Photographs
Attachment A – Plant Compendium
Attachment B – California Natural Diversity Database Forms

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REFERENCES

BonTerra Consulting. 2008 (August 4). *Results of Focused Plant Surveys for the Moorpark-Newbury 66 kV Project, Ventura County, California*. Pasadena, CA: BonTerra Consulting.

———. 2007 (May 24). *Field Survey Results for Moorpark-Newbury 66-kV Transmission Line Project*. Pasadena, CA: BonTerra Consulting.

California Department of Fish and Game (CDFG). 2010. California Natural Diversity Database. Records of Occurrence for Newbury Park, Thousand Oaks, Moorpark, and Simi quadrangle maps. Sacramento, CA: CDFG, Natural Heritage Division.

———. 2009 (November 24). *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. Sacramento, CA: CDFG.

California Native Plant Society (CNPS). 2010. Electronic Inventory of Rare and Endangered Vascular Plants of California. Records of Occurrence for Newbury Park, Thousand Oaks, Moorpark, and Simi quadrangle maps. Sacramento, CA: CNPS. http://www.cnps.org/inventory.

Hickman, J.C., Ed. 1993. *The Jepson Manual of Higher Plants of California*. Berkeley, CA: University of California Press.

Munz, P.A. 1974. *A Flora of Southern California*. Berkeley, CA: University of California Press.

National Weather Service. 2010 (May 18). Monthly Precipitation Summary Water Year 2010. Sacramento, CA: National Weather Service, California-Nevada River Forecast Center. http://www.cnrfc.noaa.gov/monthly_precip.php.

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA NRCS). 2007 (March 6). Soil Survey Geographic (SSURGO) Database for Ventura Area, California. Fort Worth, TX: USDA, NRCS.

U.S. Fish and Wildlife Service (USFWS). 2006 (November 14). Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Astragalus brauntonii* and *Pentachaeta lyonii*; Final Rule. *Federal Register* 71(219): 66373–66423. Washington, D.C.: USFWS.

Regional Location

Exhibit 1

Moorpark-Newbury 66-kV Project, Ventura County, California

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BonTerra CONSULTING

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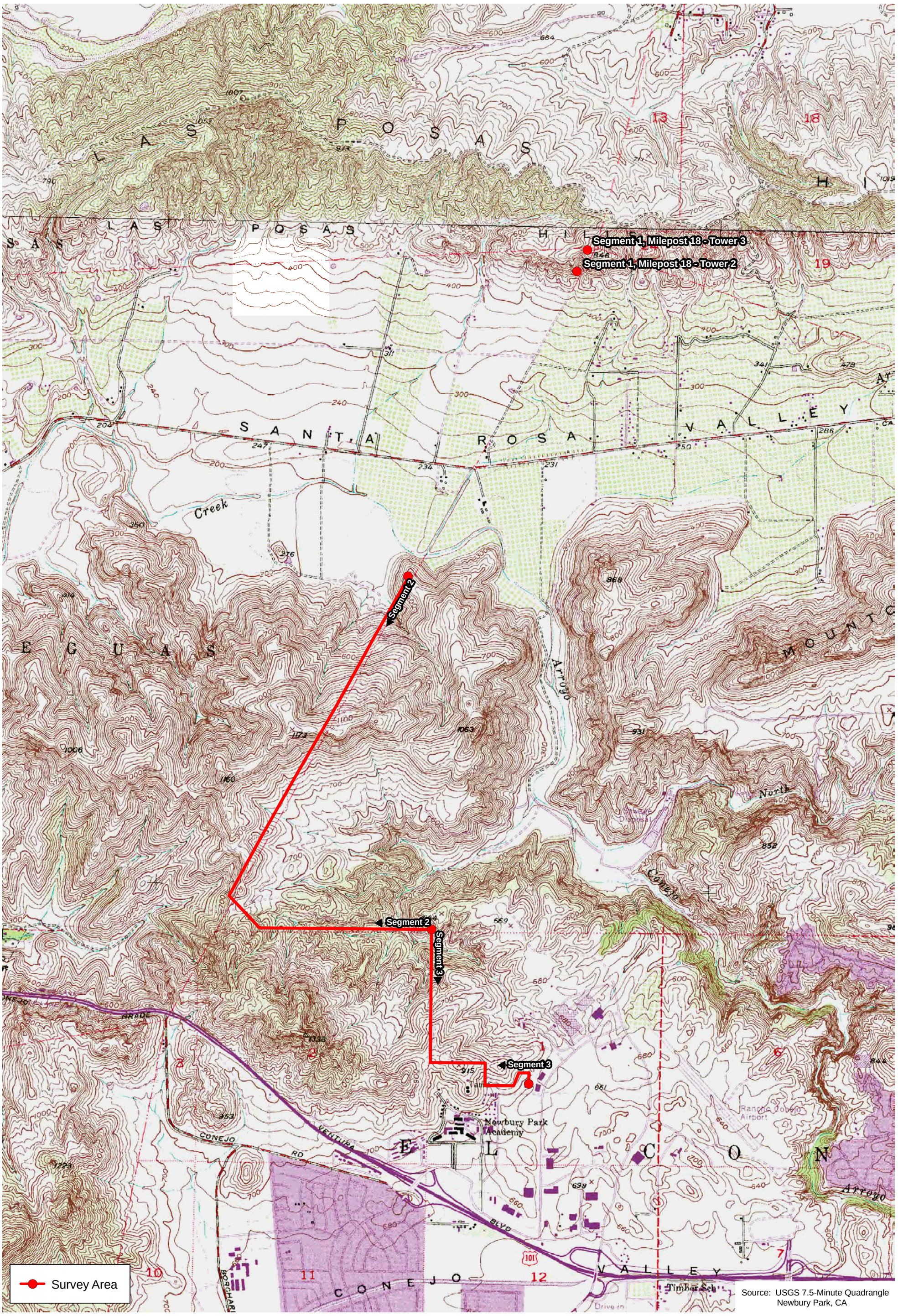

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Local Vicinity

Exhibit 2

Moorpark-Newbury 66-kV Project, Ventura County, California

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2,000 1,000 0 2,000 Feet

BonTerra CONSULTING

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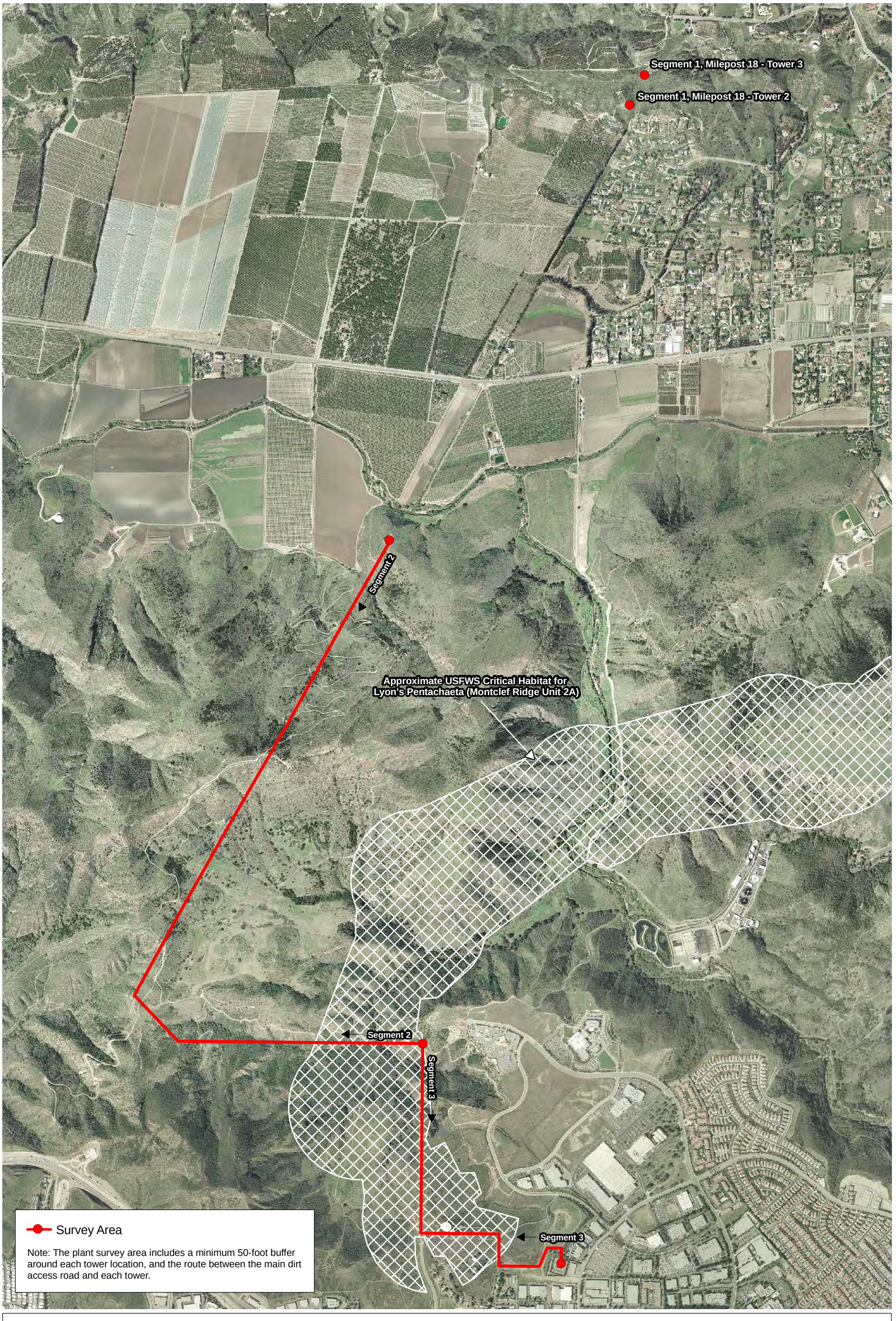

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Survey Area and Critical Habitat

Exhibit 3

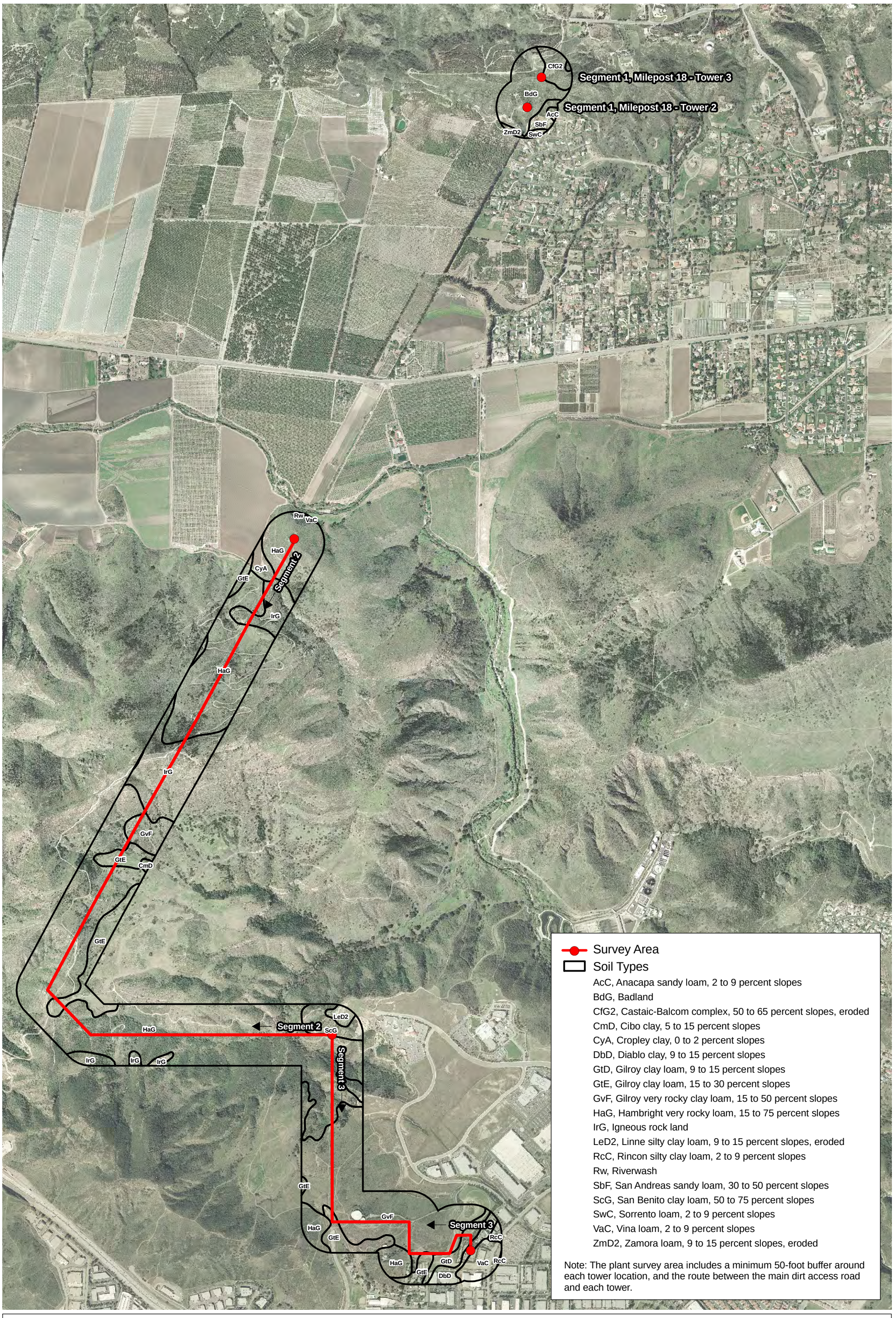
Moorpark-Newbury 66-kV Project, Ventura County, California

N W E S

1,400 700 0 1,400 Feet

BonTerra CONSULTING

(Rev 07/15/10 CJS) PAS/Projects/Edison/J050/Graphics/Plant_Report/Ex3_critical_habitat.pdf



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Soil Types

Exhibit 4

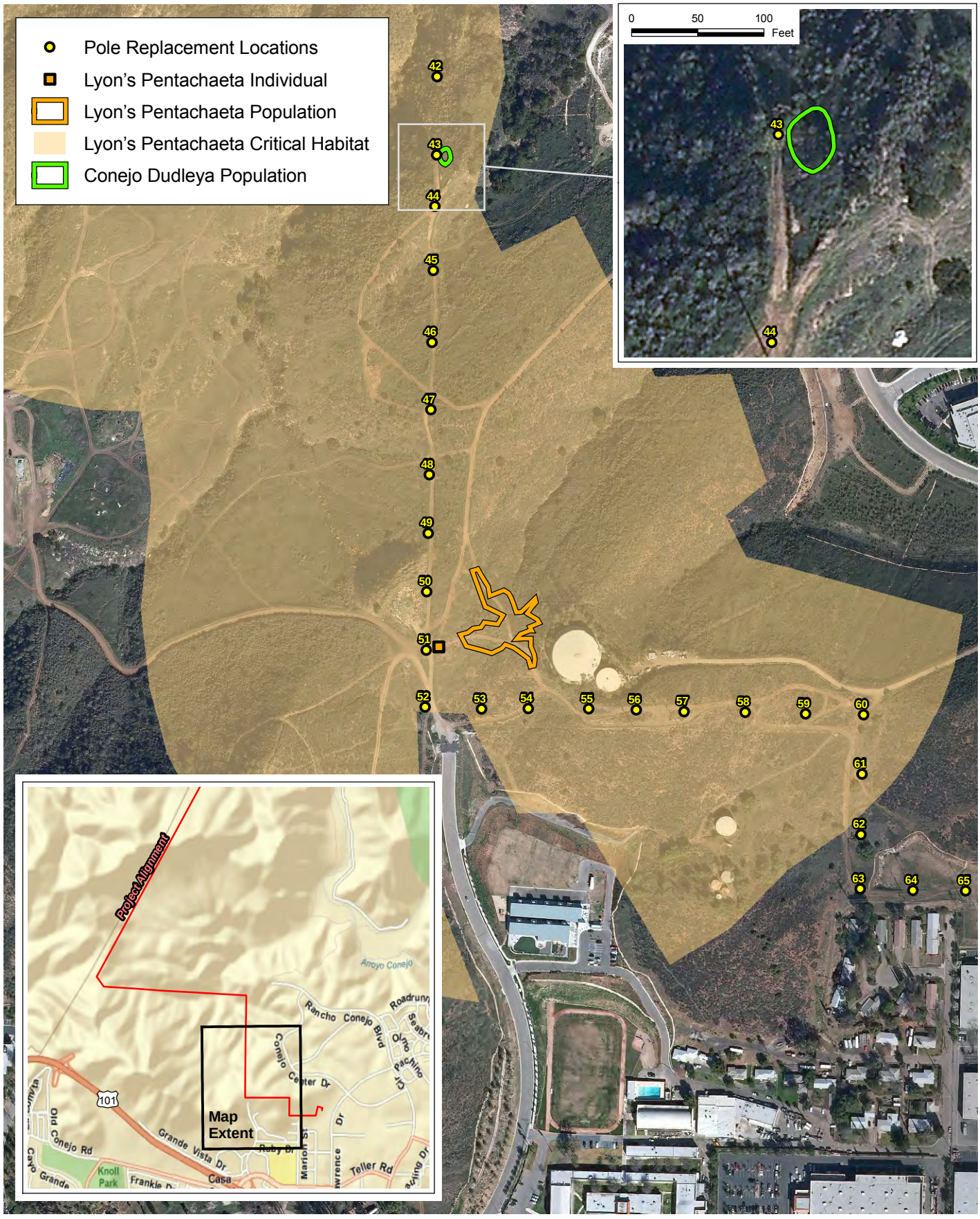
Moorpark-Newbury 66-kV Project, Ventura County, California

N W E S

1,400 700 0 1,400 Feet

BonTerra CONSULTING

(Rev 07/15/10 CJS) PAS/Projects/Edison/J050/Graphics/Plant_Report/Ex4_soils.pdf



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Special Status Plant Species Locations

Exhibit 5

Moorpark-Newbury 66-kV Project, Ventura County, California

N
W
E
S

400 200 0 400
Feet

BonTerra CONSULTING

(Rev 07/09/10 CJS) Projects\Edison\J050\Graphics\Plant_Report\Ex5_aerial_plantRpt.pdf

Lyon's Pentachaeta Occurrence

Lyon's Pentachaeta Habitat

Special Status Plant Species Photographs

Exhibit 6a

Moorpark-Newbury 66-kV Project, Ventura County, California

BonTerra CONSULTING

Conejo Dudleya Occurrence

Conejo Dudleya Habitat

D:\Projects\Edison\J050\Graphics\Ex_photosB.ai

Special Status Plant Species Photographs

Exhibit 6b

Moorpark-Newbury 66-kV Project, Ventura County, California

BonTerra CONSULTING

ATTACHMENT A

PLANT COMPENDIUM
MOORPARK-NEWBURY 66kV PROJECT

July 21, 2010

FERNS AND FERN ALLIES
PTERIDACEAE - BRAKE FAMILY
Adiantum jordanii **   California maiden-hair
Pentagramma triangularis ssp. *triangularis*   goldenback fern
SELAGINELLACEAE - SPIKE-MOSS FAMILY
Selaginella bigelovii   Bigelow's spike-moss / bushy spike-moss
GYMNOSPERMS
PINACEAE - PINE FAMILY
Pinus sp.*   ornamental pine
FLOWERING PLANTS
CLASS DICOTYLEDONES (DICOTS)
ANACARDIACEAE - SUMAC FAMILY
Malosma laurina   laurel sumac
Rhus integrifolia   lemonadeberry
Rhus ovata   sugar bush
*Schinus molle**   Peruvian pepper tree
Toxicodendron diversilobum   western poison oak
APIACEAE (UMBELLIFERAE) - CARROT FAMILY
Apiastrum angustifolium   wild celery
*Conium maculatum**   poison hemlock
Daucus pusillus   rattlesnake weed
*Foeniculum vulgare**   sweet fennel
Lomatium dasycarpum ssp. *dasycarpum* **   woolly-fruited lomatium
Sanicula tuberosa   tuberous sanicle
APOCYNACEAE - DOGBANE FAMILY
*Nerium oleander**   oleander
ASCLEPIADACEAE - MILKWEED FAMILY
Asclepias fascicularis   narrow-leaved milkweed

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
ASTERACEAE (COMPOSITAE) - SUNFLOWER FAMILY
Acourtia microcephala sacapellote
Ambrosia acanthicarpa annual bursage
Ambrosia psilostachya western ragweed
Artemisia californica California sagebrush
Artemisia douglasiana mugwort
Baccharis pilularis coyote brush
Baccharis salicifolia mule fat
Brickellia californica California brickellbush
*Carduus pycnocephalus** Italian thistle
*Centaurea melitensis** tocalote
*Chamomilla suaveolens** common pineapple weed
*Chrysanthemum coronarium** garland daisy
*Cirsium vulgare** bull thistle
Conyza canadensis common horseweed
Encelia californica bush sunflower
Erigeron foliosus fleabane daisy
Eriophyllum confertiflorum golden yarrow
Filago californica fluffweed
*Filago gallica** narrow-leaved filago
*Gazania linearis** gazania
Gnaphalium californicum California everlasting
Gnaphalium canescens everlasting
Grindelia camporum var. *bracteosum* white-stem gum-plant
Hazardia squarrosa saw-toothed goldenbush
Hemizonia fasciculata fascicled tarweed

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
Heterotheca grandiflora telegraph weed
*Hypochaeris glabra** smooth cat's ear
*Lactuca serriola** prickly lettuce
Lasthenia californica California goldfields
Malacothrix saxatilis cliff malacothrix
Pentachaeta lyonii **Lyon's pentachaeta**
*Picris echioides** bristly ox tongue
Rafinesquia californica California chicory
*Senecio vulgaris** common groundsel
*Silybum marianum** milk thistle
*Sonchus asper** prickly sow-thistle
*Sonchus oleraceus** common sow-thistle
Stylocline gnaphaloides everlasting nest straw
Uropappus lindleyi silver puffs
BORAGINACEAE - BORAGE FAMILY
Amsinckia menziesii rancher's fiddleneck
Cryptantha or *Plagiobothrys* sp. popcornflower
Heliotropium curassavicum ** salt heliotrope / alkali heliotrope
BRASSICACEAE (CRUCIFERAE) - MUSTARD FAMILY
*Brassica nigra** black mustard
*Hirschfeldia incana** shortpod mustard
*Sisymbrium altissimum** tumble mustard
CACTACEAE - CACTUS FAMILY
Opuntia littoralis coastal prickly pear
Opuntia prolifera proliferous prickly pear / coastal cholla
CAPPARACEAE - CAPER FAMILY
Isomeris arborea bladderpod

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
CAPRIFOLIACEAE - HONEYSUCKLE FAMILY
Sambucus mexicana elderberry
CARYOPHYLLACEAE - PINK FAMILY
*Silene gallica** ** windmill pink / common catchfly
Silene laciniata ssp. *major* Mexican pink / southern pink
CHENOPODIACEAE - GOOSEFOOT FAMILY
*Chenopodium album** lamb's quarters
*Salsola tragus** Russian thistle
CONVOLVULACEAE - MORNING-GLORY FAMILY
Calystegia macrostegia morning-glory
*Convolvulus arvensis** bindweed
CRASSULACEAE - STONECROP FAMILY
Crassula connata ** pigmy-weed
*Crassula ovata** ornamental jade plant
Dudleya lanceolata lance-leaved dudleya / coastal live-forever
Dudleya parva **Conejo dudleya**
Dudleya pulverulenta chalk dudleya / chalky live-forever
CUCURBITACEAE - GOURD FAMILY
Cucurbita foetidissima coyote melon / calabazilla
Marah macrocarpus wild cucumber / man-root
EUPHORBIACEAE - SPURGE FAMILY
Chamaesyce albomarginata rattlesnake weed
Croton californicus California croton
FABACEAE (LEGUMINOSAE) - LEGUME FAMILY
Lotus salsuginosus ssp. *salsuginosus* alkali lotus
Lotus scoparius deerweed / California broom
Lupinus bicolor miniature lupine
Lupinus succulentus arroyo lupine
*Medicago polymorpha** California burclover

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
*Melilotus alba** ** white sweet-clover
*Melilotus indica** sourclover
*Vicia villosa** winter vetch
FAGACEAE - OAK / BEECH FAMILY
Quercus agrifolia coast live oak
Quercus berberidifolia scrub oak / California scrub oak
GERANIACEAE - GERANIUM FAMILY
*Erodium cicutarium** red-stemmed filaree
GROSSULARIACEAE - GOOSEBERRY FAMILY
Ribes speciosum fuchsia-flowered gooseberry
HYDROPHYLLACEAE - WATERLEAF FAMILY
Emmenanthe penduliflora ** whispering bells
Eucrypta chrysanthemifolia common eucrypta
Phacelia distans common phacelia
Phacelia viscida viscid phacelia
LAMIACEAE (LABIATAE) - MINT FAMILY
*Marrubium vulgare** common horehound
Salvia columbariae chia
Salvia leucophylla purple sage
Salvia mellifera black sage
Stachys bullata California hedge-nettle
MALVACEAE - MALLOW FAMILY
Malacothamnus fasciculatus chaparral bushmallow
*Malva parviflora** cheeseweed
MYRTACEAE - MYRTLE FAMILY
Eucalyptus sp.* gum
NYCTAGINACEAE - FOUR-O'CLOCK FAMILY
Mirabilis californica wishbone bush / California wishbone bush
ONAGRACEAE - EVENING PRIMROSE FAMILY
Camissonia bistorta California sun cup

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
Camissonia californica mustard-like evening primrose
Clarkia purpurea ssp. *quadrivulnera* four-spot clarkia
Clarkia unguiculata elegant clarkia
PAPAVERACEAE - POPPY FAMILY
Eschscholzia californica California poppy
PLANTAGINACEAE - PLANTAIN FAMILY
Plantago erecta dwarf plantain / California plantain
*Plantago lanceolata** English plantain
POLEMONIACEAE - PHLOX FAMILY
Eriastrum densifolium ssp. *elongatum* ** woolly-star
Leptodactylon californicum prickly phlox
POLYGONACEAE - BUCKWHEAT FAMILY
Eriogonum cinereum gray coast buckwheat
Eriogonum elongatum var. *elongatum* wand buckwheat
Eriogonum fasciculatum var. *polifolium* rosemary flat-topped buckwheat
Pterostegia drymarioides pterostegia / notch leaf
*Rumex crispus** curly dock
PORTULACACEAE - PURSLANE FAMILY
Claytonia sp. miner's-lettuce
PRIMULACEAE - PRIMROSE FAMILY
*Anagallis arvensis** scarlet pimpernel
RANUNCULACEAE - CROWFOOT FAMILY
Delphinium parryi ssp. *parryi* Parry's larkspur / blue larkspur
RHAMNACEAE - BUCKTHORN FAMILY
Ceanothus megacarpus ssp. *megacarpus* bigpod ceanothus
Rhamnus crocea spiny redberry
Rhamnus ilicifolia holly-leaf redberry
ROSACEAE - ROSE FAMILY
Adenostoma fasciculatum chamise
Cercocarpus betuloides mountain mahogany

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
Heteromeles arbutifolia toyon / christmas berry
Prunus ilicifolia holly-leaved cherry
Rosa californica California wild rose
RUBIACEAE - MADDER FAMILY
Galium angustifolium narrow-leaved bedstraw
Galium nuttallii ssp*. nuttallii* San Diego bedstraw
SALICACEAE - WILLOW FAMILY
Salix laevigata red willow
SCROPHULARIACEAE - FIGWORT FAMILY
Castilleja affinis ssp. *affinis* coastal / Indian paintbrush
Keckiella cordifolia heart-leaved bush-penstemon
Mimulus aurantiacus bush monkeyflower
Mimulus brevipes slope semaphore
Scrophularia californica California figwort
SOLANACEAE - NIGHTSHADE FAMILY
*Nicotiana glauca** tree tobacco
Solanum xanti chaparral nightshade
URTICACEAE - NETTLE FAMILY
Urtica dioica ssp*. holosericea* hoary nettle
CLASS MONOCOTYLEDONES (MONOCOTS)
IRIDACEAE - IRIS FAMILY
Sisyrinchium bellum blue-eyed grass
LILIACEAE - LILY FAMILY
Allium peninsulare var. *peninsulare* peninsular onion
Bloomeria crocea common goldenstar
Calochortus catalinae **Catalina mariposa lily**
Calochortus clavatus ssp. *pallidus* yellow mariposa lily
Chlorogalum pomeridianum wavy-leaved soap plant
Dichelostemma capitatum blue dicks

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
Yucca whipplei Our Lord's candle
POACEAE [GRAMINEAE] - GRASS FAMILY
*Avena barbata** slender wild oat
*Avena fatua** wild oat
*Bromus diandrus** ripgut grass
*Bromus hordeaceus** soft chess
Bromus madritensis ssp. *rubens** foxtail chess
*Hordeum murinum** foxtail barley
Koeleria macrantha Junegrass
*Lamarckia aurea** goldentop grass
Leymus condensatus giant wild rye
*Lolium multiflorum** Italian ryegrass
Melica imperfecta small-flowered melic grass
Nassella cernua nodding needlegrass
Nassella lepida foothill needlegrass
*Pennisetum setaceum** African fountain grass
Phalaris minor *** little-seed canary grass
*Schismus barbatus** Mediterranean schismus
Vulpia microstachys fescue
*Vulpia myuros** foxtail fescue
** denotes non-native species* *** denotes species observed in 2008 but not in 2010* *Special status species are shown in **bold** font*

ATTACHMENT B

CALIFORNIA NATURAL DIVERSITY DATABASE FORMS

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 05/05/2010

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Pentachaeta lyonii*

Common Name: Lyon's pentachaeta

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals Est. 4,000 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ ☑ no ☐ unk. (Yes, Occ. #)

Collection? If yes: 2010-1 (Number) Rancho Santa Ana Botanic Garden (Museum / Herbarium)

Reporter: Andrea Edwards, BonTerra Consulting
Address: 3452 E. Foothill Blvd, Suite 420
Pasadena, California 91107
E-mail Address: aedwards@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative 95 % flowering 5 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Ventura County Landowner / Mgr.: Unknown

Quad Name: Newbury Park Elevation: 860-890 ft

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Geko 301

DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 15 ft meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐

Coordinates: 3785801.80, 321449.03

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Along and adjacent to dirt roads, close to utility alignment, immediately west of two fenced water tanks. In open disturbed areas with coastal sage scrub and non-native grassland vegetation. On gravelly clay loam; flat area to gentle slope (all aspects). Associated species: Hemizonia fasciculata, Lasthenia californica, Artemisia californica, Eriogonum fasciculatum, Bromus madritensis ssp. rubens, Avena barbata, and Centaurea melitensis.

Other rare taxa seen at THIS site on THIS date: Dudleya parva, Calochortus catalinae
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☑ Excellent ☐ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space and utilities

Visible disturbances: Existing dirt roads

Threats: N/A

Comments: This population is located within USFWS-designated Critical Habitat for this species. CDFG Plant Voucher Collecting Permit No. 08010.

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☑ Other: Familiar with species

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☑ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 06/21/2010

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Dudleya parva*

Common Name: Conejo dudleya

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 25 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: 2010-2 Number; Rancho Santa Ana Botanic Garden Museum / Herbarium

Reporter: Andrea Edwards, BonTerra Consulting
Address: 3452 E. Foothill Blvd, Suite 420
Pasadena, California 91107
E-mail Address: aedwards@bonterraconsulting.com
Phone: (626) 351-2000

Plant Information

Phenology: _____% vegetative; 100 % flowering; _____% fruiting

Animal Information

_____ # adults; _____ # juveniles; _____ # larvae; _____ # egg masses; _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

County: Ventura County Landowner / Mgr.: Unknown
Quad Name: Newbury Park Elevation: 635 ft
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS
T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin Geko 301
DATUM: NAD27 ☐ NAD83 ☑ WGS84 ☐ Horizontal Accuracy 15 ft meters/feet
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☑ *OR* Geographic (Latitude & Longitude) ☐
Coordinates: 3786237.71, 321401.49

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Close to utility alignment, on rock outcrops with coastal sage scrub and non-native grassland vegetation. On rocky clay soil; moderate northwest-facing slope. Associated species: Bloomeria crocea, Eriogonum fasciculatum, Eriogonum elongatum, Bromus madritensis ssp. rubens, and Avena sp.

Other rare taxa seen at THIS site on THIS date: Pentachaeta lyonii
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space and utilities

Visible disturbances: Existing dirt roads

Threats: N/A

Comments:

Determination: *(check one or more, and fill in blanks)*
- ☑ Keyed (cite reference): Jepson (Hickman 1993)
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☑ By another person (name): Botanist Rick Burgess (using photographs)
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☑ no ☐

Appendix B

SCE Moorpark-Newbury Project
Coastal California Gnatcatcher Protocol Survey Report

BonTerra CONSULTING
COSTA MESA PASADENA
T: (626) 351-2000 F: (626) 351-2030 | 3452 E. Foothill Blvd., Suite 420
www.BonTerraConsulting.com | Pasadena, CA 91107

July 28, 2010

Mr. Paul A. Yamazaki
Southern California Edison
Natural/Cultural Resources Group
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of the Coastal California Gnatcatcher Survey for the Proposed Moorpark-Newbury 66-kV Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for the coastal California gnatcatcher (*Polioptila californica californica*) at the Proposed Moorpark-Newbury 66-kV Transmission Line project site (hereafter referred to as "the project site") in the Cities of Moorpark and Thousand Oaks, Ventura County, California (Exhibit 1). The purpose of the surveys was to determine the presence or absence of the coastal California gnatcatcher on or immediately adjacent to the project site. Surveys were conducted by biologists that hold the necessary Federal Endangered Species Act (FESA) survey permit and according to guidelines established by the U.S. Fish and Wildlife Service (USFWS).

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the cities of Moorpark and Thousand Oaks, Ventura County, California (Exhibit 1). A biological constraints survey performed in May 2007 resulted in a determination that there was potentially suitable habitat for the coastal California gnatcatcher within the three segments of the project site. Potentially suitable coastal sage scrub vegetation occurs throughout the project site with the suitability for coastal California gnatcatcher decreasing from Segment 1 to Segment 3. Segment 1 involves the installation of 32 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kilovolt (kV) towers with the same approximate span lengths (5.1 miles). Segment 2 involves replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves replacement of 36 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles) (Exhibit 2). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Vegetation types within the study area include coastal sage scrub and chaparral. The Segment 1 towers located within the survey area are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*),

black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub characterized by the species listed above, but that are also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Segments 2 and 3 also support chaparral, which is dominated by chamise (*Adenostoma fasciculatum*), and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type include laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*). Photos of representative habitat on the project site are provided in Exhibits 3a and 3b.

Background

Recent taxonomic studies indicate the California gnatcatcher consists of four subspecies that extend from southwestern California to southern Baja California, Mexico (Atwood and Lerman 2006; Mellink and Rea 1994). The coastal California gnatcatcher, the northernmost gnatcatcher subspecies, is restricted to lowland areas from central Ventura County through Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties to the Baja California, Mexico border (Atwood and Lerman 2006; Mellink and Rea 1994). Formerly, the coastal California gnatcatcher was common from the San Fernando Valley east along the base of the San Gabriel Mountains to Claremont (Atwood 1990). The coastal California gnatcatcher is now rare in the northern part of its range with a handful of sightings from Santa Clarita to Tujunga Wash, though a small population persists near Moorpark in Ventura County. The coastal California gnatcatcher has been recorded from sea level to approximately 3,000 feet above msl (USFWS 2003); however, greater than 90 percent of gnatcatcher records are from elevations below 820 feet msl along the coast (Atwood and Bolsinger 1992; MBA 1991) and between sea level and 1,800 feet above msl inland. Recent estimates by the USFWS regarding the population size of the coastal California gnatcatcher in Southern California have been about 3,000 pairs (Atwood and Bontrager 2001).

The coastal California gnatcatcher typically occurs within coastal and inland sage scrub vegetation types. Sage scrub often occurs in a patchy distribution pattern throughout the range of the gnatcatcher. Coastal California gnatcatchers also use chaparral, grassland, and riparian habitats that are near sage scrub. These non-sage scrub habitats are used for dispersal and foraging (Atwood et al. 1998; Campbell et al. 1998; USFWS 2003). Availability of these non-sage scrub areas is essential during certain times of the year, particularly during drought conditions, or for dispersal, foraging, or nesting (USFWS 2003).

The coastal California gnatcatcher was designated as a Threatened species by the USFWS on March 25, 1993. A Special Rule was issued that would allow incidental take of coastal California gnatcatcher under Section 9 of the FESA if the take results from activities conducted in accordance with the state's Natural Community Conservation Plan (NCCP) Act (USFWS 1993). For those not participating in the state's NCCP, any activity that may result in the take of coastal California gnatcatcher requires formal consultation with the USFWS under Sections 7 or 10 of

the FESA. On December 19, 2007, the USFWS published a final rule revising critical habitat for the coastal California gnatcatcher. The revised critical habitat designates 197,303 acres of land in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura counties as critical habitat for the coastal California gnatcatcher (USFWS 2007). Although distant from the survey area, proposed USFWS Critical Habitat for the coastal California gnatcatcher is located adjacent to the northern terminus of Segment 1.

Survey Methodology

The USFWS Coastal California Gnatcatcher Survey Protocol recommends six visits to all potentially occupied habitat areas for surveys conducted entirely within the breeding season, which extends from March 15 to June 30 (USFWS 1997a, 1997b). All visits must take place during the morning hours, and no more than 80 acres of suitable habitat may be surveyed per visit. Because the survey area was greater than 80 acres, 2 days were required to complete each survey visit. Following the USFWS protocol for the species, BonTerra Consulting Ecologist Lindsay Messett (USFWS Permit #067064-1) conducted all surveys on the project site. Surveys for the coastal California gnatcatcher were conducted on April 26 and 28; May 3, 5, 10, 12, 18, 19, 26, and 28; and June 11 and 14, 2010.

Weather conditions met the USFWS survey protocol requirements for optimal gnatcatcher detection. Weather conditions that were too cold (below 55 degrees Fahrenheit [°F]), too hot (above 95°F), or too windy (wind speed greater than 15 miles per hour) were avoided. Surveys were conducted by slowly walking through all appropriate habitats while listening and watching for gnatcatcher activity. A combination of taped recordings of gnatcatcher vocalizations and "pishing" sounds were used to elicit responses from any gnatcatchers present. The frequency of vocalization playback and "pishing" varied depending on conditions such as habitat patch size and topography in each area. All bird species detected during the survey were recorded, including notable observations of special status species or other birds (Appendix A).

Survey Results

A total of three coastal California gnatcatcher territories consisting of two breeding pairs, and one solitary juvenile were present on the project site during the surveys (Exhibit 4). As Exhibit 4 shows, all coastal California gnatcatchers were located in the southern portion of the project site within Segment 3. Both gnatcatcher pairs observed during the surveys exhibited behavior consistent with breeding; this was confirmed by observing adults feeding fledglings or adults building nests. One juvenile gnatcatcher was also observed in Segment 3. California Natural Diversity Database (CNDDB) forms will be submitted to the California Department of Fish and Game (CDFG). Survey dates, times and weather data for the focused coastal California gnatcatcher surveys are shown in Table 1.

TABLE 1
SUMMARY OF COASTAL CALIFORNIA GNATCATCHER SURVEYS

Survey Number	Date	Time	Surveyor	Weather Conditions			Gnatcatchers Observed and/or Detected
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%) (Start/End)	
1	4/26/2010	0710–1215	Messett	55/74	0–1/0–2	100/clear	None observed or detected
	4/28/2010	0900–1240	Messett	57/65	0–1/0–7	25/20	None observed or detected
2	5/3/2010	0730–1225	Messett	56/76	0–1/0–8	clear/clear	None observed or detected
	5/5/2010	0700–1210	Messett	58/72	0–1/0–4	5/clear	None observed or detected
3	5/10/2010	0630–1200	Messett	57/65	0–1/0–6	clear/clear	None observed or detected
	5/12/2010	0730–1150	Messett	55/71	0–1/0–5	clear/clear	None observed or detected
4	5/18/2010	0610–1145	Messett	56/63	0–3/0–5	100/100	None observed or detected
	5/19/2010	0615–1200	Messett	58/64	0–2/0–6	100/85	None observed or detected
5	5/26/2010	0720–1150	Messett	56/65	0–1/0–6	100/50	None observed or detected
	5/28/2010	0700–1155	Messett	57/70	0–1/0–5	clear/clear	None observed or detected
6	6/11/2010	0615–1210	Messett	56/66	0–1/0–5	100/80	None observed or detected
	6/14/2010	0700–1240	Messett	56/86	0–1/0–1	100/clear	1 pair feeding 2–3 fledglings; 1 pair observed building a nest, and 1 solitary juvenile observed in Segment 3.

°F: degrees Fahrenheit; mph: miles per hour

Additional Sensitive Species

Two additional sensitive species were observed and/or detected on the project site during the surveys: coastal cactus wren (*Campylorhynchus brunneicapillus*) and Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*).

Coastal cactus wren is a California Species of Special Concern. Some authorities consider the taxonomic status of cactus wrens in the southwestern U.S. to be uncertain (Proudfoot et al. 2000). Coastal populations of the cactus wren are found in Southern California from San Diego County north to Ventura County (Garrett and Dunn 1981), and are declining due to loss of habitat. Except for the Banning Pass area west of Palm Springs, the coastal populations of cactus wren appear to be isolated from interior populations. On the coastal slope of Southern California, cactus wrens inhabit coastal sage scrub and alluvial sage scrub habitats that have sufficient amounts of prickly pear cactus and/or cholla. Cactus wrens were observed and/or detected through vocalization throughout the project site in all Segments (1, 2, and 3).

Southern California rufous-crowned sparrow is a CDFG Watch List species. In coastal Southern California, rufous-crowned sparrows are considered fairly common in scrub vegetation types and other habitats with grasses and widely spaced, low shrubs. They also prefer slopes with rock outcroppings (Garrett and Dunn 1981). This subspecies is present throughout the year in Southern California, but is threatened by loss of habitat due to development. Southern California rufous-crowned sparrows were observed and/or detected through vocalization throughout the project site in all Segments (1, 2, and 3).

Additionally, several brown-headed cowbirds (*Molothrus ater*) were observed during the course of the gnatcatcher surveys. Brown-headed cowbirds were consistently detected on the project site, near the south end of Segment 1 and along the north end of Segment 2.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact David Hughes or Lindsay Messett at (626) 351-2000 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Amber S'Oneal for
David T. Hughes
Project Manager

Lindsay Messett
Lindsay A. Messett
Biologist

Attachments: Exhibits 1, 2, 3A, 3B, and 4
Appendix A – Wildlife Compendium

I certify that the information in this survey report and enclosed exhibits fully and accurately present my work.

Lindsay Messett
Lindsay A. Messett
Ecologist
(TE-067064-1)

cc: Mr. Chris Kofron, USFWS
Marc Blain, BonTerra Consulting

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REFERENCES

Atwood, J. L. 1990. Status Review of the California Gnatcatcher (*Polioptila californica*). Manomet Bird Observatory, Manomet, Massachusetts.

Atwood, J. L., and J. S. Bolsinger. 1992. *Elevational distribution of California Gnatcatchers in the United States.* Journal of Field Ornithology 63: 159 – 168.

Atwood, J. L., D. R. Bontrager, and A. L. Gorospe. 1998. *Use of Refugia by California Gnatcatchers Displaced by Habitat Loss.* Western Birds 29: 406-412.

Atwood, J. L., and D. R. Bontrager. 2001. California Gnatcatcher (*Polioptila* californica). *In* The Birds of North America, No. 574 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Atwood, J. L., and S. B. Lerman. 2006. Family Polioptilidae (Gnatcatchers). Pp. 350 – 377 in: del Hoyo, J., A. Elliott, and D. A. Christie, eds. (2006). *Handbook of the Birds of the World.* Vol. 11. Old World Flycatchers to Old World Warblers. Lynx Edicions, Barcelona.

Campbell, K. F., R. A. Erickson, W. E. Haas, and M. A. Patten. 1998. *California Gnatcatcher Use of Habitats Other Than Coastal Sage Scrub: Conservation and Management Implications.* Western Birds 29: 421-433.

Garrett, K. and J. Dunn. 1981. *Birds of Southern California: Status and Distribution.* Los Angeles, CA: Los Angeles Audubon Society.

Mellink, E., and A. M. Rea. 1994. *Taxonomic Status of the California Gnatcatchers of Northwestern Baja California, Mexico.* Western Birds 25: 50 – 62.

Michael Brandman Associates (MBA). 1991 (July). A Rangewide Assessment of the California Gnatcatcher (*Polioptila californica*) (an Unpublished Report prepared for the Building Industry Association of Southern California).

Proudfoot, G.A., D.A. Sherry, and S. Johnson. 2000. Cactus Wren (*Campylorhynchus brunneicapillus*). *The Birds of North America, No. 558* (A. Poole and F. Gills, eds.). Philadelphia, PA and Washington, D.C.: The Academy of Natural Sciences and The American Ornithologists' Union (respectively).

U.S. Fish and Wildlife Service (USFWS). 2007 (December 19). Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*); Final Rule. *Federal Register* 72(243): 72009–72213.

———. 2003 (April 24). Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*) and Determination of Distinct Vertibrate Population Segment for the California Gnatcatcher (*Polioptila californica*); Proposed Rule. *Federal Register* 68(79): 20227–20312. Washington, D.C.: USFWS. http://policy.fws.gov/library/03-9435.pdf.

———. 1997a (February 28). *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Guidelines.*

———. 1997b (July 28). *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol.*

———. 1993 (March 30). Endangered and Threatened Wildlife and Plants: Determination of Threatened Status for the Coastal California Gnatcatcher. *Federal Register* 58(59): 16742–16757. Washington, D.C.: USFWS.

Regional Location

Exhibit 1

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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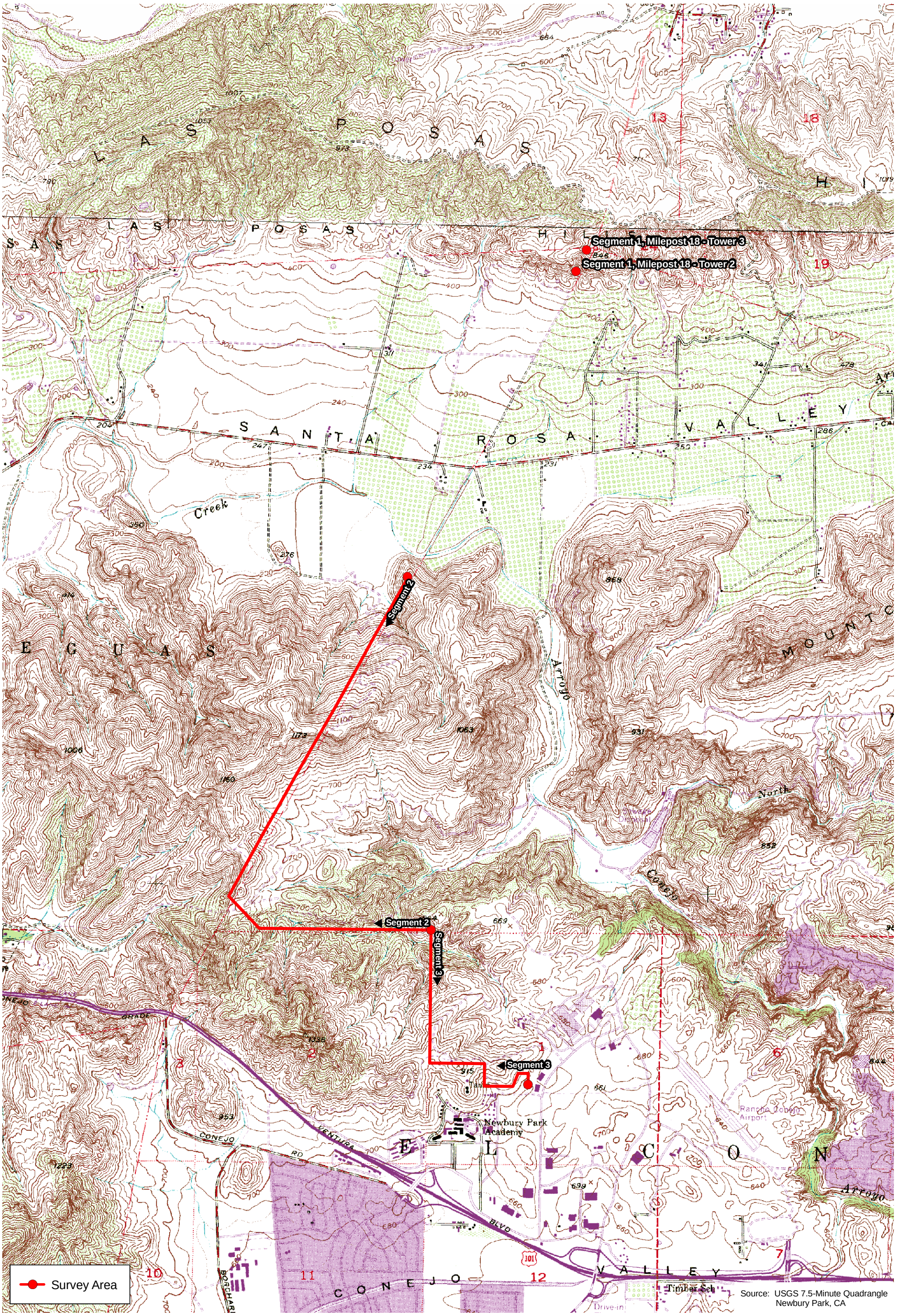

Local Vicinity

Exhibit 2

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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Representative site photograph depicting coastal sage scrub vegetation located within Segment 1 of the project site.

Representative site photograph depicting coastal sage scrub vegetation located within Segment 2 of the project site.

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Site Photographs

Exhibit 3A

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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Representative site photograph depicting the western portion of coastal California gnatcatcher Territory 2, located within Segment 3 of the project site.

Representative site photograph depicting the northern portion of coastal California gnatcatcher Territory 3 located within Segment 3 of the project site.

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Site Photographs

Exhibit 3B

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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Coastal California Gnatcatcher (CAGN) Locations

Exhibit 4

Moorpark-Newbury 66kV Transmission Line Project, Ventura County, California

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APPENDIX A
WILDLIFE COMPENDIUM

Species
Reptiles
PHRYNOSOMATIDAE – ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, AND HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Uta stansburiana side-blotched lizard
COLUBRIDAE – COLUBRID SNAKES
Masticophis flagellum coachwhip
VIPERIDAE – VIPERS
Crotalus atrox western diamond-backed rattlesnake
Birds
ODONTOPHORIDAE – QUAILS
Callipepla californica California quail
CATHARTIDAE – NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE – HAWKS
Accipiter cooperii Cooper's hawk
Buteo jamaicensis red-tailed hawk
FALCONIDAE – FALCONS
Falco sparverius American kestrel
CHARADRIIDAE – PLOVERS
Charadrius vociferus killdeer
COLUMBIDAE – PIGEONS & DOVES
*Columba livia** rock pigeon
Zenaida macroura mourning dove
CUCULIDAE – CUCKOOS & ROADRUNNERS
Geococcyx californianus greater roadrunner
TROCHILIDAE – HUMMINGBIRDS
Calypte anna Anna's hummingbird
Selasphorus sasin Allen's hummingbird
PICIDAE – WOODPECKERS
Melanerpes formicivorus acorn woodpecker
Picoides nuttallii Nuttall's woodpecker

WILDLIFE COMPENDIUM (Continued)

Species
Colaptes auratus northern flicker
TYRANNIDAE – TYRANT FLYCATCHERS
Empidonax difficilis Pacific-slope flycatcher
Sayornis saya Say's phoebe
Myiarchus cinerascens ash-throated flycatcher
Tyrannus vociferans Cassin's kingbird
Tyrannus verticalis western kingbird
CORVIDAE – JAYS & CROWS
Aphelocoma californica western scrub-jay
Corvus brachyrhynchos American crow
Corvus corax common raven
HIRUNDINIDAE – SWALLOWS
Stelgidopteryx serripennis northern rough-winged swallow
Petrochelidon pyrrhonota cliff swallow
Hirundo rustica barn swallow
PARIDAE – TITMICE
Baeolophus inornatus oak titmouse
AEGITHALIDAE – BUSHTITS
Psaltriparus minimus bushtit
TROGLODYTIDAE – WRENS
Campylorhynchus brunneicapillus cactus wren
Catherpes mexicanus canyon wren
Thryomanes bewickii Bewick's wren
REGULIDAE – KINGLETS
Regulus calendula ruby-crowned kinglet
SYLVIIDAE – GNATCATCHERS
Polioptila caerulea blue-gray gnatcatcher
Polioptila californica californica coastal California gnatcatcher

WILDLIFE COMPENDIUM (Continued)

Species
TURDIDAE – THRUSHES & ROBINS
Turdus migratorius American robin
TIMALIIDAE – WRENTITS
Chamaea fasciata wrentit
MIMIDAE – THRASHERS
Mimus polyglottos northern mockingbird
Toxostoma redivivum California thrasher
STURNIDAE – STARLINGS
*Sturnus vulgaris** European starling
EMBERIZIDAE – SPARROWS & JUNCOS
Pipilo maculatus spotted towhee
Pipilo crissalis California towhee
Aimophila ruficeps rufous-crowned sparrow
Melospiza melodia song sparrow
CARDINALIDAE – GROSBEAKS & BUNTINGS
Pheucticus melanocephalus black-headed grosbeak
Passerina caerulea blue grosbeak
Passerina amoena lazuli bunting
ICTERIDAE – BLACKBIRDS
Euphagus cyanocephalus Brewer's blackbird
Molothrus ater brown-headed cowbird
Icterus cucullatus hooded oriole
Icterus bullockii Bullock's oriole
FRINGILLIDAE – FINCHES
Carpodacus mexicanus house finch
Spinus [Carduelis] psaltria lesser goldfinch
PASSERIDAE – OLD WORLD SPARROWS
*Passer domesticus** house sparrow

WILDLIFE COMPENDIUM (Continued)

Species
Mammals
LEPORIDAE – HARES & RABBITS
Sylvilagus audubonii desert cottontail
SCIURIDAE – SQUIRRELS
Spermophilus beecheyi California ground squirrel
GEOMYIDAE – POCKET GOPHERS
Thomomys bottae Botta's pocket gopher
MURIDAE – MICE, RATS, AND VOLES
Neotoma fuscipes dusky-footed woodrat
CANIDAE – WOLVES & FOXES
Canis latrans coyote
FELIDAE – CATS
Lynx rufus bobcat
Invertebrates
PAPILIONIDAE – SWALLOWTAIL BUTTERFLIES
Papilio zelicaon anise swallowtail
PIERIDAE – WHITES, SULFURS, & ORANGETIPS
Anthocharis sara Sara orangetip
*Pieris rapae** mustard white
Pontia protodice common (checkered) white
SATYRIDAE – WOOD NYMPHS
Coenonympha californica California ringlet
NYMPHALIDAE – BRUSH-FOOTED BUTTERFLIES
Vanessa annabella west coast lady
Basilarchia lorquini Lorquin's admiral
DANAIDAE – MILKWEED BUTTERFLIES
Danaus plexippus monarch
RIODINIDAE – METALMARKS
Apodemia mormo virgulti Behr's (Mormon) metalmark
* introduced species

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September 27, 2010

Mr. Paul A. Yamazaki
Southern California Edison
Natural/Cultural Resources Group
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of the Least Bell's Vireo Surveys for the Proposed Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for the least Bell's vireo (*Vireo bellii pusillus*) on the Proposed Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as the "project site") in the Cities of Moorpark and Thousand Oaks in Ventura County, California. The purpose of the surveys was to determine the presence or absence of the least Bell's vireo on or immediately adjacent to the project site. Surveys were conducted according to guidelines established by the U.S. Fish and Wildlife Service (USFWS).

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California (Exhibit 1). The project is divided into three segments. Segment 1 involves the installation of 32 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves replacement of 36 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles). The project site is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps (Exhibit 2).

Potentially suitable riparian habitat for the least Bell's vireo occurs within a blueline drainage that bisects the transmission line alignment at the southern end of Segment 1. Marginal suitable riparian habitat occurs within two side channels which serve as tributaries to the drianage (Exhibit 3). These three areas combined will hereafter be referred to as the "survey area". The elevation in the survey area is approximately 225 feet above mean sea level (msl). Specifically, the least Bell's vireo surveys were conducted within the blueline drainage approximately 2,000 feet west and 1,700 feet east of the transmission line alignment and within the two side channels from Santa Rosa Road south to their intersection with the drainage.

Vegetation types within the survey area include willow scrub, and mule fat scrub. Native plant species in the survey area include willow (*Salix* sp.), mule fat (*Baccharis salicifolia*),

western sycamore (*Platanus racemosa*), coast live oak (*Quercus agrifolia*), California sagebrush (*Artemisia californica*), bush sunflower (*Encelia californica*), and western poison oak (*Toxicodendron diversilobum*). Non-native plant species which also occur in the survey area include gum tree (*Eucalyptus* sp.), castor bean (*Ricinus communis*), giant reed (*Arundo donax*), sweet fennel (*Foeniculum vulgare*), and black mustard (*Brassica nigra*). Photographs of representative habitat within the survey area are provided in Exhibit 4.

Background

The least Bell's vireo was formerly more common and widespread, but is now a rare, local summer resident of Southern California's lowland riparian woodlands (Grinnell and Miller 1986; Garrett and Dunn 1981). The substantial population declines of this avian species over the latter half of the twentieth century is attributable to the loss and degradation of riparian habitats and brood parasitism by the brown-headed cowbird (*Molothrus ater*). As a result, the least Bell's vireo was listed by the California Department of Fish and Game (CDFG) as Endangered on October 2, 1980, and by the USFWS as Endangered on May 2, 1986.

Bell's vireo is a Neotropical migrant that breeds in central and southwestern North America from northern Mexico to Southern California, Nevada, and Utah; east to Louisiana; and north to North Dakota, Wisconsin, and Indiana in the central United States (AOU 1998). Although not well known, the winter range of the Bell's vireo is believed to be the western coast of Central America from southern Sonora south to northwestern Nicaragua, including the cape region of Baja California, Mexico (Brown 1993). Of the four Bell's vireo subspecies, only two breed in California: the least Bell's vireo and the Arizona Bell's vireo (*V. b. arizonae*), which breeds in the Colorado River Valley (Garrett and Dunn 1981; Rosenberg et al. 1991). Though the least Bell's vireo was formerly considered a common breeder in riparian habitats throughout the Central Valley and other low-elevation riverine systems in California and Baja California, Mexico (Franzreb 1989), presently, the least Bell's vireo has been eliminated from much of its historical range (Franzreb 1989; Brown 1993).

The breeding habitat of the least Bell's vireo is primarily riparian dominated by willows with dense understory vegetation; shrubs such as mule fat and California rose (*Rosa californica*) are often a component of the understory (Goldwasser 1981). The least Bell's vireo is often found in areas that include trees such as willow (*Salix* sp.), western sycamore or cottonwood (*Populus* sp.), particularly where the canopy is within or immediately adjacent to an understory layer of vegetation (Salata 1983). The least Bell's vireo generally nests in early successional stages of riparian habitats, with nest sites frequently located in willows that are between four and ten feet high (RECON 1988; Franzreb 1989). The most critical factor in habitat structure is the presence of a dense understory shrub layer from approximately two to ten feet above ground (Goldwasser 1981; Salata 1983; Franzreb 1989).

On February 2, 1994, the USFWS issued their final determination of critical habitat for the least Bell's vireo (USFWS 1994), identifying approximately 37,560 acres as critical habitat in Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, and San Diego Counties. The survey area is not located in the designated critical habitat area for this species.

Survey Methodology

A total of eight surveys for the least Bell's vireo were conducted on May 12 and 22; June 2, 12, and 22; and July 2, 12, and 22, 2010. All surveys were conducted by BonTerra Consulting Biologist Lindsay Messett. Surveys followed the updated guidelines for least Bell's vireo surveys issued by the USFWS on January 19, 2001. These guidelines require that at least eight surveys be conducted from April 10 to July 31 with a ten-day interval between each site visit. The survey

guidelines do not require the surveying biologist to hold a Section 10(a)(1)(A) permit to conduct presence/absence surveys, as long as the USFWS protocol is utilized and vocalization tapes are not used.

The riparian habitat in the vireo survey area was systematically surveyed by walking slowly and methodically along its margins. As the least Bell's vireo survey protocol does not require the playback of least Bell's vireo vocalizations, no taped vocalizations of least Bell's vireo were used during these surveys. All surveys were conducted under optimal weather conditions and during early morning hours when bird activity is at a peak. Numbers were recorded for all bird species detected during the survey, including any notable observations of special status species or other birds, such as the brown-headed cowbird.

Survey Results

No least Bell's vireo were obesrved or detected in the survey area during the focused surveys. California Natural Diversity Database (CNDDB) forms will be submitted to the CDFG. Survey dates, times, and weather data for the focused least Bell's vireo surveys are shown in Table 1.

TABLE 1
SUMMARY OF LEAST BELL'S VIREO SURVEYS

Survey Number	Date	Time (Start/End)	Surveyors	Weather Conditions			Vireos Observed and/or Detected
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%) (Start/End)	
1	May 12, 2010	0730/1055	Messett	55/71	0–0/0–3	Clear/Clear	No LBV observed or detected
2	May 22, 2010	0725/1105	Messett	55/68	0–1/0–2	Clear/Clear	No LBV observed or detected
3	June 2, 2010	0700/1015	Messett	65/68	0–1/0–3	100/95	No LBV observed or detected
4	June 12, 2010	0700/1100	Messett	59/70	0–1/0–1	100/80	No LBV observed or detected
5	June 22, 2010	0630/1050	Messett	55/78	0–1/0–6	100/50	No LBV observed or detected
6	July 2, 2010	0730/1110	Messett	62/70	0–0/0–2	50/Clear	No LBV observed or detected
7	July 12, 2010	0730/1120	Messett	64/67	0–1/0–4	100/85	No LBV observed or detected
8	July 22, 2010	0715/1100	Messett	62/70	0–0/0–3	100/70	No LBV observed or detected

LBV: least Bell's vireo; °F: degrees Fahrenheit; mph: miles per hour

Additional Sensitive Species

One additional sensitive species, the yellow warbler (*Dendroica petechia brewsteri*), was observed and/or detected in the survey area during the surveys.

Yellow warbler is a California Species of Special Concern. It is the subspecies that breeds in Southern California (Dunn and Garrett 1997); most yellow warblers are migrants. This subspecies occurs in coastal areas from northwestern Washington south to western Baja California, Mexico (Dunn and Garrett 1997). In Southern California, yellow warblers breed locally in riparian woodlands but during migration they can forage in a variety of different habitat

types. This species is threatened by loss of habitat and nest parasitism by brown-headed cowbirds (Remsen 1978). Suitable foraging and nesting habitat for this species is present within the survey area in the willow and mule fat scrub vegetation. This species was observed and/or detected within the survey area during the vireo surveys on June 2, 12, 22, and July 12, 2010.

Additionally, several brown-headed cowbirds were observed during the course of the vireo surveys. Brown-headed cowbirds were consistently detected in the survey area, on June 2, 12, and 22 and July 2 and 12, 2010.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact David Hughes or Lindsay Messett at (626) 351-2000 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

David T. Hughes
Project Manager

Lindsay A. Messett
Biologist

Attachments: Exhibits 1, 2, 3, and 4
Attachment A – Wildlife Compendium

cc: Mr. Chris Kofron, USFWS

I certify that the information in this survey report and enclosed exhibits fully and accurately present my work.

Lindsay A. Messett
Ecologist
(TE-067064-1)

cc: Mr. Chris Kofron, USFWS
Marc Blain, BonTerra Consulting

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REFERENCES

American Ornithologists' Union (AOU). 1998. *Check-list of North American Birds* (7th ed). Shipman, VA: Buteo Books.

Brown, B.T. 1993. Bell's Vireo (*Vireo bellii*). *The Birds of North America, No. 35* (A. Poole, P. Stettenheim, and F. Gill, Eds.). Philadelphia, PA and Washington, D.C.: The Academy of Natural Sciences and the AOU (respectively).

Dunn, J.L. and K.L. Garrett. 1997. *A Field Guide to Warblers of North America* (Peterson's Field Guide Series 49). Boston, MA: Houghton Mifflin Company.

Franzreb, K.E. 1989. *Ecology and Conservation of the Endangered Least Bell's Vireo* (Biological Report 89[1]) Washington, D.C.: USFWS, Endangered Species Office.

Garrett, K. and J. Dunn. 1981. *Birds of Southern California: Status and Distribution*. Los Angeles, CA: Audubon Press.

Goldwasser, S. 1981. *Habitat Requirements of the Least Bell's Vireo* (Final Report, Job IV-38.1). Sacramento, CA: CDFG.

Grinnell, J. and A.H. Miller. 1986 (April). *The Distribution of the Birds of California* (reprint from Cooper Ornithological Club's December 30, 1944, Pacific Coast Avifauna No. 27). Lee Vining, CA: Artemesia Press.

RECON Regional Environmental Consultants (RECON). 1988. *Draft Comprehensive Species Management Plan for the Least Bell's Vireo* (Prepared for the San Diego Association of Governments). San Diego, CA: RECON.

Remsen, J.V., Jr. 1978. *Bird Species of Special Concern in California: An Annotated List of Declining or Vulnerable Bird Species* (Administrative Report No. 78-1). Sacramento, CA: CDFG, Wildlife Management Branch.

Rosenberg, K.V., R.D. Ohmart, W.C. Hunter, and B.W. Anderson. 1991. *Birds of the Lower Colorado River Valley*. Tucson, AZ: University of Arizona Press.

Salata, L.R. 1983. *Status of the Least Bell's Vireo on Camp Pendleton, California: Report on Research Done in 1983*. Laguna Niguel, CA: USFWS.

U.S. Fish and Wildlife Service (USFWS). 2001 (January 19). *Least Bell's Vireo Survey Guidelines*. Carlsbad, CA: USFWS.

U.S. Fish and Wildlife Service (USFWS). 1994 (February 2). Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Least Bell's Vireo. *Federal Register* 59(22): 4845–4867. Washington, D.C.: USFWS.

ATTACHMENT A

WILDLIFE COMPENDIUM

WILDLIFE COMPENDIUM

Species
Amphibians
BUFONIDAE - TRUE TOADS
Bufo boreas western toad
Reptiles
PHRYNOSOMATIDAE - ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, & HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Birds
ANATIDAE - WATERFOWL
Anas platyrhynchos mallard
ODONTOPHORIDAE - QUAILS
Callipepla californica California quail
ACCIPITRIDAE - HAWKS, KITES, EAGLES, & ALLIES
Buteo jamaicensis red-tailed hawk
COLUMBIDAE - PIGEONS & DOVES
Zenaida macroura mourning dove
Columbina passerina common ground-dove
APODIDAE - SWIFTS
Aeronautes saxatalis white-throated swift
TROCHILIDAE - HUMMINGBIRDS
Calypte anna Anna's hummingbird
PICIDAE - WOODPECKERS
Picoides nuttallii Nuttall's woodpecker
TYRANNIDAE - TYRANT FLYCATCHERS
Empidonax difficilis Pacific-slope flycatcher
Sayornis nigricans black phoebe
CORVIDAE - CROWS & JAYS
Aphelocoma californica western scrub-jay
Corvus brachyrhynchos American crow
Corvus corax common raven
HIRUNDINIDAE - SWALLOWS
Stelgidopteryx serripennis northern rough-winged swallow
Petrochelidon pyrrhonota cliff swallow

WILDLIFE COMPENDIUM (Continued)

Species
AEGITHALIDAE - BUSHTITS
Psaltriparus minimus bushtit
TROGLODYTIDAE - WRENS
Thryomanes bewickii Bewick's wren
Troglodytes aedon house wren
TURDIDAE - THRUSHES & ROBINS
Turdus migratorius American robin
MIMIDAE - THRASHERS
Mimus polyglottos northern mockingbird
PARULIDAE - WARBLERS
Dendroica petechia yellow warbler
Geothlypis trichas common yellowthroat
EMBERIZIDAE - SPARROWS & JUNCOS
Pipilo maculatus spotted towhee
Melozone [*Pipilo*] *crissalis* California towhee
Melospiza melodia song sparrow
CARDINALIDAE - CARDINALS & ALLIES
Pheucticus melanocephalus black-headed grosbeak
ICTERIDAE - BLACKBIRDS
Molothrus ater brown-headed cowbird
Icterus bullockii Bullock's oriole
FRINGILLIDAE - FINCHES
Carpodacus mexicanus house finch
Spinus [Carduelis] psaltria lesser goldfinch
Spinus [Carduelis] tristis American goldfinch
Mammals
LEPORIDAE - HARES & RABBITS
Sylvilagus audubonii desert cottontail
SCIURIDAE - SQUIRRELS
Spermophilus beecheyi California ground squirrel
* introduced species

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Pasadena, CA 91107

January 27, 2011

Mr. Paul A. Yamazaki
Southern California Edison
Corporate Environment, Health & Safety
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of the Nesting Raptor Survey for the Proposed Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for nesting raptors at the proposed Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as "the project site") in the Cities of Moorpark and Thousand Oaks in Ventura County, California (Exhibit 1). The purpose of the surveys was to determine the presence or absence of nesting raptors on or immediately adjacent to the project site.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks (Exhibit 1). Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles) (Exhibit 2). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey's (USGS') Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

SURVEY METHODOLOGY

Survey methodology consisted of driving the entire length of the linear project site and using binoculars to survey areas that were inaccessible (private property) in order to closely observe birds, determine breeding stage (i.e., building nests, incubating eggs, feeding nestlings, feeding fledglings) and, if possible, locate the nest or young. All bird species using the project site were recorded and any behaviors that indicated breeding activity were noted. All active nest locations were also noted. BonTerra Consulting Biologist Lindsay Messett conducted the survey on January 19, 2011, from 9:00 AM to 12:00 PM. The weather conditions during the survey were suitable for bird activity and consisted of mostly clear skies and mild temperatures with calm conditions.

RESULTS

A total of three raptor nests were observed in the survey area in Segment 2. However, two of the three nests were not located within the project alignment, but were located within 500 feet of the project alignment in adjacent towers. One of these nests was located in a tower immediately adjacent to Tower 29 and the other nest was located in a tower in between Towers 32 and 33 (Exhibit 3). These two nests did not appear to be currently active, and there were no raptors observed perched near them.

The third nest was located within the project alignment in Tower 38 (Exhibit 3). A pair of red-tailed hawks (*Buteo jamaicensis*) was observed perched in this tower. One bird was in the nest and the other was perched directly above it. This nest appeared to be in good condition and the hawks were not observed feeding nestlings. Due to the bird observed sitting in the nest, it was assumed that the nest was active and the hawks were currently incubating eggs.

CONCLUSIONS

The results of the nesting raptor survey indicate that one pair of red-tailed hawks is currently nesting within the project alignment. Two additional raptor nests were observed within 500 feet of the project alignment in adjacent towers. These nests did not appear active at the time of the survey; however, several individual red-tailed hawks were observed flying in the vicinity of the project alignment so these nests may become active in the near future.

BonTerra Consulting appreciates the opportunity to assist with this project. Please contact David Hughes or Lindsay Messett at (626) 351-2000 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

for Linda Robb

David T. Hughes
Project Manager

Lindsay Messett

Lindsay A. Messett
Biologist

Attachments: Exhibits 1, 2, and 3

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Regional Location

Exhibit 1

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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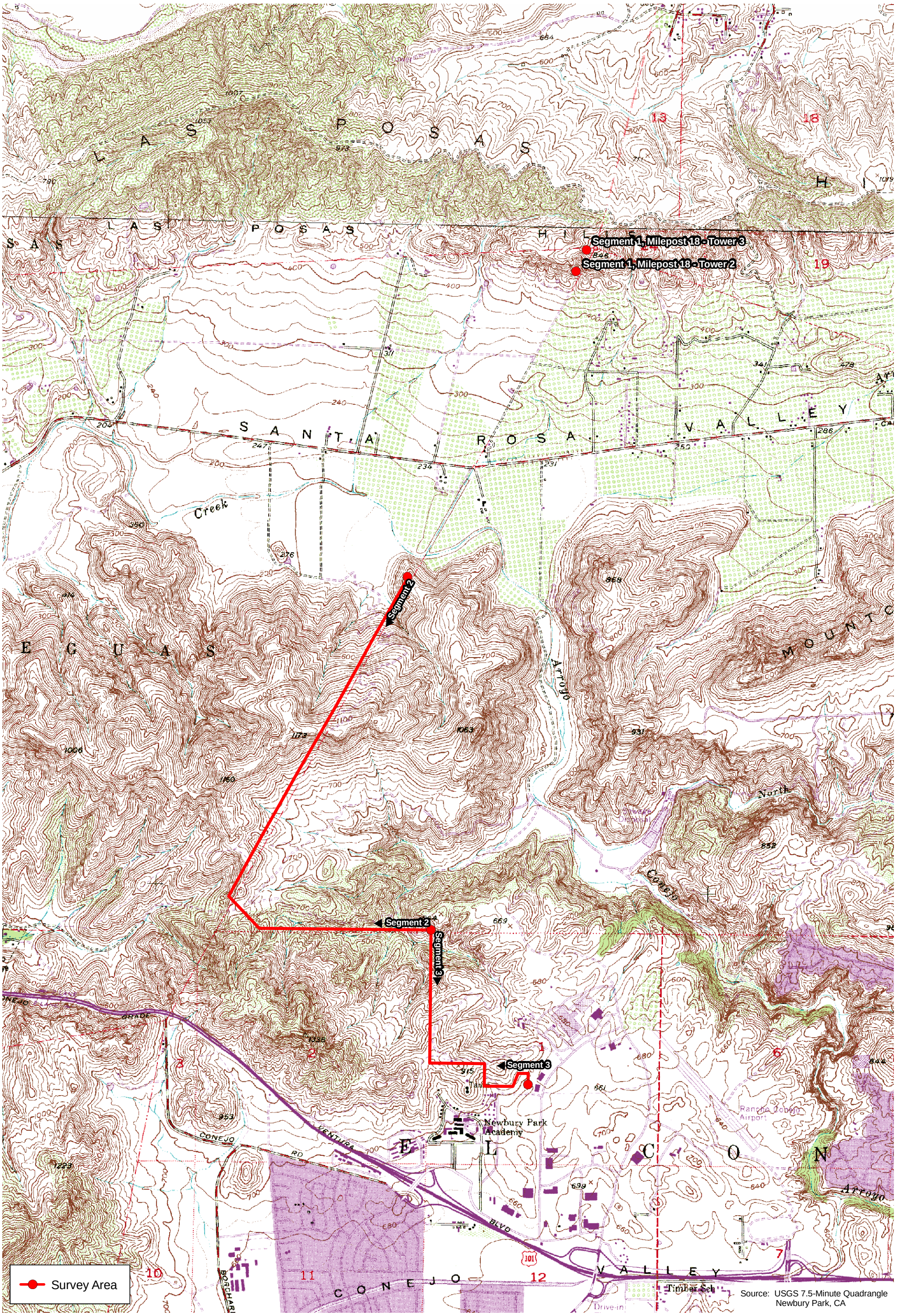

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Local Vicinity

Exhibit 2

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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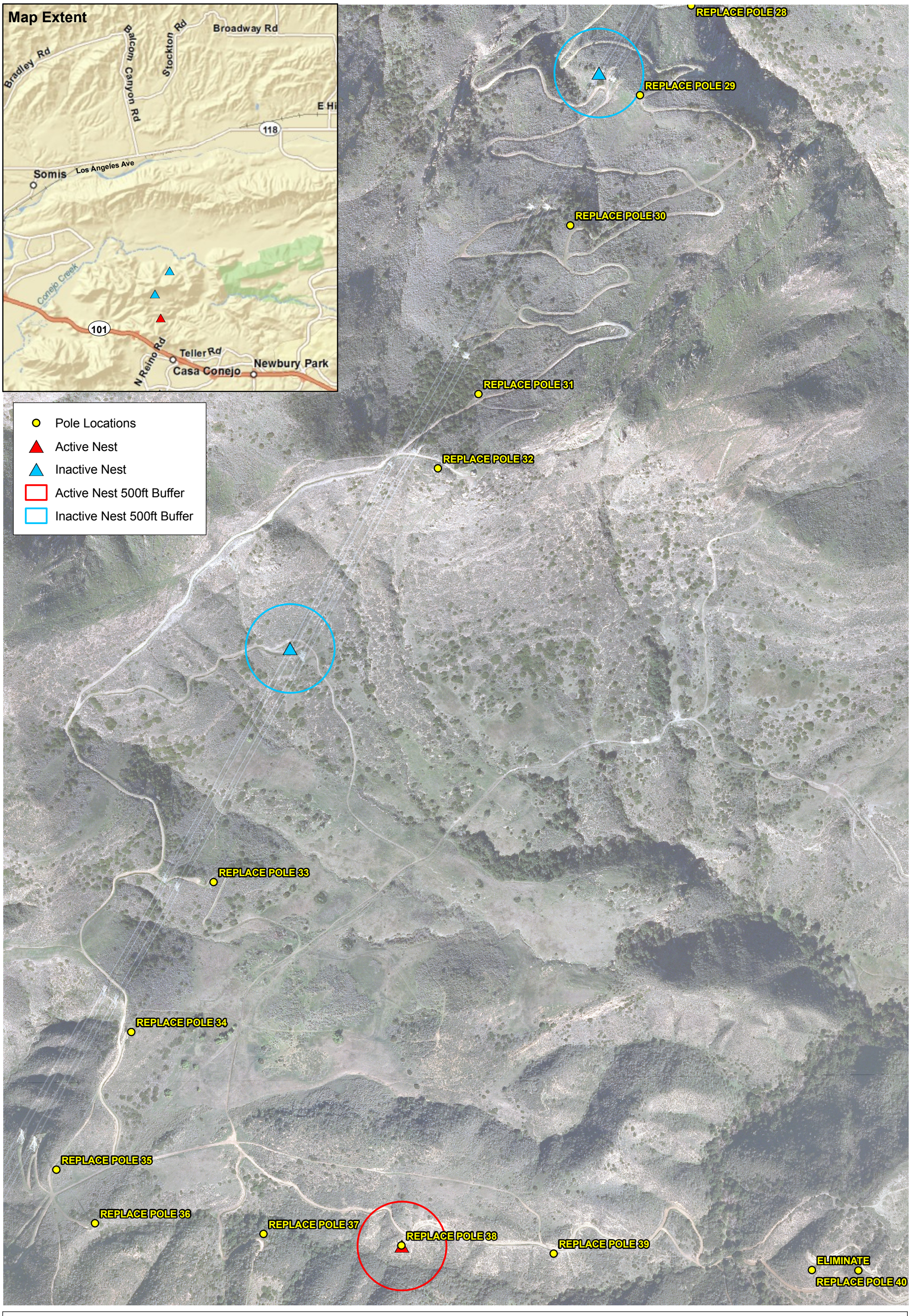

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Nest Locations – January 19, 2011

Exhibit 3

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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500 250 0 500 Feet

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August 30, 2011

Mr. Manjunath Venkat, Biologist
Southern California Edison
Environment, Health and Safety Division
1218 South 5th Avenue
Monrovia, California 91016

VIA EMAIL
manjunath.venkat@sce.com

Subject: Results of Focused Presence/Absence Surveys for the Coastal California Gnatcatcher on the Proposed Moorpark-Newbury 66-kilovolt Transmission Line Project Site Located in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Venkat:

This Letter Report presents the results of focused presence/absence surveys for the coastal California gnatcatcher (*Polioptila californica californica*) on the Proposed Moorpark-Newbury 66-kilovolt (kV) Transmission Line Project Site (hereafter referred to as "Project site") located in the Cities of Moorpark and Thousand Oaks, Ventura County, California. The purpose of the surveys was to determine the presence or absence of the coastal California gnatcatcher on or immediately adjacent to the project site. A biological constraints survey performed in May 2007 resulted in a determination that there was potentially suitable habitat for the coastal California gnatcatcher within the three segments of the Project site. Focused surveys for the coastal California gnatcatcher were conducted on the Project site by BonTerra Consulting in 2010. The 2010 surveys resulted in the detection of two pairs of gnatcatchers on the sixth survey (BonTerra Consulting 2010). Therefore, surveys were repeated in 2011 in order to better determine gnatcatcher territories on the Project site. Surveys were conducted by a biologist that holds the necessary Federal Endangered Species Act (FESA) survey permit according to guidelines established by the U.S. Fish and Wildlife Service (USFWS).

Project Location and Description

The Project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California (Exhibit 1).

The entire Project site is split into three segments. Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles).

The Project site is at an elevation of between approximately 250 and 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey's (USGS') Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Focused surveys for the coastal California gnatcatcher were conducted within all suitable coastal sage scrub habitats on the Project site. The survey area consists of two towers in Segment 1 and Segments 2 and 3 in their entirety (Exhibit 2).

In Segment 1, coastal sage scrub is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub characterized by the species listed above, but that are also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Background

Recent taxonomic studies indicate the California gnatcatcher consists of four subspecies that extend from southwestern California to southern Baja California, Mexico (Atwood and Lerman 2006; Mellink and Rea 1994). The coastal California gnatcatcher, the northernmost gnatcatcher subspecies, is restricted to lowland areas from central Ventura County through Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties to the Baja California, Mexico border (Atwood and Lerman 2006; Mellink and Rea 1994). Formerly, the coastal California gnatcatcher was common from the San Fernando Valley east along the base of the San Gabriel Mountains to Claremont (Atwood 1990). The coastal California gnatcatcher is now rare in the northern part of its range with a handful of sightings from Santa Clarita to Tujunga Wash, though a small population persists near Moorpark in Ventura County. The coastal California gnatcatcher has been recorded from sea level to approximately 3,000 feet above msl (USFWS 2003); however, greater than 90 percent of gnatcatcher records are from elevations between sea level and 820 feet above msl along the coast (Atwood and Bolsinger 1992; MBA 1991) and between sea level and 1,800 feet above msl inland. Recent estimates by the USFWS regarding the population size of the coastal California gnatcatcher in Southern California have been about 3,000 pairs (Atwood and Bontrager 2001).

The coastal California gnatcatcher typically occurs within coastal and inland sage scrub vegetation types. Sage scrub often occurs in a patchy distribution pattern throughout the range of the gnatcatcher. Coastal California gnatcatchers also use chaparral, grassland, and riparian habitats that are near sage scrub. These non-sage scrub habitats are used for dispersal and foraging (Atwood et al. 1998; Campbell et al. 1998; USFWS 2003). Availability of these non-sage scrub areas is essential during certain times of the year, particularly during drought conditions, or for dispersal, foraging, or nesting (USFWS 2003).

On December 19, 2007, the USFWS published a final rule revising critical habitat for the coastal California gnatcatcher. The revised critical habitat designates 197,303 acres of land in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura counties as critical habitat for the coastal California gnatcatcher (USFWS 2007). The Project site is not located within USFWS Critical Habitat for the coastal California gnatcatcher.

Survey Methodology

The USFWS Coastal California Gnatcatcher Survey Protocol recommends six visits to all potentially occupied habitat areas for surveys conducted entirely within the breeding season, which extends from March 15 to June 30 (USFWS 1997a, 1997b). All visits must take place during the morning hours, and no more than 80 acres of suitable habitat may be surveyed per visit. Because the survey area was greater than 80 acres, 2 days were required to complete each survey visit. Following the USFWS protocol for the species, BonTerra Consulting Biologist Lindsay Messett (USFWS Permit #067064-1) conducted all surveys on the Project site. Surveys for the coastal California gnatcatcher were conducted on April 4, 5, 11, 12, 18, 19, 25 and 28, and May 2, 5, 11, and 13, 2011. Site photographs are provided in Exhibit 3.

Weather conditions met the USFWS survey protocol requirements for optimal gnatcatcher detection. Weather conditions that were too cold (below 55 degrees Fahrenheit [°F]), too hot (above 95°F), or too windy (wind speed greater than 15 miles per hour) were avoided. Surveys were conducted by slowly walking through all appropriate habitat while listening and watching for gnatcatcher activity. A combination of taped recordings of gnatcatcher vocalizations and "pishing" sounds was used to elicit responses from any gnatcatchers present. The frequency of vocalization playback and "pishing" varied depending on conditions such as habitat patch size and topography in each area. All bird species detected during the survey were recorded, including notable observations of special status species or other birds (Appendix A).

Survey Results

A total of two coastal California gnatcatcher territories consisting of two breeding pairs were present on the Project site during the surveys (Exhibit 4). As Exhibit 4 shows, all coastal California gnatcatchers were located in the southern portion of the Project site within Segment 3. Both gnatcatcher pairs observed during the surveys exhibited behavior consistent with breeding; this was confirmed by observing adults building nests; incubating eggs; and/or feeding nestlings and/or fledglings. California Natural Diversity Database (CNDDB) forms will be submitted to the California Department of Fish and Game (CDFG). Survey dates, times and weather data for the focused coastal California gnatcatcher surveys are shown in Table 1.

Additional Sensitive Species

Two additional sensitive species were observed and/or detected on the Project site during the surveys: coastal cactus wren (*Campylorhynchus brunneicapillus*) and southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*).

Coastal cactus wren is a California Species of Special Concern. Some authorities consider the taxonomic status of cactus wrens in the southwestern U.S. to be uncertain (Proudfoot et al. 2000). Coastal populations of the cactus wren are found in Southern California from San Diego County north to Ventura County (Garrett and Dunn 1981) and are declining due to loss of habitat. Except for the Banning Pass area west of Palm Springs, the coastal populations of cactus wren appear to be isolated from interior populations. On the coastal slope of Southern California, cactus wrens inhabit coastal sage scrub and alluvial sage scrub habitats that have sufficient amounts of prickly pear cactus and/or cholla. Cactus wrens were observed and/or detected through vocalization throughout all segments of the Project site.

TABLE 1
SUMMARY OF COASTAL CALIFORNIA GNATCATCHER SURVEYS

Survey Number	Date	Time	Surveyor	Weather Conditions			Gnatcatchers Observed and/or Detected
				Temperature (°F) (Start/End)	Wind (mph) (Start/End)	Cloud Cover (%) (Start/End)	
1	April 4, 2011	0610/1210	Messett	55/68	0–1/0–5	Clear/Clear	Observed 2 pairs foraging.
	April 5, 2011	0630/1200	Messett	55/65	0–1/0–4	10/Clear	None observed or detected.
2	April 11, 2011	0630/1210	Messett	55/67	0–1/0–4	100/Clear	Observed 2 males defending territories.
	April 12, 2011	0630/1200	Messett	55/73	0–1/0–4	Clear/Clear	None observed or detected.
3	April 18, 2011	0930/1230	Messett	57/64	0–2/0–4	100/100	Observed 2 males defending territories.
	April 19, 2011	0645/1215	Messett	56/63	0–1/0–3	100/100	None observed or detected.
4	April 25, 2011	0650/1210	Messett	58/67	0–1/0–6	60/Clear	Observed 1 pair incubating. 2nd pair detected through vocalization.
	April 28, 2011	0635/1200	Messett	55/72	0–1/0–4	Clear/Clear	None observed or detected.
5	May 2, 2011	0625/1200	Messett	59/82	0–1/0–3	10/Clear	Observed 1 pair incubating (same pair as Survey 4).
	May 5, 2011	0640/1205	Messett	58/70	0–1/0–2	Clear/Clear	None observed or detected.
6	May 11, 2011	0630/1200	Messett	57/68	0–1/0–1	20/Clear	Observed 1 pair feeding nestlings. Observed 2nd pair incubating.
	May 13, 2011	0620/1215	Messett	58/66	0–1/0–5	10/30	None observed or detected.

°F: degrees Fahrenheit; mph: miles per hour.

Southern California rufous-crowned sparrow is a CDFG Watch List species. In coastal Southern California, rufous-crowned sparrows are considered fairly common in scrub vegetation types and other habitats with grasses and widely spaced, low shrubs. They also prefer slopes with rock outcroppings. This subspecies is present throughout the year in Southern California, but is threatened by loss of habitat due to development. Suitable habitat for this subspecies is present throughout the Project site, and this subspecies was observed and/or detected through vocalization in all segments of the Project site.

Additionally, several brown-headed cowbirds (*Molothrus ater*) were observed during the course of the gnatcatcher surveys. Brown-headed cowbirds were consistently detected on the Project site, near the southern end of Segment 1 and along the northern end of Segment 2.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact David Hughes or Lindsay Messett at (626) 351-2000 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

for David T. Hughes
Senior Project Manager

Lindsay A. Messett
Biologist

Attachments: Exhibits 1, 2, 3, and 4
Appendix A – Wildlife Compendium

I certify that the information in this survey report and enclosed exhibits fully and accurately present my work.

Lindsay A. Messett
Biologist
(TE-067064-1)

cc: Ms. Diane Noda, USFWS

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REFERENCES

Atwood, J.L. 1990. *Status Review of the California Gnatcatcher (Polioptila californica)*. Manomet, MAManomet Bird Observatory, usetts.

Atwood, J.L., and J.S. Bolsinger. 1992. Elevational distribution of California Gnatcatchers in the United States. *Journal of Field Ornithology* 63(2): 159–168. Waco, TX: Ornithological Societies of North America.

Atwood, J.L., D.R. Bontrager, and A.L. Gorospe. 1998. Use of Refugia by California Gnatcatchers Displaced by Habitat Loss. *Western Birds* 29: 406–412. San Diego, CA: Western Field Ornithologists.

Atwood, J.L., and D.R. Bontrager. 2001. California Gnatcatcher (*Polioptila* californica). *The Birds of North America, No. 574* (A. Poole and F. Gill, Eds.). Philadelphia, PA: The Academy of Natural Sciences.

Atwood, J.L., and S.B. Lerman. 2006. Family Polioptilidae (Gnatcatchers) (pp. 350–377). *Handbook of the Birds of the World*. *Vol. 11: Old World Flycatchers to Old World Warblers* (J. del Hoyo, A. Elliott, and D.A. Christie, Eds.). Barcelona, Spain: Lynx Edicions.

Campbell, K.F., R.A. Erickson, W.E. Haas, and M.A. Patten. 1998. California Gnatcatcher Use of Habitats Other Than Coastal Sage Scrub: Conservation and Management Implications. *Western Birds* 29: 421–433. San Diego, CA: Western Field Ornithologists.

BonTerra Consulting. 2008 (July 15). *Results of Coastal California Gnatcatcher Survey for the Proposed Moorpark-Newbury Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California.* Costa Mesa, CA: BonTerra Consulting.

———. 2010 (July 28). *Results of the Coastal California Gnatcatcher Survey for the Proposed Moorpark-Newbury 66-kV Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California.* Costa Mesa, CA: BonTerra Consulting.

Garrett, K. and J. Dunn. 1981. *Birds of Southern California: Status and Distribution*. Los Angeles, CA: Los Angeles Audubon Society.

Mellink, E. and A.M. Rea. 1994. Taxonomic Status of the California Gnatcatchers of Northwestern Baja California, Mexico. *Western Birds* 25: 50–62. San Diego, CA: Western Field Ornithologists.

Michael Brandman Associates (MBA). 1991 (July). A Rangewide Assessment of the California Gnatcatcher (*Polioptila californica*) (an Unpublished Report prepared for the Building Industry Association of Southern California).

Proudfoot, G.A., D.A. Sherry, and S. Johnson. 2000. Cactus Wren (*Campylorhynchus brunneicapillus*). *The Birds of North America, No. 558* (A. Poole and F. Gills, Eds.). Philadelphia, PA and Washington, D.C.: The Academy of Natural Sciences and The American Ornithologists' Union (respectively).

U.S. Fish and Wildlife Service (USFWS). 2007 (December 19). Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*); Final Rule. *Federal Register* 72(243): 72009–72213. Washington, D.C.: USFWS.

———. 2003 (April 24). Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*) and Determination of Distinct Vertibrate Population Segment for the California Gnatcatcher (*Polioptila californica*); Proposed Rule. *Federal Register* 68(79): 20227–20312. Washington, D.C.: USFWS.

———. 1997a (February 28). *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Guidelines.* Washington, D.C.: USFWS.

———. 1997b (July 28). *Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol.* Washington, D.C.: USFWS.

———. 1993 (March 30). Endangered and Threatened Wildlife and Plants: Determination of Threatened Status for the Coastal California Gnatcatcher. *Federal Register* 58(59): 16742–16757. Washington, D.C.: USFWS.

Regional Location

Exhibit 1

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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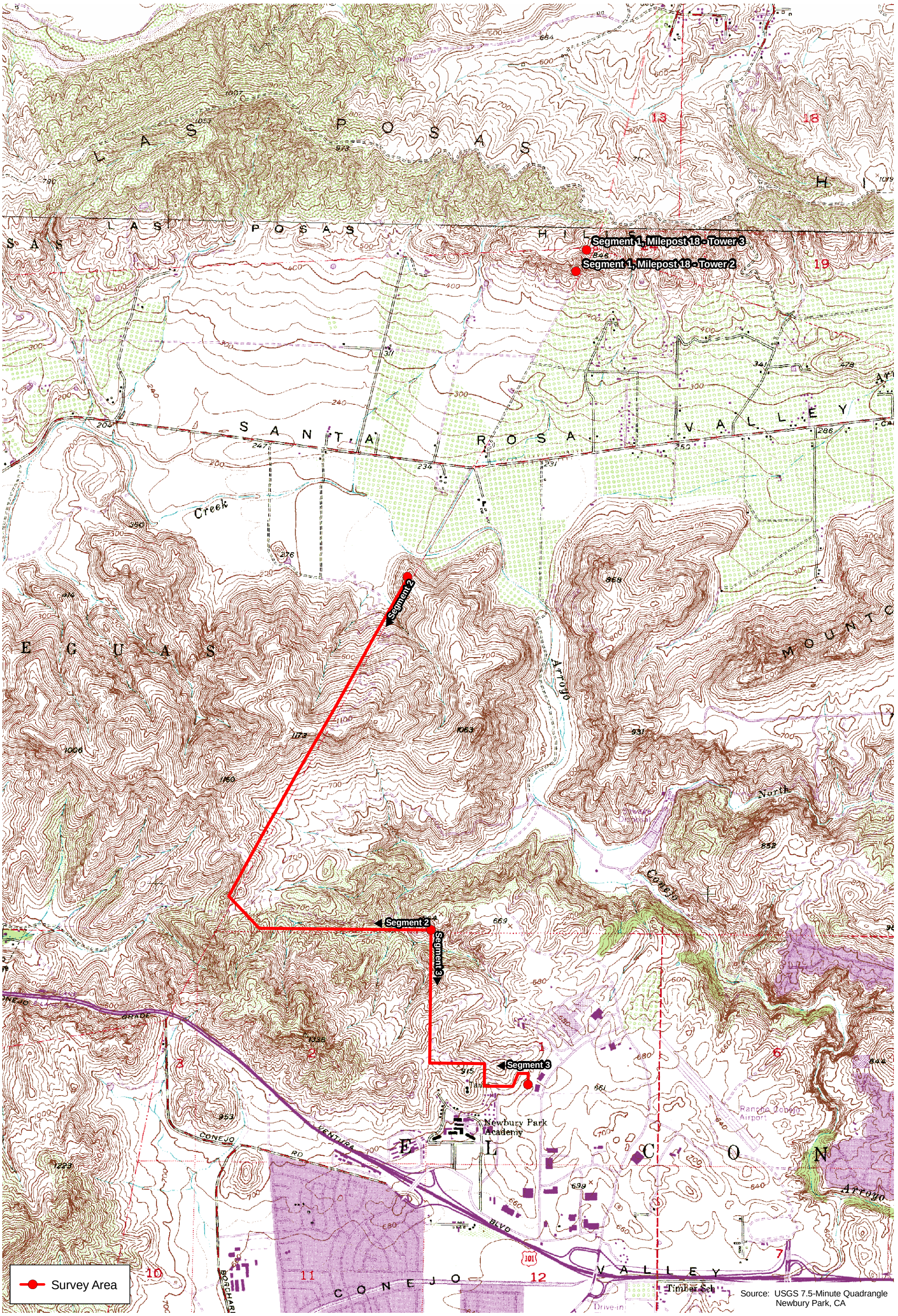

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Local Vicinity

Exhibit 2

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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Looking East. Representative site photograph depicting the southern portion of California gnatcatcher Territory 1.

Looking South. Representative site photograph depicting the southern portion of California gnatcatcher Territory 2.

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Site Photographs

Exhibit 3

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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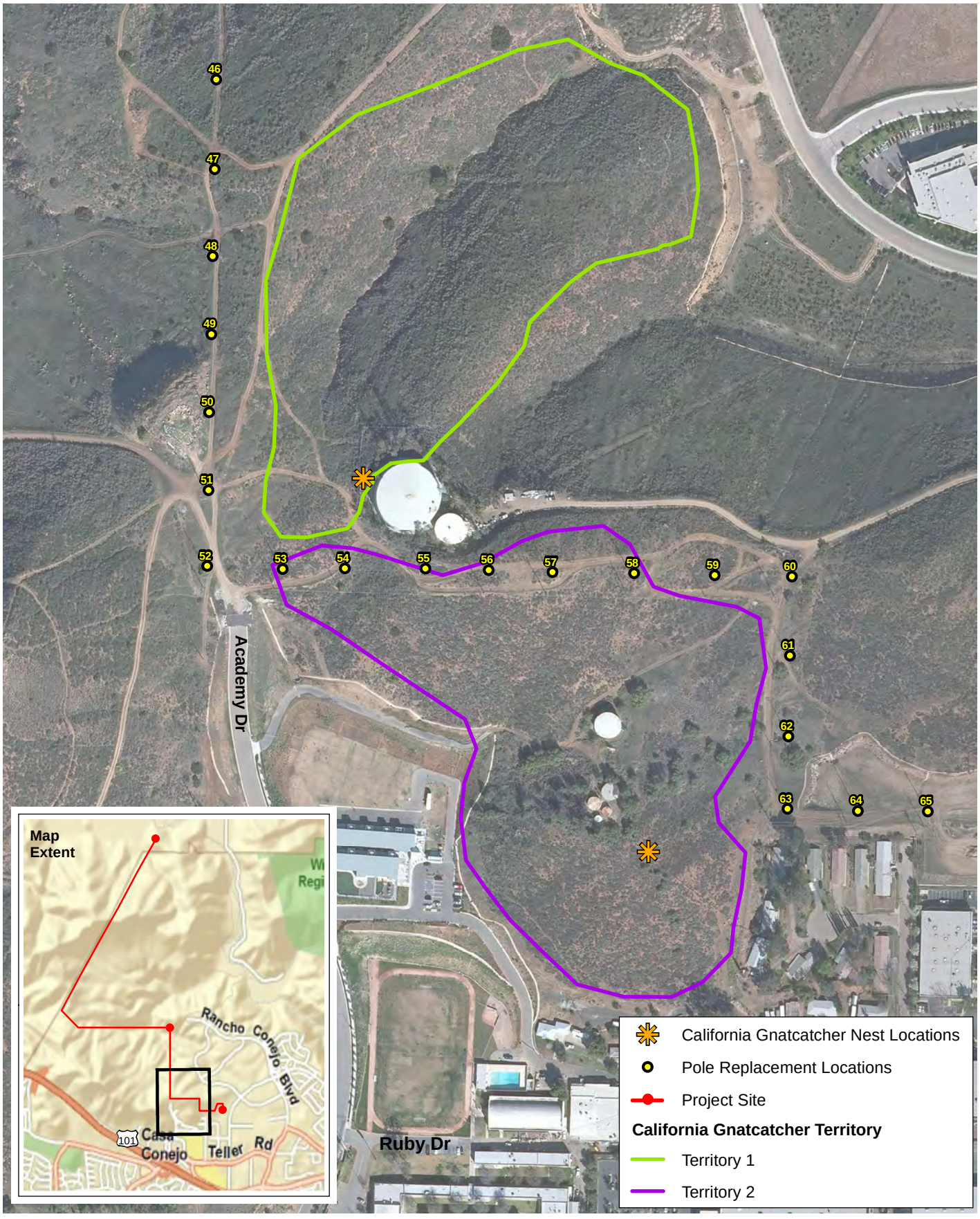

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Gnatcatcher Locations

Exhibit 4

Moorpark-Newbury 66kV Project, Ventura County, California

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APPENDIX A
WILDLIFE COMPENDIUM

APPENDIX A
WILDLIFE COMPENDIUM

Species
Reptiles
PHRYNOSOMATIDAE – ZEBRA-TAILED, FRINGE-TOED, SPINY, TREE, SIDE-BLOTCHED, & HORNED LIZARDS
Sceloporus occidentalis western fence lizard
Uta stansburiana side-blotched lizard
TEIIDAE – WHIPTAIL LIZARDS
Aspidoscelis [Cnemidophorus] tigris stejnegeri coastal western whiptail
COLUBRIDAE – COLUBRID SNAKES
Pituophis catenifer gopher snake
VIPERIDAE – VIPERS
Crotalus atrox western diamond-backed rattlesnake
Crotalus oreganus western rattlesnake
Birds
ODONTOPHORIDAE – QUAILS
Callipepla californica California quail
CATHARTIDAE – NEW WORLD VULTURES
Cathartes aura turkey vulture
ACCIPITRIDAE – HAWKS, KITES, EAGLES, & ALLIES
Circus cyaneus northern harrier
Accipiter cooperii Cooper's hawk
Buteo jamaicensis red-tailed hawk
FALCONIDAE – FALCONS
Falco sparverius American kestrel
CHARADRIIDAE – PLOVERS
Charadrius vociferus killdeer
LARIDAE – GULLS & TERNS
Larus occidentalis western gull
COLUMBIDAE – PIGEONS & DOVES
*Columba livia** rock pigeon
Zenaida macroura mourning dove
Columbina passerina common ground-dove

APPENDIX A
WILDLIFE COMPENDIUM
(Continued)

Species
CUCULIDAE – CUCKOOS & ROADRUNNERS
Geococcyx californianus greater roadrunner
TYTONIDAE – BARN OWLS
Tyto alba barn owl
STRIGIDAE – TRUE OWLS
Bubo virginianus great horned owl
APODIDAE – SWIFTS
Aeronautes saxatalis white-throated swift
TROCHILIDAE – HUMMINGBIRDS
Calypte anna Anna's hummingbird
Selasphorus sasin Allen's hummingbird
PICIDAE – WOODPECKERS
Melanerpes formicivorus acorn woodpecker
Picoides nuttallii Nuttall's woodpecker
Colaptes auratus northern flicker
TYRANNIDAE – TYRANT FLYCATCHERS
Sayornis nigricans black phoebe
Sayornis saya Say's phoebe
Myiarchus cinerascens ash-throated flycatcher
Tyrannus vociferans Cassin's kingbird
Tyrannus verticalis western kingbird
CORVIDAE – CROWS & JAYS
Aphelocoma californica western scrub-jay
Corvus brachyrhynchos American crow
Corvus corax common raven
HIRUNDINIDAE – SWALLOWS
Tachycineta bicolor tree swallow
Stelgidopteryx serripennis northern rough-winged swallow
Petrochelidon pyrrhonota cliff swallow

APPENDIX A
WILDLIFE COMPENDIUM
(Continued)

Species
PARIDAE – TITMICE
Baeolophus inornatus oak titmouse
AEGITHALIDAE – BUSHTITS
Psaltriparus minimus bushtit
TROGLODYTIDAE – WRENS
Campylorhynchus brunneicapillus cactus wren
Catherpes mexicanus canyon wren
Thryomanes bewickii Bewick's wren
POLIOPTILIDAE – GNATCATCHERS & GNATWRENS
Polioptila californica californica coastal California gnatcatcher
REGULIDAE – KINGLETS
Regulus calendula ruby-crowned kinglet
SYLVIIDAE – SYLVIID WARBLERS
Chamaea fasciata wrentit
TURDIDAE – THRUSHES & ROBINS
Sialia mexicana western bluebird
MIMIDAE – THRASHERS
Mimus polyglottos northern mockingbird
Toxostoma redivivum California thrasher
STURNIDAE – STARLINGS
*Sturnus vulgaris** European starling
BOMBYCILLIDAE – WAXWINGS
Bombycilla cedrorum cedar waxwing
PTILOGONATIDAE – SILKY-FLYCATCHERS
Phainopepla nitens phainopepla
PARULIDAE – WARBLERS
Oreothlypis [*Vermivora*] *celata* orange-crowned warbler
EMBERIZIDAE – SPARROWS & JUNCOS
Pipilo maculatus spotted towhee
Melozone [*Pipilo*] *crissalis* California towhee
Aimophila ruficeps rufous-crowned sparrow

APPENDIX A
WILDLIFE COMPENDIUM
(Continued)

Species
Chondestes grammacus lark sparrow
Amphispiza belli sage sparrow
Melospiza melodia song sparrow
CARDINALIDAE – CARDINALS & ALLIES
Pheucticus melanocephalus black-headed grosbeak
Passerina caerulea blue grosbeak
Passerina amoena lazuli bunting
ICTERIDAE – BLACKBIRDS
Euphagus cyanocephalus Brewer's blackbird
Molothrus ater brown-headed cowbird
Icterus cucullatus hooded oriole
Icterus bullockii Bullock's oriole
FRINGILLIDAE – FINCHES
Carpodacus mexicanus house finch
Spinus [Carduelis] psaltria lesser goldfinch
Spinus [Carduelis] lawrencei Lawrence's goldfinch
Spinus [Carduelis] tristis American goldfinch
PASSERIDAE – OLD WORLD SPARROWS
*Passer domesticus** house sparrow
Mammals
LEPORIDAE – HARES & RABBITS
Sylvilagus audubonii desert cottontail
SCIURIDAE – SQUIRRELS
Spermophilus beecheyi California ground squirrel
GEOMYIDAE – POCKET GOPHERS
Thomomys bottae Botta's pocket gopher
CANIDAE – WOLVES & FOXES
Canis latrans coyote
Urocyon cinereoargenteus gray fox

APPENDIX A
WILDLIFE COMPENDIUM
(Continued)

Species
PROCYONIDAE – RACCOONS
Procyon lotor common raccoon
MUSTELIDAE – WEASELS, SKUNKS & OTTERS
Mephitis mephitis striped skunk
CERVIDAE – DEER
Odocoileus hemionus mule deer
Invertebrates
PAPILIONIDAE – SWALLOWTAIL BUTTERFLIES
Papilio zelicaon anise swallowtail
Papilio rutulus western tiger swallowtail
PIERIDAE – WHITES, SULFURS, & ORANGETIPS
Anthocharis sara Sara orangetip
*Pieris rapae** mustard white
Pontia protodice common (checkered) white
SATYRIDAE – WOOD NYMPHS
Coenonympha californica California ringlet
NYMPHALIDAE – BRUSH-FOOTED BUTTERFLIES
Vanessa cardui painted lady
Vanessa atalanta red admiral
Junonia coenia common buckeye
Nymphalis antiopa mourning cloak
DANAIDAE – MILKWEED BUTTERFLIES
Danaus plexippus monarch
LYCAENIDAE – BLUES, HAIRSTREAKS, & COPPERS
Icaricia acmon acmon blue
Everes amyntula western tailed blue
* introduced species

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August 29, 2011

Mr. Manjunath Venkat
Southern California Edison
Environmental Health and Safety
1218 South 5th Avenue
Monrovia, California 91016

VIA EMAIL
Manjunath.Venkat@sce.com

Subject: Results of Nesting Bird Surveys and Coastal Sage Scrub Removal Monitoring Conducted During the Months of July and August 2011 on the Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Venkat:

This Letter Report presents the results of focused surveys for nesting birds and coastal sage scrub removal monitoring conducted during the months of July and August 2011 on the Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as "project site") in the cities of Moorpark and Thousand Oaks in Ventura County, California. The surveys and monitoring were conducted in accordance with the Southern California Edison (SCE) letter to the U.S. Fish and Wildlife (USFWS) dated August 30, 2010.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California. Segment 1 is 5.1 miles long and involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles and 66 kV transmission lines will be installed adjacent to existing 220-kV towers with the same approximate span lengths. Segment 2 is 2.5 miles long and involves the replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles. Segment 3 is 1.2 miles long and involves the replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles. The project site elevation ranges from approximately 250 to 900 feet above mean sea level (msl). It is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Native vegetation types along the project alignment consist primarily of coastal sage scrub and chaparral. The Segment 1 towers located within the survey area are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub that is characterized by the species listed above but that is also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Chaparral is also present along Segments 2 and 3. This vegetation type is dominated by chamise (*Adenostoma fasciculatum*) and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type include laurel sumac, lemonadeberry, blue elderberry (*Sambucus nigra* ssp*. caerulea*), and toyon (*Heteromeles arbutifolia*).

Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*).

SURVEY METHODOLGY

The methodology for conducting pre-construction nesting bird surveys consisted of walking the length of the linear project site, including a 50-foot buffer around each pole location. The nesting bird surveys were conducted 3–4 days prior to construction work in each area, along Segments 1 and 2, from Pole 40 north to the Moorpark Substation. These surveys were conducted to determine the presence or absence of nesting birds on or immediately adjacent to the project site and using binoculars to survey areas that were inaccessible. All bird species observed within the survey area were recorded and any behaviors that indicated breeding activity were noted. All active nest locations were also noted. The objective was to closely observe birds to determine breeding stage (e.g., building nest, incubating eggs, feeding nestlings or fledglings) and, if possible, locate the nest or young. The surveys were conducted on July 22, 26, 27, and 28, and August 1, 2, 3, 11, 15, 23, and 24, 2011, from 6:30 AM to 11:00 AM by BonTerra Consulting Biologists Lindsay Messett and Cristhian Mace. The weather conditions during the survey were suitable for bird activity and consisted of mostly clear skies and mild temperatures with calm conditions.

Monitoring of coastal sage scrub removal was conducted along Segment 2, beginning at Pole 40 and continuing north to Pole 26. Additional areas that were surveyed include Poles 18 and 19; the access road between Poles 11 and 12; and a small, approximate 20,000-square-foot area located in Segment 2, between Poles 35 and 36. This monitoring was conducted by Ms. Messett on July 27, 28, and August 1, 2, 3, and 24, 2011. The vegetation was removed using hand tools such as clippers and hand-held string trimmers. The vegetation clearing was performed to open up the existing access roads throughout the project site and to widen several pad areas adjacent to the poles to make enough room for the construction component of the project.

RESULTS

On July 27, Ms. Messett observed a California quail (*Callipepla californica*) nest located at the base of a lemonadeberry shrub just west of Pole 32 as work was beginning at that location. The nest contained a total of six eggs. Ms. Messett consulted with the construction supervisor and crews were re-directed to continue work at Pole 31 while the status of the nest was assessed by Ms. Messett. Ms. Messett checked the nest location at the end of the day and no adult quail were observed or detected in the vicinity.

On July 28, Ms. Messett checked the quail nest next to Pole 32 again. It was determined that this nest was likely abandoned prior to vegetation clearing activities, since no adults were detected in the vicinity of the nest during the pre-construction survey and no adults were observed incubating. Also, California quail tend to lay between 10 and 12 eggs per clutch and only 6 eggs were

present in the nest. Ms. Messett also observed an old nest (likely a Cassin's kingbird [*Tyrannus vociferans*]) located within a pepper tree (*Schinus molle*) near Pole 29. This nest was empty and therefore, not considered active.

On August 11, 2011, Ms. Mace observed an active northern mockingbird nest (*Mimus polyglottos*) located in an ornamental shrub along the northern side of the Moorpark Substation. The adults were observed entering the shrub carrying food items and at least one chick was detected through vocalization. The presence of this nest was communicated to SCE and no work was performed in this area until the nest was confirmed to be inactive.

On August 23, 2011, Ms. Messett located an old nest within a small California sagebrush shrub located between Poles 35 and 36. The nest was falling apart and empty; therefore, it was presumed to be inactive. Ms. Messett also checked on the mockingbird nest that Ms. Mace located on August 11, 2011. This nest was also very dilapidated and did not contain any eggs or chicks. Because no mockingbirds were detected in the area, it was determined that the chicks from the August 11 survey had fledged and this nest was no longer active.

CONCLUSIONS

With the implementation of minimization measures (nesting bird survey and protective buffers for nests found), the removal of vegetation within Segments 1 and 2 of the project site was completed with no impacts on nesting bird species. Construction crews should continue to follow avoidance and minimization measures to avoid impacts on special status resources throughout their activities.

Please contact David Hughes at (626) 351-2000 or Lindsay Messett at (714) 444-9199 with any questions related to this project.

Sincerely,

BONTERRA CONSULTING

David T. Hughes
Senior Project Manager

for

Lindsay A. Messett
Biologist

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Appendix F2

Biological Monitoring Reports

BonTerra CONSULTING

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February 28, 2011

Mr. Paul A. Yamazaki
Southern California Edison
Corporate Environment Health & Safety
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of Nesting Bird Surveys Conducted the Week Ending February 18, 2011, for the Proposed Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for nesting birds conducted the week ending February 18, 2011, at the Proposed Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as "the project site") in the Cities of Moorpark and Thousand Oaks in Ventura County, California. The surveys were conducted along Segment 3 from the Lawrence Substation to Academy Drive in order to determine the presence or absence of nesting birds on or immediately adjacent to the project site.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California. Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves the replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves the replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Vegetation types within the survey area include primarily coastal sage scrub and chaparral. The Segment 1 towers located within the survey area. are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub that is characterized by the species listed above but that is also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Segments 2 and 3 also support chaparral, which is dominated by chamise (*Adenostoma fasciculatum*) and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type include laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*).

SURVEY METHODOLGY

Survey methodology consisted of walking the length of the linear project site (from Lawrence Substation to Academy Drive), using binoculars to survey areas that were inaccessible (private property). All bird species using the project site were recorded and any behaviors that indicated breeding activity were noted. All active nest locations were also noted. The objective was to closely observe birds to determine breeding stage (building nest, incubating eggs, feeding nestlings, feeding fledglings, etc.) and then, if possible, locate the nest or young. The surveys were conducted on February 14, and 17, 2011 from 6:30 AM to 10:00 AM by BonTerra Consulting Biologist Lindsay Messett. The weather conditions during the survey were suitable for bird activity, and consisted of mostly clear skies and mild temperatures with calm conditions.

RESULTS

During the survey on February 14, a pair of coastal California gnatcatchers (*Polioptila californica californica*) was observed near Pole 54. This pair was not observed exibiting any breeding behavior; however, they were obviously paired and foraging together. During the survey on Feburary 17, a pair of California towhees (*Pipilo crissalis*) was observed carrying nesting material to a Peruvian pepper tree (*Schinus molle*) located in between Poles 52 and 51, just north of the Acadamy Drive entrance. Several other bird species on the project site appeared to be paired up including mourning dove (*Zenaida macroura*), rufous-crowned sparrow (*Aimophila ruficeps*), and northern mockingbird (*Mimus polyglottos*). However, no active nests (fully formed nests which contain eggs) were observed on the project site during the survey.

Additonal wildlife species observed or otherwise detected on-site included American crow (*Corvus brachyrhynchos*), American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), California quail (*Callipepla californica*), spotted towhee (*Pipilo maculatus*), cactus wren (*Campylorhynchus brunneicapillus*), Bewick's wren (Thryomanes bewickii), coastal California gnatcatcher, wrentit (*Chamaea fasciata*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*),), California thrasher (*Toxostoma redivivum*), European starling (*Sturnus vulgaris*), northern flicker (*Colaptes auratus*), Say's phoebe (*Sayornis saya*), spotted towhee (*Pipilo maculatus*), white-crowned sparrow (*Zonotrichia leucophrys*), desert cottontail (*Sylvilagus audubonii*), and California ground squirrel (*Spermophilus beechyi*).

CONCLUSIONS

No active nests were observed on the project site during the surveys; however, nesting behavior (nest building) was observed. Additionally, early signs of breeding behavior (i.e. paired birds) were observed during both days of surveys. Therefore, it is determined that although birds are not currently nesting on the project site, there is potential for nesting in the near future.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact Linda Robb or Lindsay Messett at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Linda M. Robb
Project Manager

Lindsay A. Messett
Biologist

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BonTerra CONSULTING

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February 28, 2011

Mr. Paul A. Yamazaki
Southern California Edison
Corporate Environment Health & Safety
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of Nesting Bird Surveys Conducted the Week Ending February 11, 2011, for the Proposed Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for nesting birds conducted the week ending February 11, 2011, at the Proposed Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as "the project site") in the Cities of Moorpark and Thousand Oaks in Ventura County, California. The surveys were conducted along Segment 3 from the Lawrence Substation to Academy Drive in order to determine the presence or absence of nesting birds on or immediately adjacent to the project site.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California. Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves the replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves the replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Vegetation types within the survey area include primarily coastal sage scrub and chaparral. The Segment 1 towers located within the survey area. are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (Salvia mellifera), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub that is characterized by the species listed above but that is also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Segments 2 and 3 also support chaparral, which is dominated by chamise (*Adenostoma fasciculatum*) and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type include laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*).

SURVEY METHODOLGY

Survey methodology consisted of walking the length of the linear project site (from Lawrence Substation to Academy Drive) and using binoculars to survey areas that were inaccessible (private property). All bird species using the project site were recorded and any behaviors that indicated breeding activity were noted. All active nest locations were also noted. The objective was to closely observe birds to determine breeding stage (e.g., building nest, incubating eggs, feeding nestlings, feeding fledglings) and, if possible, locate the nest or young. The surveys were conducted on February 7 and 10, 2011, from 6:30 AM to 10:00 AM by BonTerra Consulting Biologist Lindsay Messett. The weather conditions during the survey were suitable for bird activity and consisted of mostly clear skies and mild temperatures with calm conditions.

RESULTS

During the survey on Feburary 7, a pair of cactus wrens (*Campylorhynchus brunneicapillus*) was observed exhibiting breeding behavior (carrying nesting material) to a cholla (*Opuntia* sp.) located on a slope adjacent to Pole 62 just west of the Lawrence Substation. This pair was not observed carrying any nesting material to this cholla during the survey on February 10; therefore, the breeding status of this pair could not be determined at the time of the survey. Several other bird species on the project site appeared to be paired up including mourning dove (*Zenaida macroura*), California towhee (*Pipilo crissalis*), rufous-crowned sparrow (*Aimophila ruficeps*), and northern mockingbird (*Mimus polyglottos*). However, no active nests (fully formed nests that contain eggs) were observed on the project site during the survey.

Additonal wildlife species observed or otherwise detected on site included the American crow (*Corvus brachyrhynchos*), American kestrel (*Falco sparverius*), Anna's hummingbird (*Calypte anna*), California quail (*Callipepla californica*), spotted towhee (*Pipilo maculatus*), , Bewick's wren (Thryomanes bewickii), coastal California gnatcatcher (*Polioptila californica californica*), wrentit (*Chamaea fasciata*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), northern mockingbird,California thrasher (*Toxostoma redivivum*), European starling (*Sturnus vulgaris*), northern flicker (*Colaptes auratus*), Say's phoebe (*Sayornis saya*), spotted towhee (*Pipilo maculatus*), white-crowned sparrow (*Zonotrichia leucophrys*), desert cottontail (*Sylvilagus audubonii*), and California ground squirrel (*Spermophilus beechyi*).

CONCLUSIONS

No active nests were observed on the project site during the surveys; however, nesting behavior (nest buildling) was observed. Additionally, early signs of breeding behavior (i.e., paired birds) were observed during both survey days. Therefore, it is determined that although birds are not currently nesting on the project site, there is potential for nesting in the near future.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact Linda Robb or Lindsay Messett at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Linda M. Robb
Project Manager

Lindsay A. Messett
Biologist

cc: Nathan Wardlaw, nathan.wardlaw@sce.com

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BonTerra CONSULTING

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March 1, 2011

Mr. Paul A. Yamazaki
Southern California Edison
Corporate Environment Health & Safety
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of Nesting Bird Surveys Conducted the Week Ending February 25, 2011, for the Proposed Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for nesting birds conducted the week ending February 25, 2011, at the Proposed Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as "the project site") in the Cities of Moorpark and Thousand Oaks in Ventura County, California. The surveys were conducted along Segment 3 (Poles 62, 64 and 65) from the Lawrence Substation to Academy Drive in order to determine the presence or absence of nesting birds on or immediately adjacent to the project site.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California. Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves the replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves the replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Vegetation types within the survey area include primarily coastal sage scrub and chaparral. The Segment 1 towers located within the survey area. are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (Salvia mellifera), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub that is characterized by the species listed above but that is also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Segments 2 and 3 also support chaparral, which is dominated by chamise (*Adenostoma fasciculatum*) and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type include laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*).

SURVEY METHODOLGY

Survey methodology consisted of walking the length of the linear project site (from Lawrence Substation to Academy Drive) and using binoculars to survey areas that were inaccessible (private property). All bird species using the project site were recorded and any behaviors that indicated breeding activity were noted. All active nest locations were also noted. The objective was to closely observe birds to determine breeding stage (e.g., building nest, incubating eggs, feeding nestlings, feeding fledglings) and, if possible, locate the nest or young. The survey was conducted on February 24, 2011, from 6:30 AM to 10:00 AM by BonTerra Consulting Biologist Lindsay Messett. The weather conditions during the survey were suitable for bird activity and consisted of mostly clear skies and mild temperatures with calm conditions.

RESULTS

No birds exhibiting breeding behavior (carrying nesting material or food for nestlings) or active nests were observed on the project site during the survey. However, several bird species on the project site appeared to be paired up including mourning dove (*Zenaida macroura*), California towhee (*Pipilo crissalis*), rufous-crowned sparrow (*Aimophila ruficeps*), American kestrel (*Falco sparverius*), cactus wren (*Campylorhynchus brunneicapillus*), and northern mockingbird (*Mimus polyglottos*). However, no active nests (fully formed nests that contain eggs) were observed on the project site during the survey.

Additonal wildlife species observed or otherwise detected on site included the American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), California quail (*Callipepla californica*), spotted towhee (*Pipilo maculatus*), , Bewick's wren (Thryomanes bewickii), coastal California gnatcatcher (*Polioptila californica californica*), wrentit (*Chamaea fasciata*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), California thrasher (*Toxostoma redivivum*), European starling (*Sturnus vulgaris*), northern flicker (*Colaptes auratus*), Say's phoebe (*Sayornis saya*), spotted towhee (*Pipilo maculatus*), white-crowned sparrow (*Zonotrichia leucophrys*), desert cottontail (*Sylvilagus audubonii*), and California ground squirrel (*Spermophilus beechyi*).

CONCLUSIONS

No active nests were observed on the project site during the surveys; however, nesting behavior (nest buildling) was observed. Additionally, early signs of breeding behavior (i.e., paired birds) were observed during both survey days. Therefore, it is determined that although birds are not currently nesting on the project site, there is potential for nesting in the near future.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact Linda Robb or Lindsay Messett at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Linda M. Robb
Project Manager

for Lindsay A. Messett
Biologist

Cc: Nathan Wardlaw, Nathan.wardlaw@sce.com

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March 7, 2011

Mr. Paul A. Yamazaki
Southern California Edison
Corporate Environment Health & Safety
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of Nesting Bird Surveys Conducted the Week Ending March 4, 2011, for the Proposed Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for nesting birds conducted the week ending March 4, 2011, at the Proposed Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as "the project site") in the Cities of Moorpark and Thousand Oaks in Ventura County, California. The surveys were conducted along Segment 3 from the Lawrence Substation to Academy Drive in order to determine the presence or absence of nesting birds on or immediately adjacent to the project site.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California. Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves the replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves the replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Vegetation types within the survey area include primarily coastal sage scrub and chaparral. The Segment 1 towers located within the survey area. are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (Salvia mellifera), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub that is characterized by the species listed above but that is also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Segments 2 and 3 also support chaparral, which is dominated by chamise (*Adenostoma fasciculatum*) and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type include laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*).

SURVEY METHODOLGY

Survey methodology consisted of walking the length of the linear project site (from Lawrence Substation to Academy Drive) and using binoculars to survey areas that were inaccessible (private property). All bird species using the project site were recorded and any behaviors that indicated breeding activity were noted. All active nest locations were also noted. The objective was to closely observe birds to determine breeding stage (e.g., building nest, incubating eggs, feeding nestlings, feeding fledglings) and, if possible, locate the nest or young. The surveys were conducted on February 28 and March 3, 2011, from 6:30 AM to 11:30 AM by BonTerra Consulting Biologist Lindsay Messett. The weather conditions during the survey were suitable for bird activity and consisted of mostly clear skies and mild temperatures with calm conditions.

RESULTS

During the survey on March 3, a pair of cactus wrens (*Campylorhynchus brunneicapillus*) was observed perched together in a patch of coast prickly-pear cactus (*Opuntia littoralis*) located on a slope adjacent to Pole 62 just west of the Newbury Substation. The pair also flew to a cholla (*Opuntia* sp.) further up the same slope. Upon investigation, a nest which was approximately 50 percent complete was detected in the patch of coast prickly-pear cactus and a nest which was approximately 75 percent complete was detected in the cholla. Neither nest contained eggs or young. Additionally, the pair of cactus wrens was not observed carrying any nesting material to either of these nest locations. Two additional cactus wren nests were detected during the survey on March 3. These nests were 100 percent complete but did not contain eggs or young. One nest is located in a cholla located near Poles 56 and 57. No cactus wrens were observed near this nest at the time of the survey. The other nest is located in a patch of coast prickly-pear cactus near Poles 53 and 54. Cactus wrens were observed in the vicinity of this nest. Additionally, a pair of coastal California gnatcatchers (*Polioptila californica californica*) was observed foraging together within the coastal sage scrub near Poles 53 and 54.

Several other bird species on the project site appeared to be paired up including American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), California towhee (*Melozone* [*Pipilo*] *crissalis*), rufous-crowned sparrow (*Aimophila ruficeps*), and house finch (*Carpodacus mexicanus*). However, no active nests (fully formed nests that contain eggs) were observed on the project site during the survey.

Additonal wildlife species observed or otherwise detected on site included the California quail (*Callipepla californica*), Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferus*), greater roadrunner (*Geococcyx californianus*), Anna's hummingbird (*Calypte anna*), Northern flicker (*Colaptes auratus*), Say's phoebe (*Sayornis saya*), Cassin's kingbird (*Tyrannus vociferans*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), Bewick's wren (*Thryomanes bewickii*), wrentit

(*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), European starling (*Sturnus vulgaris*), yellow-rumped warbler (*Dendroica coronata*), spotted towhee (*Pipilo maculatus*), California towhee, white-crowned sparrow (*Zonotrichia leucophrys*), lesser goldfinch (*Carduelis psaltria*), desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beechyi*), eastern fox squirrel (*Sciurus niger*), woodrat (*Neotoma* sp.), coyote (*Canis latrans*), grey fox (*Urocyon cinereoargenteus*), domestic dog (*Canis familiaris*), and mule deer (*Odocoileus hemionus*).

CONCLUSIONS

No active nests (nests containing eggs and/or young) were observed on the project site during the surveys; however, two partially built nests and two complete nests which didn't contain eggs or young were observed. Additionally, early signs of breeding behavior (i.e., paired birds) were observed during both survey days. Therefore, it is determined that although birds are not currently nesting on the project site, there is potential for nesting in the near future.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact Linda Robb or Lindsay Messett at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Linda M. Robb
Project Manager

for Lindsay A. Messett
Biologist

Cc: Nathan Wardlaw, nathan.wardlaw@sce.com

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March 24, 2011

Mr. Paul A. Yamazaki
Southern California Edison
Corporate Environment Health & Safety
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of Nesting Bird Surveys Conducted the Week Ending March 18, 2011, for the Proposed Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for nesting birds conducted the week ending March 18, 2011, at the Proposed Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as "the project site") in the Cities of Moorpark and Thousand Oaks in Ventura County, California. The surveys were conducted within the entire length of Segment 3 in order to determine the presence or absence of nesting birds on or immediately adjacent to the project site.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California. Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves the replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves the replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Vegetation types within the survey area include primarily coastal sage scrub and chaparral. The Segment 1 towers located within the survey area are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub that is characterized by the species listed above but that is also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Segments 2 and 3 also support chaparral, which is dominated by chamise (*Adenostoma fasciculatum*) and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type include laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*).

SURVEY METHODOLGY

Survey methodology consisted of walking the length of the linear project site (Segment 3) and using binoculars to survey areas that were inaccessible (private property). All bird species using the project site were recorded and any behaviors that indicated breeding activity were noted. All active nest locations were also noted. The objective was to closely observe birds to determine breeding stage (e.g., building nest, incubating eggs, feeding nestlings, and feeding fledglings) and, if possible, locate the nest or young. The surveys were conducted on March 14, and 17, 2011, from 6:15 AM to 11:45 AM by BonTerra Consulting Biologist Lindsay Messett. The weather conditions during the survey were suitable for bird activity and consisted of mostly clear skies and mild temperatures with calm conditions.

RESULTS

During the survey on March 14, a pair of coastal California gnatcatchers (*Polioptila californica californica*) was observed nest building within coastal sage scrub near Pole 54. Upon further investigation, a nest was located within a black sage shrub approximately 50 feet north of Pole 54. During the survey on March 17 this nest was complete but did not contain any eggs. The pair was observed foraging together in the vicinity of the nest during the survey on March 17. The nest location was marked using a Global Positioning System (GPS) and a no work zone (500 foot buffer) was established. This no work zone includes Poles 50-57 (Exhibit 1). Several other bird species were observed nest building during the surveys. A bushtit (*Psaltriparus minimus*) nest was observed within a chamise shrub located along the access road east of Pole 47. This nest was approximately 90 percent complete and did not contain any eggs at the time of the surveys. Additionally a wrentit (*Chamaea fasciata*), California towhee (*Melozone* [*Pipilo*] *crissalis*), and Bewicks wren (*Thryomanes bewickii*) were observed carrying nesting material in this same general location; however, nests of these species were not located. The acorn woodpecker (*Melanerpes formicivorus*) nest in the pole adjacent to Pole 65 appeared to still be active. The pair of woodpeckers was observed carrying food in and out of the nest cavity multiple times during both surveys.

Several other bird species on the project site appeared to be paired up including American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), northern flicker (*Colaptes auratus*), rufous-crowned sparrow (*Aimophila ruficeps*), and house finch (*Carpodacus mexicanus*). However, no active nests of these species (fully formed nests that contain eggs) were observed on the project site during the survey.

Additonal wildlife species observed or otherwise detected on site included the California quail (*Callipepla californica*), Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferus*), greater roadrunner (*Geococcyx californianus*), Anna's hummingbird (*Calypte anna*), Say's phoebe (*Sayornis saya*), American crow (*Corvus*

brachyrhynchos), common raven (*Corvus corax*), California thrasher (*Toxostoma redivivum*), European starling (*Sturnus vulgaris*), yellow-rumped warbler (*Dendroica coronata*), spotted towhee (*Pipilo maculatus*), white-crowned sparrow (*Zonotrichia leucophrys)*, lesser goldfinch (*Carduelis psaltria*), desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beechyi*), eastern fox squirrel (*Sciurus niger*), woodrat (*Neotoma* sp.), coyote (*Canis latrans*), grey fox (*Urocyon cinereoargenteus*), domestic dog (*Canis familiaris*), and mule deer (*Odocoileus hemionus*).

CONCLUSIONS

No new active nests (nests containing eggs and/or young) were observed on the project site during the surveys; however, several partially built nests as well as complete nests which didn't contain eggs or young were observed on the project site during the surveys. Additionally, signs of breeding behavior (i.e., paired birds) were observed during both survey days. Therefore, it is determined that birds are currently nesting on the project site, and there is potential for more nesting in the near future.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact Linda Robb or Lindsay Messett at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Linda M. Robb
Project Manager

for Lindsay A. Messett
Biologist

Attachment: Exhibit 1

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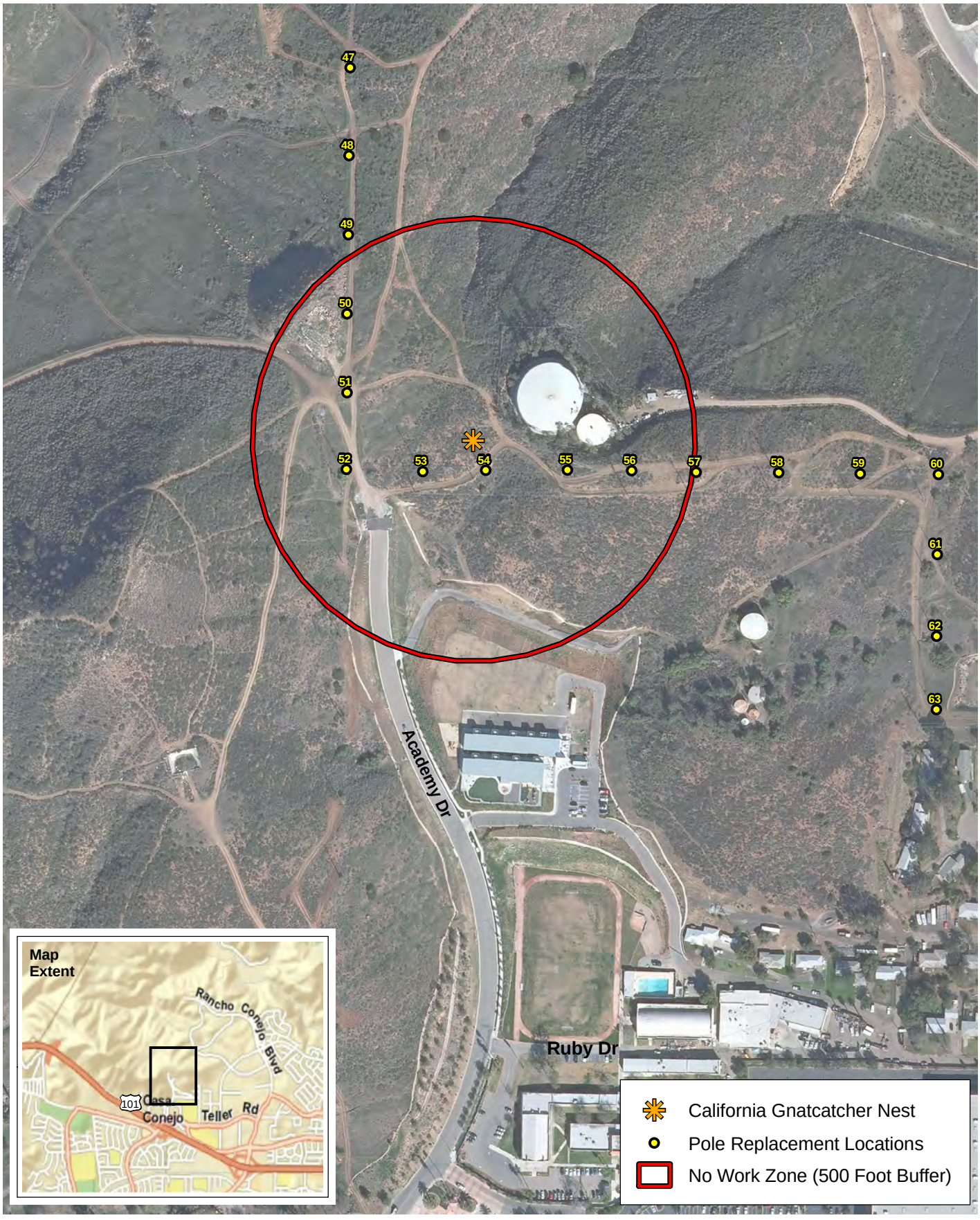

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Gnatcatcher Nest 500-Foot Buffer Area (No Work Zone)

Exhibit 1

Moorpark-Newbury 66kV Project, Ventura County, California

N W E S

400 200 0 400 Feet

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March 24, 2011

Mr. Paul A. Yamazaki
Southern California Edison
Corporate Environment Health & Safety
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of Nesting Bird Surveys Conducted the Week Ending March 11, 2011, for the Proposed Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for nesting birds conducted the week ending March 11, 2011, at the Proposed Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as "the project site") in the Cities of Moorpark and Thousand Oaks in Ventura County, California. The surveys were conducted along Segment 3 from the Lawrence Substation to Academy Drive in order to determine the presence or absence of nesting birds on or immediately adjacent to the project site.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California. Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves the replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves the replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Vegetation types within the survey area include primarily coastal sage scrub and chaparral. The Segment 1 towers located within the survey area are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub that is characterized by the species listed above but that is also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Segments 2 and 3 also support chaparral, which is dominated by chamise (*Adenostoma fasciculatum*) and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type include laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*).

SURVEY METHODOLGY

Survey methodology consisted of walking the length of the linear project site (from Lawrence Substation to Academy Drive) and using binoculars to survey areas that were inaccessible (private property). All bird species using the project site were recorded and any behaviors that indicated breeding activity were noted. All active nest locations were also noted. The objective was to closely observe birds to determine breeding stage (e.g., building nest, incubating eggs, feeding nestlings, and feeding fledglings) and, if possible, locate the nest or young. The survey was conducted on March 10, 2011, from 6:30 AM to 11:30 AM by BonTerra Consulting Biologist Lindsay Messett. The weather conditions during the survey were suitable for bird activity and consisted of mostly clear skies and mild temperatures with calm conditions.

RESULTS

A pair of cactus wrens (*Campylorhynchus brunneicapillus*) was observed carrying nesting material to a patch of coastal prickly pear located on a slope south of Pole 58. Upon investigation, a nest which was approximately 70 percent complete was detected in the patch of coastal prickly pear. This nest did not contain eggs and/or young. The cactus wren nests which were detected during the survey on March 3 were in the same condition (100 percent complete) but did not contain any eggs and/or young. A pair of coastal California gnatcatchers (*Polioptila californica californica*) was observed nest building within coastal sage scrub near Pole 54. Upon further investigation, a nest was located within a black sage shrub approximately 50 feet north of Pole 54. During the survey on March 10 this nest was 50 percent complete and did not contain any eggs and/or young. Additionally, a pair of acron woodpeckers (*Melanerpes formicivorus*) was observed entering a cavity in a pole adjacent to Pole 65. The cavity is approxmately 30 feet above the ground and therefore it was not possible to see inside. The pair of woodpeckers was observed carrying food to the cavity; therefore, it is assumed that the nest is active and they most likely have young. At the time of the nest observation, construction activities were occuring at Poles 66 and 67 which were within 100 feet of the woodpecker nest; however, the woodpeckers continued to enter and exit the nest cavity multiple times and did not appear to be bothered by the adjacent construction activities.

Several other bird species on the project site appeared to be paired up including American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), northern flicker (*Colaptes auratus*), California towhee (*Melozone* [*Pipilo*] *crissalis*), rufous-crowned sparrow (*Aimophila ruficeps*), and house finch (*Carpodacus mexicanus*). However, no active nests of these species (fully formed nests that contain eggs) were observed on the project site during the survey.

Additonal wildlife species observed or otherwise detected on site included the California quail (*Callipepla californica*), Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferus*), greater roadrunner (*Geococcyx californianus*), Anna's hummingbird (*Calypte anna*), Say's phoebe (*Sayornis saya*), Cassin's kingbird (*Tyrannus vociferans*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), Bewick's wren (*Thryomanes bewickii*), wrentit (*Chamaea fasciata*), California thrasher (*Toxostoma redivivum*), European starling (*Sturnus vulgaris*), yellow-rumped warbler (*Dendroica coronata*), spotted towhee (*Pipilo maculatus*), white-crowned sparrow (*Zonotrichia leucophrys*), lesser goldfinch (*Carduelis psaltria*), desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beechyi*), eastern fox squirrel (*Sciurus niger*), woodrat (*Neotoma* sp.), coyote (*Canis latrans*), grey fox (*Urocyon cinereoargenteus*), domestic dog (*Canis familiaris*), and mule deer (*Odocoileus hemionus*).

CONCLUSIONS

An active acorn woodpecker nest was observed in a cavitity in a pole adjacent to Pole 65. At the time of the nest observation, construction activities were occuring at Poles 66 and 67 which were within 100 feet of the woodpecker nest; however, the woodpeckers continued to enter and exit the nest cavity multiple times and did not appear to be bothered by the adjacent construction activities. Two other bird species (cactus wren and coastal California gnatcatcher) were observed nest building on the project site during the surveys. The nests of these species were not considered active (nests containing eggs and/or young). Additionally, signs of breeding behavior (i.e., paired birds) were observed during both survey days. Therefore, it is determined that birds are currently nesting on the project site, and there is potential for more nesting in the near future.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact Linda Robb or Lindsay Messett at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Linda M. Robb
Project Manager

for Lindsay A. Messett
Biologist

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151 Kalmus Drive, Suite E-200
Costa Mesa, CA 92626

June 24, 2011

Mr. Paul A. Yamazaki
Southern California Edison
Corporate Environment Health & Safety
2244 Walnut Grove Avenue
Rosemead, California 91770

VIA EMAIL
Paul.Yamazaki@sce.com

Subject: Results of Nesting Bird Surveys Conducted in the Months of April and May, 2011, for the Proposed Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Yamazaki:

This Letter Report presents the results of focused surveys for nesting birds conducted in the months of April and May, 2011, at the Proposed Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as "the project site") in the cities of Moorpark and Thousand Oaks in Ventura County, California. The surveys were conducted within the entire length of Segment 3 in order to determine the presence or absence of nesting birds on or immediately adjacent to the project site.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California. Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves the replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves the replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Vegetation types within the survey area include primarily coastal sage scrub and chaparral. The Segment 1 towers located within the survey area are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub that is characterized by the species listed above but that is also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Segments 2 and 3 also support chaparral, which is dominated by chamise (*Adenostoma fasciculatum*) and bigpod ceanothus (*Ceanothus megacarpus*). Other native species in this vegetation type include laurel sumac, lemonadeberry, elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*). Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*).

SURVEY METHODOLGY

Survey methodology consisted of walking the length of the linear project site (Segment 3) and using binoculars to survey areas that were inaccessible (private property). All bird species using the project site were recorded and any behaviors that indicated breeding activity were noted. All active nest locations were also noted. The objective was to closely observe birds to determine breeding stage (e.g., building nest, incubating eggs, feeding nestlings, and feeding fledglings) and, if possible, locate the nest or young. The surveys were conducted on April 14, 2011, by BonTerra Consulting Biologist Johathan Aguayo and on May 25, 2011, by BonTerra Consulting Biologist Lindsay Messett. The time and weather conditions during the surveys were suitable for bird activity and consisted of mostly clear skies and mild temperatures with calm conditions.

RESULTS

During the survey on April 14, a killdeer (*Charadrius vociferus*) nest was observed north of Pole 65 (Exhibit 1). This nest was previously detected during a focused coastal California gnatcatcher (*Polioptila californica californica*) survey. During the April 14 survey, an adult was observed sitting on the nest incubating one egg. During the survey on May 25, the killdeer nest was empty and two adult killdeer were observed with one fledgling in the vicinity of the nest. A pair of coastal California gnatcatchers was observed at a known nest location just east of Poles 50 and 51, inside the chainlink fence that surround the large water tanks on site. The nest is assumed to be located within a patch coastal sage scrub just north of the water tanks. Plant species in this area include purple sage, California buckwheat, and California sage scrub. The male gnatcatcher was observed calling and foraging in the surrounding area. The female was detected through vocalization from the suspected nest location. A second pair of gnatcatchers was detected nesting west of Pole 63. The male was observed calling and foraging in the surrounding area. The female was observed foraging with the male. The male was also observed on the nest incubating. The nest is located approximately 3 feet off the ground in a small patch of coastal sage scrub. This pair previously nested south of Pole 57; however, that nest failed for unknown reasons. Both nest locations were marked using a Global Positioning System (GPS) and no work zones (500-foot buffer) were established. These no work zones include Poles 49–57 and Poles 61–64 (Exhibit 2).

Several other bird species on the project site appeared to be paired up including American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), northern flicker (*Colaptes auratus*), rufous-crowned sparrow (*Aimophila ruficeps*), and house finch (*Carpodacus mexicanus*). However, no active nests of these species (fully formed nests that contain eggs) were observed on the project site during either of the surveys.

Additonal wildlife species observed or otherwise detected on site included the California quail (*Callipepla californica*), Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferus*), greater roadrunner (*Geococcyx californianus*), Anna's

hummingbird (*Calypte anna*), Nuttall's woodpecker (*Picoides nuttallii*), western wood-pewee (*Contopus sordidulus*), Say's phoebe (*Sayornis saya*), Cassin's kingbird (*Tyrannus vociferans*), western kingbird (*Tyrannus verticalis*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), California thrasher (*Toxostoma redivivum*), European starling (*Sturnus vulgaris*), yellow-rumped warbler (*Dendroica coronata*), spotted towhee (*Pipilo maculatus*), chipping sparrow (*Spizella passerina*), white-crowned sparrow (*Zonotrichia leucophrys*), lesser goldfinch (*Carduelis psaltria*), American goldfinch (*Spinus* [*Carduelis*] *tristis*), desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beechyi*), eastern fox squirrel (*Sciurus niger*), woodrat (*Neotoma* sp.), coyote (*Canis latrans*), grey fox (*Urocyon cinereoargenteus*), domestic dog (*Canis familiaris*), and mule deer (*Odocoileus hemionus*).

CONCLUSIONS

A total of three active nests (nests containing eggs and/or young) were observed on the project site during the surveys: the killdeer nest and two coastal California gnatcatcher nests. Signs of breeding behavior (i.e., paired birds) were also observed during both survey days. Therefore, it is determined that birds are currently nesting on the project site, and there is potential for more nesting in the near future.

BonTerra Consulting has appreciated the opportunity to assist with this project. Please contact Linda Robb or Lindsay Messett at (714) 444-9199 if you have questions or comments.

Sincerely,

BONTERRA CONSULTING

Linda M. Robb
Project Manager

Lindsay A. Messett
Biologist

Attachments: Exhibits 1 and 2

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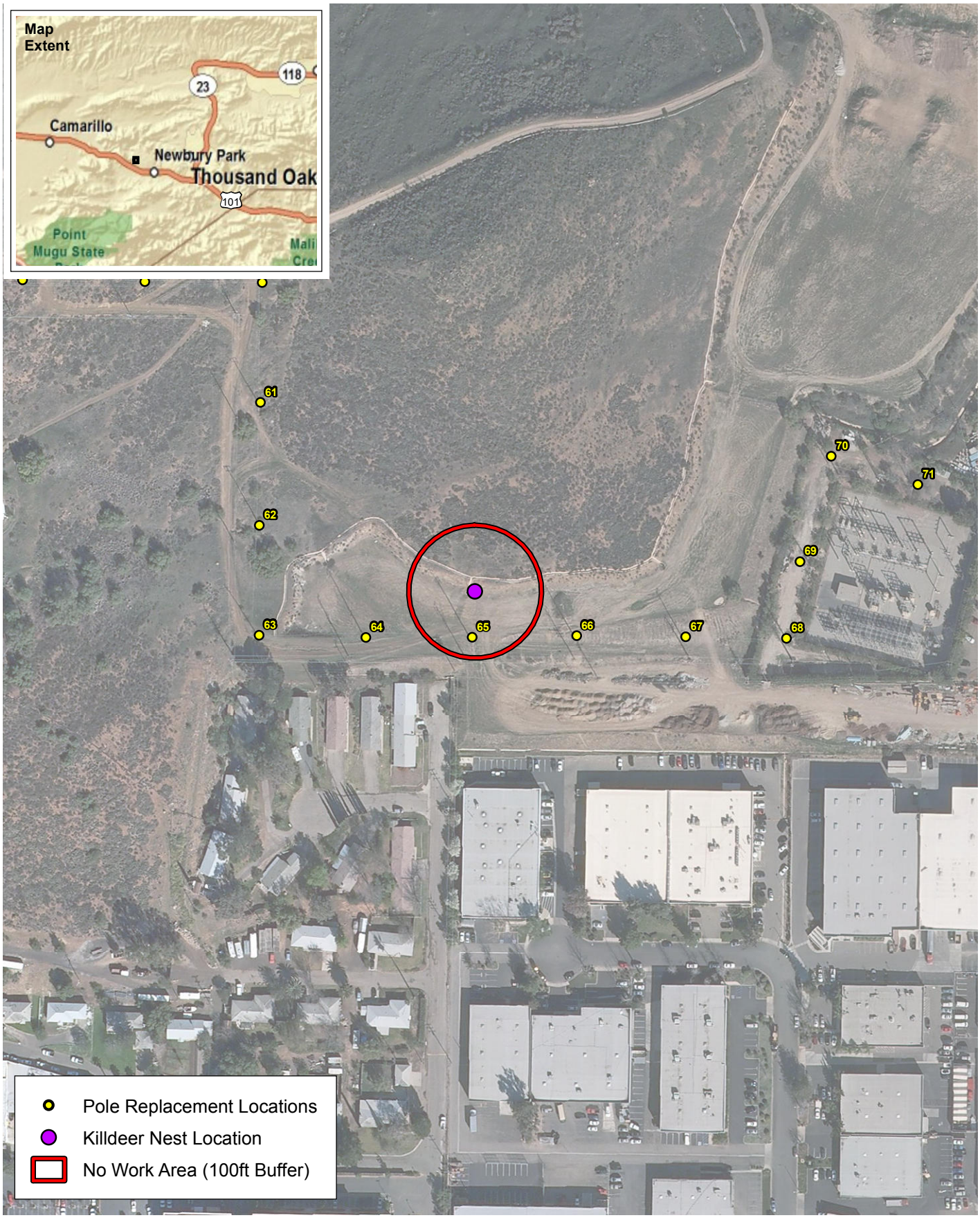

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Killdeer Nest 100-Foot Buffer (Biological Monitor Needed)

Exhibit 1

Moorpark-Newbury 66kV Project, Ventura County, California

N W E S

200 100 0 200 Feet

BonTerra CONSULTING

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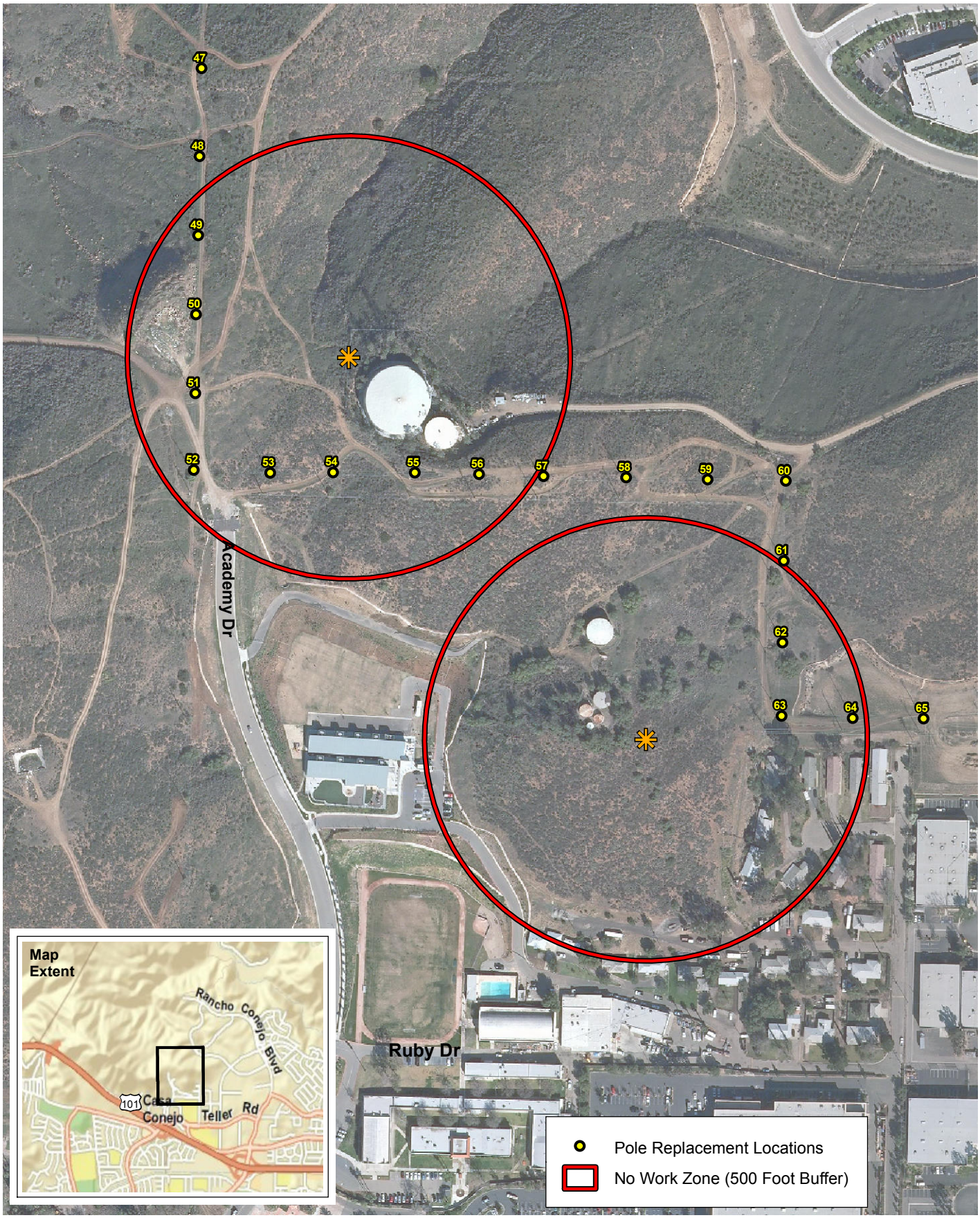

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Gnatcatcher Nest 500-Foot Buffer Area (No Work Zone)

Exhibit 2

Moorpark-Newbury 66kV Project, Ventura County, California

N W E S

400 200 0 400 Feet

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(Rev 06-21-11 JFG) R:\Projects\Edison\J050\Graphics\Memo\ex2_CAGN.pdf

MEMORANDUM

August 4, 2011

To:
Mr. Manjunath Venkat, Biologist
Southern California Edison
Environmental Health and Safety
1218 S. 5th Avenue
Monrovia, CA 91016

From:
Lindsay Messett
Biologist

Subject: General Biological Survey for Proposed Brush Clearance - In Segment 2 of the Moorpark-Newbury 66-kilovolt Transmission Line Project

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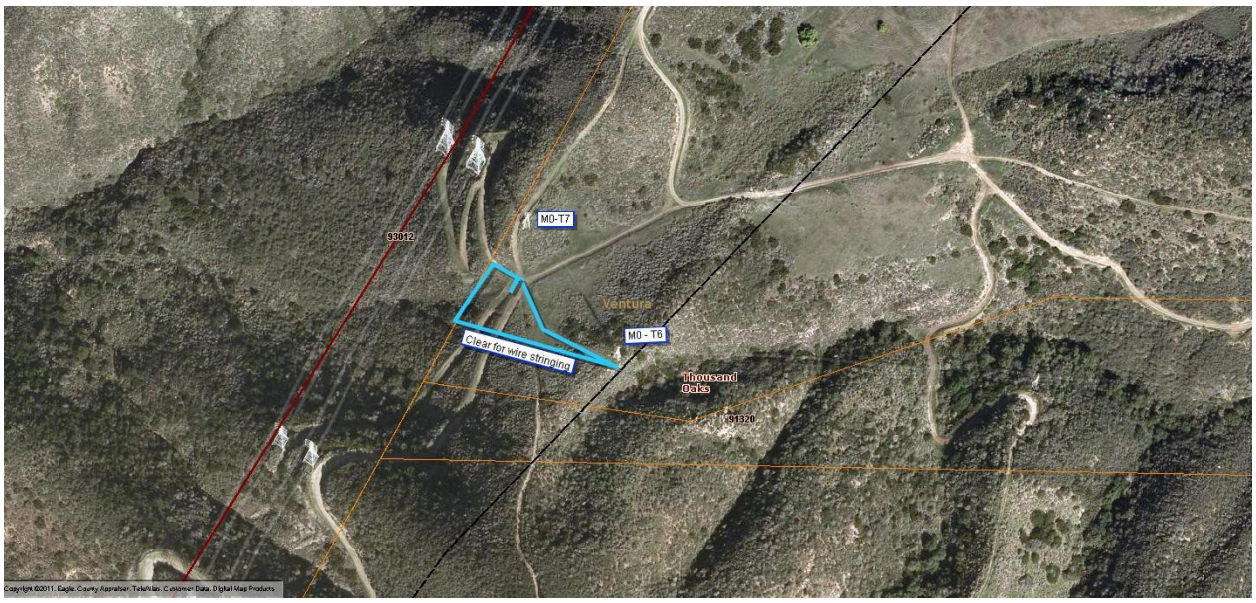
This memo summarizes a general biological survey that was conducted on the Moorpark-Newbury 66-kilovolt Transmission Line Project site. At the request of Southern California Edison (SCE), BonTerra Consulting Biologist Lindsay Messett conducted the survey on August 3, 2011 in an approximately 20,000 square foot area (hereafter referred to as the "survey area") located in Segment 2, between Pole 35 (MO-T7) and Pole 36 (MO-T6),(see map below). The purpose of the survey was to document the existing biological conditions of the area in order to determine the potential for any sensitive biological resources to occur in the area. Edison proposes to clear vegetation from this area in order to decrease the risk of a brush fire occurring during the construction and stringing of the 66-kilovolt transmission line.



Moorpark-Newbury Project Site

The Moorpark-Newbury project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California. Segment 1 involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles will be installed adjacent to existing 220-kV towers with the same approximate span lengths (5.1 miles). Segment 2 involves the replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles (2.5 miles). Segment 3 involves the replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles (1.2 miles). The project site is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Methods

BonTerra Consulting Biologist Lindsay Messett conducted a general plant and wildlife survey on August 3, 2011. The survey was conducted by walking the survey area and recording plant and wildlife data that were observed. The biological survey was conducted in order to document the existing conditions and determine the potential for special status plant and wildlife species to occur in the survey area. Additionally, Ms. Messett searched for active nests or breeding bird behavior during the survey. All plant and wildlife species observed were recorded in field notes. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign including scat, footprints, scratch-outs, dust bowls, burrows, and trails. The survey was conducted from 7:30 AM to 9:00 AM. The weather conditions during the survey were suitable for bird/wildlife activity, and consisted of mostly clear skies and mild temperatures with calm conditions.

Existing Conditions

The vegetation types within the survey area are primarily ruderal with scattered individual coastal sage scrub plants. Common non-native plant species in the survey area include sweet fennel (*Foeniculum vulgare*), black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*). Coastal sage scrub plant species include California sagebrush (*Artemisia californica*), rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), and gray coast buckwheat (*Eriogonum cinereum*). A site photograph taken from the northern portion of the survey area, looking southeast is included below.

Conclusions

The survey area supports a limited number of coastal sage scrub plants; however, the individual shrubs are scattered sparsely throughout the survey area and small in stature and therefore, would be considered low quality habitat for the coastal California gnatcatcher. Additionally, no coastal California gnatcatchers were observed or detected through vocalization in the vicinity of the survey area. No active nests or nesting behavior (i.e. paired birds, nest building, feeding nestlings/fledglings) were observed in the survey area during the survey. Focused plant surveys were conducted for federally and state-listed Endangered Lyon's pentachaeta (*Pentachaeta lyonii*) and federally listed Threatened Conejo dudleya (*Dudleya parva*) on the project site in 2008 and 2010. Lyon's pentachaeta and Conejo dudleya were both observed within and adjacent to the Moorpark-Newbury project site within Segment 3. These sensitive plant species were not observed in Segment 2 during the 2008 or 2010 focused surveys; therefore, they are not expected to occur within the survey area detailed in this memo.

Due to the small size of the impact area, the dominance of non-native vegetation present, and the temporary nature of the disturbance for mowing activities, clearing of vegetation within the survey area is not expected to negatively impact any sensitive biological resources.

Please contact BonTerra Consulting biologists David Hughes or Lindsay Messett at (714) 444-9199 of if you have questions or comments.

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August 29, 2011

Mr. Manjunath Venkat
Southern California Edison
Environmental Health and Safety
1218 South 5th Avenue
Monrovia, California 91016

VIA EMAIL
Manjunath.Venkat@sce.com

Subject: Results of Nesting Bird Surveys and Coastal Sage Scrub Removal Monitoring Conducted During the Months of July and August 2011 on the Moorpark-Newbury 66-kilovolt Transmission Line Project in the Cities of Moorpark and Thousand Oaks, Ventura County, California

Dear Mr. Venkat:

This Letter Report presents the results of focused surveys for nesting birds and coastal sage scrub removal monitoring conducted during the months of July and August 2011 on the Moorpark-Newbury 66-kilovolt (kV) Transmission Line project site (hereafter referred to as "project site") in the cities of Moorpark and Thousand Oaks in Ventura County, California. The surveys and monitoring were conducted in accordance with the Southern California Edison (SCE) letter to the U.S. Fish and Wildlife (USFWS) dated August 30, 2010.

Project Site

The project site is located along existing transmission lines that traverse open space and agricultural areas in the Cities of Moorpark and Thousand Oaks in Ventura County, California. Segment 1 is 5.1 miles long and involves the installation of 25 engineered steel poles from the Moorpark Substation to a point adjacent to Milepost 16 – Tower 5; poles and 66 kV transmission lines will be installed adjacent to existing 220-kV towers with the same approximate span lengths. Segment 2 is 2.5 miles long and involves the replacement of 14 existing double-circuit 66-kV lattice steel towers with engineered steel poles. Segment 3 is 1.2 miles long and involves the replacement of 31 single-circuit wood poles with double-circuit lightweight steel poles. The project site elevation ranges from approximately 250 to 900 feet above mean sea level (msl). It is located on the U.S. Geological Survey (USGS) Thousand Oaks and Simi Valley West 7.5-minute quadrangle maps.

Native vegetation types along the project alignment consist primarily of coastal sage scrub and chaparral. The Segment 1 towers located within the survey area are surrounded by coastal sage scrub, which is dominated by rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and gray coast buckwheat (*Eriogonum cinereum*). Segment 2 and Segment 3 also contain coastal sage scrub that is characterized by the species listed above but that is also co-dominated by coastal prickly pear (*Opuntia littoralis*) and purple sage (*Salvia leucophylla*) in some areas. Other native species found in this vegetation type include bladderpod (*Isomeris arborea*), bush sunflower (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), coyote brush (*Baccharis pilularis*), western poison oak (*Toxicodendron diversilobum*), bush monkeyflower (*Mimulus aurantiacus*), laurel sumac (*Malosma laurina*), and deerweed (*Lotus scoparius*).

Chaparral is also present along Segments 2 and 3. This vegetation type is dominated by chamise (*Adenostoma fasciculatum*) and bigpod ceanothus (*Ceanothus megacarpus*); other native species in this vegetation type include laurel sumac, lemonadeberry, blue elderberry (*Sambucus nigra* ssp*. caerulea*), and toyon (*Heteromeles arbutifolia*).

Disturbed areas consist of dirt roads and a large clearing at the southern end of the survey area. These areas are generally devoid of vegetation due to past mechanical disturbance. In the southern portion of the survey area, the scrub habitat and edges of the dirt access roads contain abundant invasive species, including black mustard (*Brassica nigra*), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), tocalote (*Centaurea melitensis*), and slender wild oat (*Avena barbata*).

SURVEY METHODOLGY

The methodology for conducting pre-construction nesting bird surveys consisted of walking the length of the linear project site, including a 50-foot buffer around each pole location. The nesting bird surveys were conducted 3–4 days prior to construction work in each area, along Segments 1 and 2, from Pole 40 north to the Moorpark Substation. These surveys were conducted to determine the presence or absence of nesting birds on or immediately adjacent to the project site and using binoculars to survey areas that were inaccessible. All bird species observed within the survey area were recorded and any behaviors that indicated breeding activity were noted. All active nest locations were also noted. The objective was to closely observe birds to determine breeding stage (e.g., building nest, incubating eggs, feeding nestlings or fledglings) and, if possible, locate the nest or young. The surveys were conducted on July 22, 26, 27, and 28, and August 1, 2, 3, 11, 15, 23, and 24, 2011, from 6:30 AM to 11:00 AM by BonTerra Consulting Biologists Lindsay Messett and Cristhian Mace. The weather conditions during the survey were suitable for bird activity and consisted of mostly clear skies and mild temperatures with calm conditions.

Monitoring of coastal sage scrub removal was conducted along Segment 2, beginning at Pole 40 and continuing north to Pole 26. Additional areas that were surveyed include Poles 18 and 19; the access road between Poles 11 and 12; and a small, approximate 20,000-square-foot area located in Segment 2, between Poles 35 and 36. This monitoring was conducted by Ms. Messett on July 27, 28, and August 1, 2, 3, and 24, 2011. The vegetation was removed using hand tools such as clippers and hand-held string trimmers. The vegetation clearing was performed to open up the existing access roads throughout the project site and to widen several pad areas adjacent to the poles to make enough room for the construction component of the project.

RESULTS

On July 27, Ms. Messett observed a California quail (*Callipepla californica*) nest located at the base of a lemonadeberry shrub just west of Pole 32 as work was beginning at that location. The nest contained a total of six eggs. Ms. Messett consulted with the construction supervisor and crews were re-directed to continue work at Pole 31 while the status of the nest was assessed by Ms. Messett. Ms. Messett checked the nest location at the end of the day and no adult quail were observed or detected in the vicinity.

On July 28, Ms. Messett checked the quail nest next to Pole 32 again. It was determined that this nest was likely abandoned prior to vegetation clearing activities, since no adults were detected in the vicinity of the nest during the pre-construction survey and no adults were observed incubating. Also, California quail tend to lay between 10 and 12 eggs per clutch and only 6 eggs were

present in the nest. Ms. Messett also observed an old nest (likely a Cassin's kingbird [*Tyrannus vociferans*]) located within a pepper tree (*Schinus molle*) near Pole 29. This nest was empty and therefore, not considered active.

On August 11, 2011, Ms. Mace observed an active northern mockingbird nest (*Mimus polyglottos*) located in an ornamental shrub along the northern side of the Moorpark Substation. The adults were observed entering the shrub carrying food items and at least one chick was detected through vocalization. The presence of this nest was communicated to SCE and no work was performed in this area until the nest was confirmed to be inactive.

On August 23, 2011, Ms. Messett located an old nest within a small California sagebrush shrub located between Poles 35 and 36. The nest was falling apart and empty; therefore, it was presumed to be inactive. Ms. Messett also checked on the mockingbird nest that Ms. Mace located on August 11, 2011. This nest was also very dilapidated and did not contain any eggs or chicks. Because no mockingbirds were detected in the area, it was determined that the chicks from the August 11 survey had fledged and this nest was no longer active.

CONCLUSIONS

With the implementation of minimization measures (nesting bird survey and protective buffers for nests found), the removal of vegetation within Segments 1 and 2 of the project site was completed with no impacts on nesting bird species. Construction crews should continue to follow avoidance and minimization measures to avoid impacts on special status resources throughout their activities.

Please contact David Hughes at (626) 351-2000 or Lindsay Messett at (714) 444-9199 with any questions related to this project.

Sincerely,

BONTERRA CONSULTING

David T. Hughes
Senior Project Manager

for

Lindsay A. Messett
Biologist

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David Hughes - Moorpark-Newbury Status Report - Sept 7

From: David Hughes
To: manjunath.venkat@sce.com
Date: 9/8/2011 11:22 AM
Subject: Moorpark-Newbury Status Report - Sept 7
CC: Lindsay Messett

Manju:
Lindsay's report from yesterday's activities:

I arrived on site at 6:30 am and met with Adam Bell and the veg. clearing crew. The crew trimmed one native shrub (lemonadeberry) and a non-native tree (Peruvian pepper) along the alignment (between poles 48 and 52). No impacts to adjacent CSS occurred during this activity. Two crews showed up on site to begin drilling holes for the new pole placement. Adam Bell and I gave all the members of the crews the WEAP training and I specified the sensitive issues in this portion of the project site. The pentachaeta area is fenced off with caution tape, the dudleya area has pin flags marking the boundary and the gnatcatchers are in the surrounding area but are no longer nesting. I informed the crews that during any digging, the top 6 inches of soil in this area needs to be salvaged and then replaced when done. The crews were informed to stay on designated roads, and to not impact the adjacent sage scrub vegetation. When placing the new poles along the alignment, I told them when possible, place them along the road or in disturbed/ruderal areas...lessen the impact to sage scrub when possible.

It was decided that daily construction monitoring was not needed and monitoring spot checks woudl be conducted on an approximately weekly basis.

No impacts to any sensitive biological resources occurred while I was onsite.

David Hughes
Project Manager

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David Hughes - Moorpark-Newbury Status Report - Sept 6

From: David Hughes
To: manjunath.venkat@sce.com
Date: 9/6/2011 4:38 PM
Subject: Moorpark-Newbury Status Report - Sept 6
CC: Lindsay Messett

Hi Manju,
I just spoke with Lindsay about project activities for the day. A summary:

Lindsay monitored vegetation clearing that occurred around each pole location starting at pole 43 all the way to the Lawrence substation (mostly non-native vegetation)
Lindsay monitored Larry as he performed some soil stabilization work at pole 42 (briefly ~10-15 minutes)
Lindsay provided WEAP training to a new crew that was onsite to dig holes for new poles. She indicated many of the crew members had received the training previously, but a few hadn't.
No unintended impacts to biological resources occurred (i.e., full compliance).

On another note, Lindsay indicated that she was receiving input that she was needed to monitor all construction activities for the rest of the project. I wanted to confirm with you that this is unnecessary. Now that we're out of the nesting season, the proposed minimization measures indicate that a biological monitor is not needed on a daily basis. Our proposal indicated that we would perform daily pre-construction nesting monitoring to facilitate work and provide daily monitoring when working around sensitive resources (e.g., gnatcatcher habitat during nesting season). Otherwise, we had proposed monitoring on an as-needed basis, where we would check in to ensure that everything was going smoothly (approximately once a week). I understand that with the recent violation, that we are under a greater degree of scrutiny, but having a BonTerra monitor onsite for 6 days/week X several months would seem to be going overboard.

Lindsay will be onsite tomorrow to monitor the removal of the last(?) bit of native vegetation. Please call me tomorrow morning to discuss how you'd like to proceed going forward.

Regards,

David Hughes
Project Manager

BonTerra Consulting
Costa Mesa | Pasadena
3452 E. Foothill Blvd, Suite 420
Pasadena, CA 91107
T: (626) 351-2000 F: (626) 351-2030
www.BonTerraConsulting.com

David Hughes - Re: Fwd: Zone 4 Activities

From: David Hughes
To: Manjunath.Venkat@sce.com; Mark.Burton@sce.com
Date: 8/23/2011 3:24 PM
Subject: Re: Fwd: Zone 4 Activities
CC: Lindsay Messett

Mark/Manju,
Lindsay was on site today and cleared the area that was indicated for the wire string equipment. One old nest was found but no active nests. She also met up with Larry onsite and he indicated that there was some vegetation removal planned for tomorrow. She surveyed that area indicated by Larry and documented that no active nesting occurs there either. She also confirmed that a mockingbird nest near Moorpark substation that was previously identified is currently inactive.

Summary -- there are no biological constraints to current activities.

Lindsay will be onsite tomorrow to monitor the vegetation clearing activities indicated by Larry.

Please let me know if there are any questions or concerns.

David Hughes
Project Manager

BonTerra Consulting
Costa Mesa | Pasadena
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www.BonTerraConsulting.com

>>> <Mark.Burton@sce.com> 8/22/2011 1:23 PM >>>
David/Lindsay
This is the area we will need to have surveyed in order to brush and grade for the wire string equipment to set up. Lindsay please contact Larry Gavin 805 610 3554

Mark Burton
Supervisor Transmission
Road & Right of Way
661 904-5123

From: "David Hughes" <DHughes@bonterraconsulting.com>

Appendix F3

Construction Monitoring Reports

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
January 13, 2011

Prepared By: Greg McGowan and Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #63 - 43
Construction Purpose: Construction on hold pending crew availability
Monitoring Dates: Thursday, January 6, 2011 and Thursday January 13, 2011

Previous Site Inspection: Tuesday, December 21, 2010

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP:

1) Grading spoils forming the end of the road by pole 43 showed many large cracks, 1-3 inches in width and 2 feet or longer, indicating the beginnings of slope failure. Slope failures in this type of loose sediment are generally triggered by excess water providing both lubrication and excess weight. The immediate BMPs for arresting such failures are designed to prevent additional water from entering the material. Long-term BMPs for stabilizing such slopes are generally based either on establishing deep-rooted perennial plants or the use of concrete. In this case, Arcadis notified SCE and RBF and worked with RBF to select, purchase, and install plastic sheeting as a short-term BMP to prevent additional rain water from entering the loose material. Given the forecast for 2-4 more inches of rainfall in the next 24 hours it was judged important to act promptly. **Slope is intact and holding.**
2) Significant trackout was observed at the Conejo Drive entrance including clods up to 6 inches in diameter. The tire tracks from last Friday appeared to be unchanged. While the sweeping contractor may have visited the site on Friday or Monday, there is no evidence that sweeping actually occurred anytime between Friday afternoon and Tuesday afternoon. **No trackout observed. J. Kirby (RBF SWPPP monitor) has met with the sweeping crew and states that proper sweeping is now occurring daily.**
3) Inlet protection (gravel bags in v-ditch) northwest of pole 64 needs to be cleared of trapped sediment. **Resolved.**

Outstanding issues:

Safety: None

Biological: None

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
January 13, 2011

Cultural: None

SWPPP:

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to fail at some point in the future. Repair of the gully may need to be coordinated with the City of Thousand Oaks. There is some question as to the source of the water: either (a) from SCE/RBF gravel bags for inlet protection causing water to back up and flow across the sidewalk, or (b) from unrelated hillside drainage. Arcadis is researching this with RBF and will advise so that SCE can discuss with the City as appropriate.
2) Gravel bags on street are clogged with sediment so that water is ponding and flowing around the ends rather than passing through the bags. Bags need to be replaced. Current bags are filled with pea gravel. The use of larger aggregate (¾ inch) would allow bags to function effectively for longer periods before needing replacement.
3) SWPPP inlet protection BMPs on adjacent streets require maintenance. Trapped sediment has been cleared as required, but numerous bags have been damaged or removed. Remaining bags are too clogged with sediment to allow water to filter through and need to be replaced.
4) The water bar southwest of pole 58 failed and requires realignment for proper drainage.
5) The roadside fiber roll northeast of pole 54 was undercut by water in one spot. The berm in this location should be repaired to prevent drainage over the side of the road or, alternatively, this should be turned into a formal drain with appropriate energy-dissipating BMPs (to avoid gullying of the hillside and damage to the road).
6) The drain for the water bar adjacent to pole 54 requires additional gravel bags to reduce erosion and capture additional sediment.
7) The bottom line of gravel bags just east of the Academy Road entrance was overtopped by sediment. The sediment has been partially removed, but that line of bags should be raised another tier to accommodate more water and sediment in future.
8) The BMPs at the road intersection by pole 48 are adequate for temporary stabilization. However, permanent stabilization of that area will require additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
9) The water bar northwest of pole 47 failed and has been repaired. This water bar, however, needs to be realigned farther uphill for proper drainage and to be away from the rock outcrop off of which it has twice slipped.
10) The road west of pole 45 that was being monitored does need additional drainage. The new, temporary water bar and drain west of pole 45 needs to be upgraded to BMP standards to withstand construction traffic.
11) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair. No rain in extended forecast.

Observations at the site:

Biological: Flagging is in place.

Cultural: The requirement for archeological monitoring near poles 59-62 during ground-disturbing activities was reviewed with the SWPPP monitor—even for water bar maintenance in the freshly graded road.

SWPPP:

1) Outstanding issues listed above are unchanged.
2) RBF is waiting to make additional SWPPP repairs on the dirt road until hearing if SCE intends to regrade prior to construction.
3) The plastic sheeting BMP protecting the slope below pole 43 experienced minor wind damage. A temporary repair is holding, however additional sandbags are needed to further secure the BMP prior to the next storm.

Safety: None

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
January 13, 2011

Prepared By: Greg McGowan and Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #63 - 43
Construction Purpose: Construction on hold pending crew availability
Monitoring Dates: Thursday, January 6, 2011 and Thursday January 13, 2011

Previous Site Inspection: Tuesday, December 21, 2010

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP:

1) Grading spoils forming the end of the road by pole 43 showed many large cracks, 1-3 inches in width and 2 feet or longer, indicating the beginnings of a slide of these spoils. Slides or slumps in this type of loose sediment are generally triggered by excess water providing both lubrication and excess weight. The immediate BMPs for arresting such slides are designed to prevent additional water from entering the material. Long-term BMPs for stabilizing such slopes are generally based either on establishing deep-rooted perennial plants or the use of concrete. In this case, Arcadis notified SCE and RBF and worked with RBF to select, purchase, and install plastic sheeting as a short-term BMP to prevent additional rain water from entering the loose material. Given the forecast for 2-4 more inches of rainfall in the next 24 hours it was judged important to act promptly. **Slope is intact and holding.**
2) Significant trackout was observed at the Conejo Drive entrance including clods up to 6 inches in diameter. The tire tracks from last Friday appeared to be unchanged. While the sweeping contractor may have visited the site on Friday or Monday, there is no evidence

that sweeping actually occurred anytime between Friday afternoon and Tuesday afternoon. **No trackout observed. J. Kirby (RBF SWPPP monitor) has met with the sweeping crew and states that proper sweeping is now occurring daily.**

3) Inlet protection (gravel bags in v-ditch) northwest of pole 64 needs to be cleared of trapped sediment. **Resolved.**

Outstanding issues:

Safety: None

Biological: None

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the gravel bags on street have become clogged with sediment so that water is ponding and flowing around the ends rather than passing through the bags. Bags need to be replaced. One option to increase the effective service life of these gravel bags is to use slightly larger aggregate.
2) SWPPP inlet protection BMPs on adjacent streets require maintenance. Trapped sediment has been cleared as required. A number of gravel bags have been damaged or removed.
3) The roadside fiber roll northeast of pole 54 was undercut by water in one spot. The roadside berm in this location should be repaired to prevent drainage over the side of the road (and potential gullying). Another potential solution would be to install a McCarthy drain with appropriate energy-dissipating BMPs.
4) The drain for the water bar adjacent to pole 54 requires additional gravel bags to reduce erosion and capture additional sediment.
5) The bottom line of gravel bags just east of the Academy Road entrance was overtopped by sediment. The sediment has been partially removed, but that line of bags should be raised another tier and/or be supplemented with silt fence to accommodate more water and sediment in future.

Long-term site stabilization (prior to permit termination)

6) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. Repair of the gully may need to be coordinated with the City of Thousand Oaks. There is some question as to the source of the water: either (a) from inlet protection gravel bags causing water to back up and flow across the sidewalk, or (b) from unrelated hillside drainage. Arcadis is researching this and will advise so that SCE can discuss with the City as appropriate.
7) The water bar southwest of pole 58 failed during heavy rain and requires realignment for proper drainage.
8) The BMPs at the road intersection by pole 48 are adequate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
9) The water bar northwest of pole 47 failed during heavy rain and has been repaired. For long-term stabilization, this water bar needs to be realigned farther uphill for proper drainage and to be away from the rock outcrop off of which it has twice slipped.
10) The road west of pole 45 that was being monitored does need additional drainage. The new, temporary water bar and drain west of pole 45 needs to be upgraded to BMP standards to withstand construction traffic.
11) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair. No rain in the extended forecast.

Observations at the site:

Biological: Flagging is in place.

Cultural: The requirement for archeological monitoring near poles 59-62 during ground-disturbing activities was reviewed with the SWPPP monitor—even for water bar maintenance in the freshly graded road.

SWPPP:

1) RBF is waiting to make additional SWPPP repairs on the dirt road until hearing if SCE intends to re-grade prior to construction.
2) The plastic sheeting BMP protecting the slope below pole 43 experienced minor wind damage. A temporary repair is holding, however the sheeting would be more secure with the addition of several more lines of sandbags.

Safety: None

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
February 1, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #63 - 43
Construction Purpose: Laying out poles and attaching insulators, etc.
Monitoring Dates: Thursday, January 27, 2011 and Tuesday February 1, 2011

Previous Site Inspection: Thursday, January 24, 2011

Previous issues (resolved):

Safety: None

Biological: Flagging tape for Lyon's Pentachaeta avoidance is partially torn from recent heavy winds (1/27). Linda Robb was notified by phone 1/27. **Replaced by 2/1.**

Cultural: None

SWPPP: None

Outstanding issues:

Safety: Between poles 58 (recently replaced) and 59, there is a piece of wire hanging down where it could potentially pose a physical hazard to people walking under the line. The wire is light seizing wire wrapped around the lowest communication wire on the poles. Chris May was notified immediately by email and phone on 1/19.

Biological: None

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the gravel bags on street have become clogged with sediment so that water is ponding and flowing around the ends rather than passing through the bags. Bags need to be replaced. One option to increase the effective service life of these gravel bags is to use slightly larger aggregate.
2) SWPPP inlet protection BMPs on adjacent streets require maintenance. Trapped sediment has been cleared as required. A number of gravel bags have been damaged or removed.
3) The roadside fiber roll northeast of pole 54 was undercut by water in one spot. The roadside berm in this location should be repaired to prevent drainage over the side of the road (and potential gullying). Another potential solution would be to install a McCarthy drain with appropriate energy-dissipating BMPs.
4) The drain for the water bar adjacent to pole 54 requires additional gravel bags to reduce erosion and capture additional sediment.
5) The bottom line of gravel bags just east of the Academy Road entrance was overtopped by sediment. The sediment has been partially removed, but that line of bags should be raised another tier and/or be supplemented with silt fence to accommodate more water and sediment in future.
6) The plastic sheeting BMP protecting the slope below pole 43 experienced minor wind damage. A temporary repair is holding, however the sheeting would be more secure with the addition of several more lines of sandbags.

Long-term site stabilization (prior to permit termination)

7) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. Repair of the gully may need to be coordinated with the City of Thousand Oaks.
8) The water bar southwest of pole 58 failed during heavy rain and requires realignment for proper drainage.
9) The BMPs at the road intersection by pole 48 are adequate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.

10) The water bar northwest of pole 47 failed during heavy rain and has been repaired. For long-term stabilization, this water bar needs to be realigned farther uphill for proper drainage and to be away from the rock outcrop off of which it has twice slipped.
11) The road west of pole 45 that was being monitored does need additional drainage. The new, temporary water bar and drain west of pole 45 needs to be upgraded to BMP standards to withstand construction traffic.
12) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair. No rain in the extended forecast. A trace of rain was recorded on site on Sunday but did not generate any sediment movement.

Observations at the site:

Biological:

1) Flagging is in place.
2) Recently-replaced pole 58 needs avian-safe equipment installed on distribution lines.

Cultural: On 2/1 the crew was working on pole 60, was aware of the cultural resource issues, and had spoken with the archeological monitor on site earlier in the day.

SWPPP:

1) Trackout at Academy Road entrance needed sweeping on 2/1. SWPPP monitor J. Kirby was aware and placed a call to the sweeper.
2) SWPPP monitor anticipates having a Tidwell crew out on site by 2/11 to deal with outstanding SWPPP issues.

Safety: None

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
February 8, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #63 - 43
Construction Purpose: Laying out poles and attaching insulators, etc.
Monitoring Dates: Friday, February 4, 2011 and Tuesday February 8, 2011

Previous Site Inspection: Tuesday February 1, 2011

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP:

1) Trackout at Academy Road entrance needed sweeping on 2/1. SWPPP monitor J. Kirby was aware and placed a call to the sweeper. **Resolved by 2/4.**
2) The road west of pole 45 that was being monitored does need additional drainage. The new, temporary water bar and drain west of pole 45 needs to be upgraded to BMP standards to withstand construction traffic. **Resolved 2/8 with new water bars.**
3) The bottom line of gravel bags just east of the Academy Road entrance was overtopped by sediment. The sediment has been partially removed, but that line of bags should be raised another tier and/or be supplemented with silt fence to accommodate more water and sediment in future. **Resolved 2/8 with additional gravel bags.**
4) The plastic sheeting BMP protecting the slope below pole 43 experienced minor wind damage. A temporary repair is holding, however the sheeting would be more secure with the addition of several more lines of sandbags. **Resolved 2/8 with additional sand bags.**

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
February 8, 2011

Outstanding issues:

Safety: Between poles 58 (recently replaced) and 59, there is a piece of wire hanging down where it could potentially pose a physical hazard to people walking under the line. The wire is light seizing wire wrapped around the lowest communication wire on the poles. Chris May was notified immediately by email and phone on 1/19. Transmission crew on site was notified 2/8.

Biological: None

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the gravel bags on street have become clogged with sediment so that water is ponding and flowing around the ends rather than passing through the bags. Bags need to be replaced. One option to increase the effective service life of these gravel bags is to use slightly larger aggregate.
2) SWPPP inlet protection BMPs on adjacent streets require maintenance. Trapped sediment has been cleared as required. A number of gravel bags have been damaged or removed.
3) The roadside fiber roll northeast of pole 54 was undercut by water in one spot. The roadside berm in this location should be repaired to prevent drainage over the side of the road (and potential gullying). Another potential solution would be to install a McCarthy drain with appropriate energy-dissipating BMPs.
4) The drain for the water bar adjacent to pole 54 requires additional gravel bags to reduce erosion and capture additional sediment.

Long-term site stabilization (prior to permit termination)

5) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. Repair of the gully may need to be coordinated with the City of Thousand Oaks.

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6) The water bar southwest of pole 58 failed during heavy rain and requires realignment for proper drainage.
7) The BMPs at the road intersection by pole 48 are adequate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
8) The water bar northwest of pole 47 failed during heavy rain and has been repaired. For long-term stabilization, this water bar needs to be realigned farther uphill for proper drainage and to be away from the rock outcrop off of which it has twice slipped.
9) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair and windy. No rain in the extended forecast.

Observations at the site:

Biological:

1) Flagging is in place.
2) Recently-replaced pole 58 needs avian-safe equipment installed on distribution lines.

Cultural:

1) On 2/8 the crew was working on pole 60 and was aware of the cultural resource issues.

SWPPP:

1) P. Kuga and J. Kirby were on site working with a Tidwell crew on SWPPP issues. Additional work was under way and more is expected by 2/11.
2) An Edison water truck parked at Lawrence Drive did not have a drip pan underneath. The truck has not been left parked on site for any length of time, but if it is in future a drip pan would prevent any potential oil drips from contaminating the soil. P. Kuga was notified and agreed to discuss with Edison.
3) Gravel bags in the v-ditch northwest of pole 64 have trapped sediment and should be cleaned before next rain.

Safety: None

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
February 8, 2011

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
February 15, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #63 - 43
Construction Purpose: Replacing poles
Monitoring Dates: Friday, February 11, 2011 and Tuesday February 15, 2011

Previous Site Inspection: Tuesday February 8, 2011

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP:

1) Many of the gravel bags on street have become clogged with sediment so that water is ponding and flowing around the ends rather than passing through the bags. Bags need to be replaced. One option to increase the effective service life of these gravel bags is to use slightly larger aggregate. **Resolved by 2/11.**
2) SWPPP inlet protection BMPs on adjacent streets require maintenance. Trapped sediment has been cleared as required. A number of gravel bags have been damaged or removed. **Resolved by 2/11.**
3) The drain for the water bar adjacent to pole 54 requires additional gravel bags to reduce erosion and capture additional sediment. **Resolved by 2/11.**
4) The water bar southwest of pole 58 failed during heavy rain and requires realignment for proper drainage. **Resolved by 2/11.**
5) An Edison water truck parked at Lawrence Drive did not have a drip pan underneath. The truck has not been left parked on site for any length of time, but if it is in future a drip pan would prevent any potential oil drips from contaminating the soil. P. Kuga was

notified and agreed to discuss with Edison. **Resolved by parking water truck at substation.**

6) The water bar northwest of pole 47 failed during heavy rain and has been repaired. For long-term stabilization, this water bar needs to be realigned farther uphill for proper drainage and to be away from the rock outcrop off of which it has twice slipped. **Resolved by 2/11.**
7) The roadside fiber roll northeast of pole 54 was undercut by water in one spot. The roadside berm in this location should be repaired to prevent drainage over the side of the road (and potential gullying). Another potential solution would be to install a McCarthy drain with appropriate energy-dissipating BMPs. **Resolved by 2/11.**

<u>Outstanding issues:</u>

Safety:

1) Between poles 58 (recently replaced) and 59, there is a piece of wire hanging down where it could potentially pose a physical hazard to people walking under the line. The wire is light seizing wire wrapped around the lowest communication wire on the poles. Chris May was notified immediately by email and phone on 1/19. Transmission crew on site was notified 2/8.

Biological:

1) Recently-replaced pole 58 needs avian-safe equipment installed on distribution lines.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Gravel bags in the v-ditch northwest of pole 64 have trapped sediment and should be cleaned before next rain.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk

and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. Repair of the gully may need to be coordinated with the City of Thousand Oaks.

2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair and windy 2/11. Light rain 2/14 left the roads muddy on 2/15. Significant rain is forecast for the rest of the week.

Observations at the site:

General: Conductors have been transferred over to the new pole for 63. The top of the old pole has been removed and the base is expected to be removed after this week's rains.

Biological:

1) Flagging is in place.
2) Biologist apparently spotted a gnatcatcher in the vicinity of pole 55 on 2/14. This pole was scheduled to have its transformers removed and switched to the adjacent distribution line today 2/15.

Cultural: None

SWPPP:

1) Extensive SWPPP work has greatly improved site stability.
2) The water bar south of pole 60 has been too flattened by truck traffic to perform its function. After the crews departed, J. Kirby added gravel bags on top as a temporary measure for this week's rain.
3) Light rain 2/14 left the road muddy. There was no significant trackout at the site this morning. However the SWPPP monitor will return this afternoon to ensure that any trackout has been swept up.

Safety: None

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
February 25, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 43
Construction Purpose: Replacing poles
Monitoring Dates: Friday February 18, Tuesday February 22, and Friday February 25, 2011

Previous Site Inspection: Tuesday February 15, 2011

Previous issues (resolved):

Safety:

1) Between poles 58 (recently replaced) and 59, there is a piece of wire hanging down where it could potentially pose a physical hazard to people walking under the line. The wire is light seizing wire wrapped around the lowest communication wire on the poles. Chris May was notified immediately by email and phone on 1/19. Transmission crew on site was notified 2/8. **Resolved by 2/18/11.**

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety: None

Biological:

1) Recently-replaced pole 58 needs avian-safe equipment installed on distribution lines.

Cultural: None

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
February 25, 2011

SWPPP:

Short-term site stabilization and SWPPP controls

1) Gravel bags in the v-ditch northwest of pole 64 have trapped sediment and should be cleaned before next rain.
2) The water bar south of pole 60 has been too flattened by truck traffic to perform its function.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. Repair of the gully may need to be coordinated with the City of Thousand Oaks.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Intermittently rainy throughout period with 1.5 inches of rain measured at Lawrence Drive over the 2/18 weekend. Fair mid-week. Rain again on Friday 2/25 with heavy rain forecast for the evening.

Observations at the site:

General: Poles 63-65 were completed.

Biological:

1) Flagging is in place.

Cultural:

1) Water bar repairs are needed in the cultural resources area in the vicinity of poles 59-61. The SWPPP crew may require assistance to arrange for appropriate archeological monitoring.

SWPPP:

1) Extensive SWPPP maintenance was performed after last week's rains. BMP's generally performed well, minimizing erosion and trapping sediment on site. The erosion noted on the site was related to water bars being damaged by non-Edison vehicles driving the roads while muddy.
2) Trackout has been observed intermittently at Conejo Center Drive and Academy Drive. J. Kirby reports that a new person is in charge of sweeping and that he has been fairly responsive to requests for street sweeping. On 2/25 there was significant trackout at Conejo Center Drive.
3) On 2/24 a broken hydraulic line on one of the trucks led to the release of a reasonable quantity of hydraulic fluid onto the dirt road by pole 63. The affected soil was removed and clean soil from the road side berm used to refill the hole. The area is currently covered with plastic sheeting and sandbags to prevent rain water infiltration pending soil test results.
4) SWPPP inlet protection BMPs on adjacent streets require maintenance. The woven poly bags that were used to replace numerous missing and damaged gravel bags are insufficiently porous to rapidly filter water resulting in overflow and bypass.
5) Numerous vehicles were driven through the site following last week's rains while the roads were muddy. Many water bars were damaged, especially the newer water bars that had not yet settled. SWPPP workers repaired these as well as possible with hand tools and removed accumulated sediment from BMP's. For long-term effectiveness most of the water bars need to be made significantly larger and to be thoroughly compacted.

Safety: None

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
March 14, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Tuesday March 8, and Friday March 11, 2011

Previous Site Inspection: Friday March 4, 2011

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

1) Water bar repairs are needed in the cultural resources area in the vicinity of poles 59-61. The SWPPP crew may require assistance to arrange for appropriate archeological monitoring. **Resolved.**

SWPPP:

1) The water bar south of pole 60 has been too flattened by truck traffic to perform its function. **Rebuilt 3/11.**
2) The area affected by the hydraulic fluid spill on 2/24 is still covered by a tarp pending results of soil testing. **Tarp removed 3/3, presumably after soil tests came back clean.**

Outstanding issues:

Safety: None

Biological:

1) Pole 58 needs avian-safe equipment installed on distribution lines.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Gravel bags in the v-ditch northwest of pole 64 have trapped sediment and should be cleaned before next rain.
2) SWPPP inlet protection BMPs on adjacent streets require maintenance. The woven poly bags that were used to replace numerous missing and damaged gravel bags are insufficiently porous to rapidly filter water resulting in overflow and bypass. Appropriate bags for gravel bag BMPs on roadways are both durable and highly porous: either an open weave plastic or a geotextile (*e.g.*, weed barrier fabric).
3) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness most of the water bars need to be made significantly larger and to be thoroughly compacted.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. Repair of the gully may need to be coordinated with the City of Thousand Oaks.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair all week. No rain forecast until Friday 3/18.

Observations at the site:

General:

1) Poles 58, 60, 63-67 were completed.

2) Options were examined for access to poles 43-49 from Conejo Center Drive and a separate report submitted.

Biological:

1) Flagging is in place as required including flagging on poles in the gnatcatcher work restriction area of poles 50-56.

Cultural:

1) Archeological monitor was on site to monitor SWPPP maintenance around poles 59-61.

SWPPP:

1) Water bars and SWPPP BMPs in the vicinity of poles 60-62 were overhauled effectively for long term stability on 3/11.

Safety: None

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
March 18, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Tuesday March 15, and Friday March 18, 2011

Previous Site Inspection: Friday March 11, 2011

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP:

1) SWPPP inlet protection BMPs on adjacent streets require maintenance. The woven poly bags that were used to replace numerous missing and damaged gravel bags are insufficiently porous to rapidly filter water resulting in overflow and bypass. Appropriate bags for gravel bag BMPs on roadways are both durable and highly porous: either an open weave plastic or a geotextile (*e.g.*, weed barrier fabric). **Resolved – all bags along adjacent roads have been replaced.**

Outstanding issues:

Safety: None

Biological:

1) Pole 58 needs avian-safe equipment installed on distribution lines.

Cultural: None

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
March 18, 2011

SWPPP:

Short-term site stabilization and SWPPP controls

2) Gravel bags in the v-ditch northwest of pole 64 have trapped sediment and should be cleaned before next rain.
3) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness most of the water bars need to be made significantly larger and to be thoroughly compacted.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The most recent rains have deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair all week. Rain forecast for the weekend.

Observations at the site:

General:

1) Poles 58-67 were completed.
2) Sawdust from cutting up old poles was left on the road by poles 59, 61 and 62. Sawdust from creosote-treated poles is hazardous waste and should be contained and removed. Tarps are available on site for collecting sawdust during cutting.

Biological:

1) Flagging is in place as required including flagging on poles in the gnatcatcher work restriction area of poles 50-56.

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2) Pole 57 has been added to the gnatcatcher work restriction, but the pole has not yet been flagged.
3) Pole 59 needs avian-safe equipment installed on the distribution lines.

Cultural:

1) Archeological monitor was on site to monitor installation of poles 61 and 62.

SWPPP:

1) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
2) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
3) Frank Munoz reported that they had a second leak of hydraulic fluid on Monday 3/14 by the base of pole 62. He stated that he reported it to environmental immediately and that it was fully contained with two shovelfuls of affected soil.

Safety: None

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
March 28, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Tuesday March 22, and Friday March 25, 2011

Previous Site Inspection: Friday March 18, 2011

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety: None

Biological:

1) Pole 57 has been added to the gnatcatcher work restriction, but the pole has not been flagged.
2) Pole 58 needs avian-safe equipment installed on the distribution lines.
3) Pole 59 needs avian-safe equipment installed on the distribution lines.

Cultural: None

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
March 28, 2011

SWPPP:

Short-term site stabilization and SWPPP controls

1) Gravel bags in the v-ditch northwest of pole 64 have trapped sediment and should be cleaned before next rain.
2) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness most of the water bars need to be made significantly larger and to be thoroughly compacted.
3) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
4) Fiber rolls by pole 47 were torn by non-Edison vehicles. The damaged section does not receive runoff and can be removed to neaten the site.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The most recent rains have deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

<u>Site Conditions/Weather:</u> Over five inches of rain on Sunday 3/20 tested SWPPP BMPs. Additional light rain through the week. No rain forecast for this week, though there may be rain this coming weekend.

<u>Observations at the site:</u>

General:

1) Poles 58-67 were completed.

Biological:

1) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural:

1) None

SWPPP:

1) The eastern soil stockpile at Academy Drive was uncovered by strong winds. Arcadis and RBF replaced tarps on Friday 3/25.
2) The gravel bags adjacent to the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
3) Fiber rolls adjacent to substation have been overtopped by sediment and should be dug out to prevent sediment entering the adjacent storm drain.
4) Gullies over 12 inches deep cut into the road southwest of the substation during the last storms (see Safety #2 below). A cost-effective repair would be to fill with approximately 3 cubic yards of 1"-2" size crushed rock.
5) The new water bars south of pole 61 showed minor erosion at their drain during recent storms. Gravel bags or gabions are needed for energy dissipation at their drain.
6) The silt fence and gravel bags adjacent to pole 61 were overtopped by sediment and need maintenance.
7) The new stabilized entrance on Conejo Center Drive is in good condition.
8) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags may be needed soon.

Safety:

1) The broken guy wire for pole 60 was taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.

2) Gullies over 12 inches deep cut into the road southwest of the substation during the last storms, presenting potential trip hazards for the public (see SWPPP #4 above).
3) Gully adjacent to the sidewalk on Conejo Center Drive grew deeper and wider during the most recent storms.

SOUTHERN CALIFORNIA EDISON
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Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
April 8, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Tuesday April 5, and Friday April 8, 2011

Previous Site Inspection: Friday April 1, 2011

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP:

1) Fiber rolls adjacent to the Newbury Park substation have been overtopped by sediment and should be dug out to prevent sediment entering the adjacent storm drain. **Superseded. These wattles have been further buried by asphalt grindings. The water that flowed to this location now needs to be diverted farther uphill.**

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) Gullies that are over 12 inches deep in places developed in the road southwest of the Newbury Park substation during the 3/20/11 storm. They are steep-sided and deep enough to present potential trip hazards for the public.

3) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Biological:

1) Pole 58 needs avian-safe equipment installed on the distribution lines.
2) Pole 59 needs avian-safe equipment installed on the distribution lines.
3) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Gravel bags in the v-ditch northwest of pole 64 are no longer needed due to stabilization of upstream road crossing. They are deteriorating and should be removed before next rain.
2) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
3) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
4) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
5) Fiber rolls by pole 47 were torn by non-Edison vehicles. The damaged section does not receive runoff and can be removed to neaten the site.
6) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
7) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
8) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
9) Gullies over 12 inches deep cut into the road southwest of the substation during the last storms (see Safety #2 below). A cost-effective repair would be to fill with approximately 3 cubic yards of 1"-2" size crushed rock.

10) The new water bars south of pole 61 showed minor erosion at their drain during recent storms. Gravel bags or gabions are needed for energy dissipation at their drain.
11) The silt fence and gravel bags adjacent to pole 61 were overtopped by sediment and need maintenance.
12) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: No rain this week. Rain showers are possible over the weekend, then clear weather forecast for next week.

Observations at the site:

General:

1) The entire laydown area south and east of the Newbury Park substation has been covered with a 4 to 16 inch thick layer of asphalt grindings that have been compacted with rollers. There is no binder to hold the grindings together, however, and any water running downhill onto this area has the potential to erode the grindings and transport them to storm drains.
2) SWPPP repairs are on hold as the Tidwell crew is busy on other jobs, there are bird nest work restrictions, and there is no substantial rain in the forecast.

Biological:

1) No new issues

Cultural:

1) No new issues

SWPPP:

1) The asphalt grindings by the substation need to be protected from stormwater run-on. The recommended BMPs include water bars to divert water off the road south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible. The recommended locations include (1) ~50 feet southeast of pole 65, draining to the west and (2) just east of the southwest corner of the substation, draining northeast.
2) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.

Safety:

1) No new issues.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
April 25, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Tuesday April 19, and Friday April 22, 2011

Previous Site Inspection: Friday April 15, 2011

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) Gullies that are over 12 inches deep in places developed in the road southwest of the Newbury Park substation during the 3/20/11 storm. They are steep-sided and deep enough to present potential trip hazards for the public.
3) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Biological:

1) Pole 58 needs avian-safe equipment installed on the distribution lines.

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2) Pole 59 needs avian-safe equipment installed on the distribution lines.
3) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Gravel bags in the v-ditch northwest of pole 64 are no longer needed due to stabilization of upstream road crossing. They are deteriorating and should be removed before next rain.
2) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
3) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
4) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
5) Fiber rolls by pole 47 were torn by non-Edison vehicles. The damaged section does not receive runoff and can be removed to neaten the site.
6) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
7) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
8) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
9) Gullies over 12 inches deep cut into the road southwest of the substation during the last storms (see Safety #2 below). A cost-effective repair would be to fill with approximately 1 cubic yard of 1"-2" size crushed rock.
10) The new water bars south of pole 61 showed minor erosion at their drain during recent storms. Gravel bags or gabions are needed for energy dissipation at their drain.
11) The silt fence and gravel bags adjacent to pole 61 were overtopped by sediment and need maintenance.

12) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
13) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
14) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair. No rain last week, nor is any forecast for the coming week.

Observations at the site:

General:

1) New pole 41 was set in place by early Friday 4/22, but the old pole had not yet been removed. SWPPP repairs were scheduled for Mon 4/25.

Biological:

1) No new issues.

Cultural:

1) No new issues

SWPPP:

1) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.

Safety:

1) No new issues.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
May 2, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Tuesday April 26, and Friday April 29, 2011

Previous Site Inspection: Friday April 22, 2011

Previous issues (resolved):

Safety:

1) Gullies that are over 12 inches deep in places developed in the road southwest of the Newbury Park substation during the 3/20/11 storm. They are steep-sided and deep enough to present potential trip hazards for the public. **Resolved.**

Biological: None

Cultural: None

SWPPP:

1) The silt fence and gravel bags adjacent to pole 61 were overtopped by sediment and need maintenance. **Resolved.**
2) Gravel bags in the v-ditch northwest of pole 64 are no longer needed due to stabilization of upstream road crossing. They are deteriorating and should be removed before next rain. **Resolved.**
3) Gullies over 12 inches deep cut into the road southwest of the substation during the last storms (see Safety #2 below). A cost-effective repair would be to fill with approximately 1 cubic yard of 1"-2" size crushed rock. **Resolved.**
4) The new water bars south of pole 61 showed minor erosion at their drain during recent storms. Gravel bags or gabions are needed for energy dissipation at their drain. **Resolved.**

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
May 2, 2011

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Biological:

1) Pole 58 needs avian-safe equipment installed on the distribution lines.
2) Pole 59 needs avian-safe equipment installed on the distribution lines.
3) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) Fiber rolls by pole 47 were torn by non-Edison vehicles. The damaged section does not receive runoff and can be removed to neaten the site.
5) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
6) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
7) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.

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8) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
9) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
10) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.
11) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair. Windy. No rain last week, nor is any forecast for the coming week. High winds were picking up thick layers of dust from the road to pole 41 even when trucks were not present.

Observations at the site:

General:

1) Pole 41 was replaced.
2) Ten additional loads of asphalt grindings were piled adjacent to the Newbury Park substation. It is not clear if those will be spread within the current footprint or will be used to further expand the footprint.

Biological:

1) Pole 41 needs avian-safe equipment installed on the distribution lines.
2) A gopher snake was run over and killed on the road adjacent to pole 60 on Monday or Tuesday. Other snakes have been seen in this vicinity and can be expected on all roads in the area. Crews should be advised to drive slowly and to watch out for snakes and other wildlife to avoid harming them.

Cultural:

1) No new issues

SWPPP:

1) Substantial SWPPP maintenance work occurred this week.
2) A foundation of rip-rap was placed in the wet spot of the road by pole 61 on which to rebuild that water bar.
3) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.
4) The plastic sheeting adjacent to pole 43 needs maintenance. The ropes holding down the sheeting have degraded due to UV exposure and a few have broken. The recommended BMP is to remove the tarps now that the rainy season is effectively over and to work towards permanent stabilization.

Safety:

1) No new issues.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
May 9, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Tuesday May 3, and Thursday May 5, 2011

Previous Site Inspection: Friday April 29, 2011

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Biological:

1) Pole 41 needs avian-safe equipment installed on the distribution lines.
2) Pole 58 needs avian-safe equipment installed on the distribution lines.
3) Pole 59 needs avian-safe equipment installed on the distribution lines.

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4) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) Fiber rolls by pole 47 were torn by non-Edison vehicles. The damaged section does not receive runoff and can be removed to neaten the site.
5) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
6) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
7) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
8) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
9) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
10) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.

11) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.
12) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.
13) The plastic sheeting adjacent to pole 43 needs maintenance. The ropes holding down the sheeting have degraded due to UV exposure and a few have broken. The recommended BMP is to remove the tarps now that the rainy season is effectively over and to work towards permanent stabilization.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair. Windy. No rain last week, nor is any forecast for the coming week. High winds were picking up thick layers of dust from the road to pole 41 even when trucks were not present.

Observations at the site:

General:

1) No substantial changes

Biological:

1) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils.

Cultural:

1) No new issues

SWPPP:

1) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils.

Safety:

1) No new issues.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
May 23, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Thursday May 19

Previous Site Inspection: Tuesday May 10

Previous issues (resolved):

Safety: None

Biological:

1) Pole 58 needs avian-safe equipment installed on the distribution lines. **Resolved. Kara Donahue clarified that this switch with jumpers underneath needs no additional raptor protection.**

Cultural: None

SWPPP:

1) None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Biological:

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2) Pole 59 needs avian-safe equipment installed on the distribution lines.
3) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
6) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
7) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
8) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
9) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.

10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.
11) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.
12) The plastic sheeting adjacent to pole 43 needs maintenance. The ropes holding down the sheeting have degraded due to UV exposure and a few have broken. The recommended BMP is to remove the tarps now that the rainy season is effectively over and to work towards permanent stabilization.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair. Light drizzle early in the week dampened roads but did not generate any runoff. No rain is in the extended forecast.

Observations at the site:

General:

1) No substantial changes to SCE work area, though additional asphalt grindings were spread farther west of the substation. Biological work restrictions limited access to the site. No work was being conducted.

Biological:

1) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils.

Cultural:

1) No new issues

SWPPP:

1) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils.

Safety:

1) No new issues.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
May 31, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Tuesday May 24

Previous Site Inspection: Thursday May 19

Previous issues (resolved):

Safety: None

Biological:

1) None

Cultural: None

SWPPP:

2) None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Biological:

1) Pole 59 needs avian-safe equipment installed on the distribution lines.

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2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
6) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
7) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
8) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
9) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.
10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading

observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.

11) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.
12) The plastic sheeting adjacent to pole 43 needs maintenance. The ropes holding down the sheeting have degraded due to UV exposure and a few have broken. The recommended BMP is to remove the tarps now that the rainy season is effectively over and to work towards permanent stabilization.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair. No rain is in the extended forecast.

Observations at the site:

General:

1) No substantial changes to SCE work area. Biological work restrictions limited access to the site. No work was being conducted.

Biological:

1) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils.

Cultural:

1) No new issues

SWPPP:

1) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils.

Safety:

1) No new issues.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
June 5, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Friday June 3

Previous Site Inspection: Tuesday May 24

Previous issues (resolved):

Safety: None

Biological:

1) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. **Mostly resolved. Plastic sheeting has been removed from all poles outside the gnatcatcher work restrictions.**

Cultural: None

SWPPP:

1) The plastic sheeting adjacent to pole 43 needs maintenance. The ropes holding down the sheeting have degraded due to UV exposure and a few have broken. The recommended BMP is to remove the tarps now that the rainy season is effectively over and to work towards permanent stabilization. **Resolved. Plastic sheeting removed. Underlying fiber rolls are still in place to prevent surface erosion.**

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Biological:

1) Pole 59 needs avian-safe equipment installed on the distribution lines.
2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
6) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
7) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
8) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or

drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.

9) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.
10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.
11) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.
12) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. Currently this only applies to poles 59-61.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair. An unseasonably late frontal system brought drizzle and light rain to the area Saturday and today.

Observations at the site:

General:

1) The plastic sheeting below pole 43 was removed and that area has adequate SWPPP BMPs for any reasonably light rains. Biological work restrictions limited access to the site. No work was being conducted.

Biological:

1) No new issues

Cultural:

1) No new issues

SWPPP:

1) Clear plastic sheeting covering stockpiles on Conejo Center Drive has degraded in sunlight and is flaking apart. The stockpiles need to be re-covered promptly both to meet SWPPP requirements and to prevent the shedding of additional plastic flakes.

Safety:

1) Abandoned 10-gauge copper wires were observed hanging down pole 48. They terminate on a cross-arm and are not connected to any other wires. They present a physical rather than electrical hazard. The wires are tied together at the end and dangle down to within six feet of the ground, swinging around in the wind.
2) Several additional rattlesnakes have been observed on site recently. Personnel may want to consider wearing snake chaps.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
June 19, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Friday June 17

Previous Site Inspection: Thursday June 9

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.
3) Abandoned 10-gauge copper wires were observed hanging down pole 48, 47, 46, and 44. They terminate on a cross-arm and are not connected to any other wires. They present a physical rather than electrical hazard. Some of the wires are tied together at the end and dangle down to within six feet of the ground, swinging around in the wind. Other wires are hanging down to the ground.

Biological:

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1) Pole 59 needs avian-safe equipment installed on the distribution lines.
2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
6) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
7) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
8) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
9) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.

10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.
11) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.
12) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. Currently this only applies to poles 59-61.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair.

Observations at the site:

General:

1) Biological work restrictions limited access to the site. No work was being conducted.

Biological:

1) No new issues

Cultural:

1) No new issues

SWPPP:

1) Plastic tarps covering stockpiles on Conejo Center Drive are disintegrating due to UV exposure. Two of the stockpiles have been covered with additional black plastic. The northernmost stockpile needs to be covered to prevent shreds of plastic from blowing off site.
2) The southern entrance on Conejo Drive has been partially blocked by a dumptruck load of dirt. This dirt did not originate from SCE but is in an area covered by the open construction permit. Best SWPPP practice would be to tarp this load of dirt as a stockpile.

Safety:

1) No new issues.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
June 29, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Thursday June 23

Previous Site Inspection: Friday June 17

Previous issues (resolved):

Safety:

1) Abandoned 10-gauge copper wires were observed hanging down pole 48, 47, 46, and 44. They terminate on a cross-arm and are not connected to any other wires. They present a physical rather than electrical hazard. Some of the wires are tied together at the end and dangle down to within six feet of the ground, swinging around in the wind. Other wires are hanging down to the ground. **Inspected by Adam Bell and deemd non-hazardous.**

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
June 29, 2011

Biological:

1) Pole 59 needs avian-safe equipment installed on the distribution lines.
2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
6) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
7) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
8) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
9) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.

10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.
11) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.
12) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. Currently this only applies to poles 59-61.
13) Plastic tarps covering stockpiles on Conejo Center Drive are disintegrating due to UV exposure. Two of the stockpiles have been covered with additional black plastic. The northernmost stockpile needs to be covered to prevent shreds of plastic from blowing off site.
14) The southern entrance on Conejo Drive has been partially blocked by a dumptruck load of dirt. This dirt did not originate from SCE but is in an area covered by the open construction permit. Best SWPPP practice would be to tarp this load of dirt as a stockpile.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair.

Observations at the site:

General:

1) Biological work restrictions limited access to the site. No work was being conducted.
2) City crews were clearing brush south of pole 63 between the road and adjacent homes.

Biological:

1) No new issues

Cultural:

1) No new issues

SWPPP:

1) No new issues.

Safety:

1) No new issues.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 5, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Thursday June 30

Previous Site Inspection: Thursday June 23

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Biological:

1) Pole 59 needs avian-safe equipment installed on the distribution lines.
2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 5, 2011

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
6) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
7) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
8) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
9) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.
10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.
11) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.

12) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. Currently this only applies to poles 59-61.
13) Plastic tarps covering stockpiles on Conejo Center Drive are disintegrating due to UV exposure. Two of the stockpiles have been covered with additional black plastic. The northernmost stockpile needs to be covered to prevent shreds of plastic from blowing off site.
14) The southern entrance on Conejo Drive has been partially blocked by a dumptruck load of dirt. This dirt did not originate from SCE but is in an area covered by the open construction permit. Best SWPPP practice would be to tarp this load of dirt as a stockpile.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair.

Observations at the site:

General:

1) Biological work restrictions limited access to the site. No work was being conducted.
2) Additional dumping is occurring at the Conejo Drive entrances.

Biological:

1) No new issues

Cultural:

1) No new issues

SWPPP:

1) No new issues.

Safety:

1) No new issues.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 12, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Friday July 8

Previous Site Inspection: Thursday June 30

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Biological:

1) Pole 59 needs avian-safe equipment installed on the distribution lines.
2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 12, 2011

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
6) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
7) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
8) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
9) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.
10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.
11) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.

12) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. Currently this only applies to poles 59-61.
13) Plastic tarps covering stockpiles on Conejo Center Drive are disintegrating due to UV exposure. Two of the stockpiles have been covered with additional black plastic. The northernmost stockpile needs to be covered to prevent shreds of plastic from blowing off site.
14) The southern entrance on Conejo Drive has been partially blocked by a dumptruck load of dirt. This dirt did not originate from SCE but is in an area covered by the open construction permit. Best SWPPP practice would be to tarp this load of dirt as a stockpile.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair.

Observations at the site:

General:

1) Biological work restrictions limited access to the site. No work was being conducted.
2) Paving contractor using Lawrence Drive laydown area has dumped sand on the street side of the stabilized entrance, leading to significant track-out on Lawrence Drive. Remedies were discussed by conference call on Friday, with Edison initiating prompt clean-up and discussion with the city on avoiding future track out.

Biological:

1) No new issues

Cultural:

1) No new issues

SWPPP:

1) No new issues.

Safety:

1) No new issues.

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 15, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Thursday July 14

Previous Site Inspection: Friday July 8

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.
2) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public.

Biological:

1) Pole 59 needs avian-safe equipment installed on the distribution lines.
2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 15, 2011

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
6) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
7) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
8) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from stormwater run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
9) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.
10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.
11) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.

12) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. Currently this only applies to poles 59-61.
13) Plastic tarps covering stockpiles on Conejo Center Drive are disintegrating due to UV exposure. Two of the stockpiles have been covered with additional black plastic. The northernmost stockpile needs to be covered to prevent shreds of plastic from blowing off site.
14) The southern entrance on Conejo Drive has been partially blocked by a dumptruck load of dirt. This dirt did not originate from SCE but is in an area covered by the open construction permit. Best SWPPP practice would be to tarp this load of dirt as a stockpile.

Long-term site stabilization (prior to permit termination)

1) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard.
2) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
3) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair.

Observations at the site:

General:

1) Biological work restrictions limited access to the site. No work was being conducted.
2) Paving contractor using Lawrence Drive laydown area has dumped additional sand and (broken) sand bags on the street side of the stabilized entrance, leading to significant track-out on Lawrence Drive.
3) Additional slurry-seal aggregate (well-graded dusty sand) has been spread on the road west of the substation. This material creates much more dust when disturbed than do

the soils on site and so will require more attention from water trucks when Edison is operating in this area.

4) New dumping has occurred off Conejo Center Drive, including a pile of fiberglass insulation and drywall scraps.

Biological:

1) No new issues

Cultural:

1) No new issues

SWPPP:

1) Tarps covering stockpiles on Conejo Center Drive continue to deteriorate and need to be replaced.

Safety:

1) Numerous beer bottles (mostly broken) have been left on site by poles 47 and 41 the last few weeks. Work crews might be advised to be particularly alert for broken glass in these areas.

SOUTHERN CALIFORNIA EDISON
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Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 24, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to just north of Academy Road, Poles #67 - 41
Construction Purpose: Replacing poles
Monitoring Dates: Thursday July 21

Previous Site Inspection: Thursday July 14

Previous issues (resolved):

Safety:

1) The gully undercutting the sidewalk on Conejo Center Drive grew larger in the storms around 3/20 and presents a potential trip hazard for the public. **Resolved by city workers filling the top of the gully (photo below).**

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 24, 2011

Biological: None

Cultural: None

SWPPP:

1) Plastic tarps covering stockpiles on Conejo Center Drive are disintegrating due to UV exposure. Two of the stockpiles have been covered with additional black plastic. The northernmost stockpile needs to be covered to prevent shreds of plastic from blowing off site. **Resolved – all stockpiles on site have been re-covered with UV-resistant plastic.**
2) On Conejo Drive, large quantities of water flowed down through a cutout in the sidewalk and migrated away from the street, eroding a 2-3 foot wide gully under the sidewalk and down the adjacent road embankment. The sidewalk, while stable for now, is likely to crack and present a trip hazard at some point in the future. The storm of 3/20/11 deepened the holes immediately adjacent to the sidewalk, increasing the trip hazard. **Resolved by city workers filling the top of the gully.**

<u>Outstanding issues:</u>

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.

Biological:

1) Pole 59 needs avian-safe equipment installed on the distribution lines.
2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

SWPPP:

Short-term site stabilization and SWPPP controls

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1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
6) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
7) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
8) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from storm water run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
9) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.
10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.
11) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.
12) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. Currently this only applies to poles 59-61.

13) The southern entrance on Conejo Drive has been partially blocked by a dumptruck load of dirt. This dirt did not originate from SCE but is in an area covered by the open construction permit. Best SWPPP practice would be to tarp this load of dirt as a stockpile.

Long-term site stabilization (prior to permit termination)

1) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
2) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair.

Observations at the site:

General:

1) Biological work restrictions limited access to the site. No SCE line work was being conducted, though RBF and Tidwell were working on SWPPP issues.

Biological:

1) No new issues

Cultural:

1) No new issues

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 24, 2011

SWPPP:

1) Tarps covering stockpiles on existing stockpiles at each construction entrance were being replaced.
2) A new construction entrance was being constructed for the road leading to towers 24-40 (photo below).

3) About twenty feet of fiber rolls near pole 47 have been torn up by off-road vehicles. These fiber rolls may be removed or should be replaced.

Safety:

1) No new issues

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 29, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to Santa Rosa Valley, Poles #67 - 28
Construction Purpose: Replacing poles
Monitoring Dates: Thursday July 28

Previous Site Inspection: Thursday July 21

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.

Biological:

1) Pole 59 needs avian-safe equipment installed on the distribution lines.
2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.

Cultural: None

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
July 29, 2011

SWPPP:

Short-term site stabilization and SWPPP controls

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) The water bar just east of pole 58 has been flattened by vehicles and needs to be built up in order to function.
3) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
4) During the last storms, the road by pole 45 was undercut by a new gully. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
5) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
6) The lines of gravel bags east of the Academy Drive entrance were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
7) The new gravel bags on the road appear to have clogged after filtering large quantities of runoff from the large storm of 3/20. Flipping the bags to reverse flow through them allowed filtering of remaining standing water on 3/25. New bags are needed before the next significant rain.
8) The entire up-hill perimeter of the asphalt grindings by the substation needs to be protected from storm water run-on. The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
9) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.
10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.
11) The McCarthy drain by pole 62 needs maintenance. Rip-rap from the road needs to be cleared away from the inlet to avoid clogging.

12) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. Currently this only applies to poles 59-61.
13) The southern entrance on Conejo Drive has been partially blocked by a dumptruck load of dirt. This dirt did not originate from SCE but is in an area covered by the open construction permit. Best SWPPP practice would be to tarp this load of dirt as a stockpile.
14) About twenty feet of fiber rolls near pole 47 have been torn up by off-road vehicles. These fiber rolls may be removed or should be replaced.

Long-term site stabilization (prior to permit termination)

1) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
2) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.

Site Conditions/Weather: Fair.

New observations at the site:

General:

1) Brush-clearing and grading crews were working on the access road for poles 40-24.
2) There are now three construction entrances off of Conejo Center Drive. Each is in good shape. A truck load of dirt had previously been dumped at the southern-most entrance. In the last week three piles of asphalt grindings were dumped inside that entrance and one pile of asphalt grindings is now blocking the entrance.

Biological:

1) Brush clearing appeared complete for poles 40-31 with a crew working at pole 30. The biological monitor had been working with them earlier in the day and stopped work at one pole on finding a quail nest with eggs.

Cultural:

1) No new issues

SWPPP:

1) The newly graded road for poles 24-40 will need extensive drainage work to prevent erosion and sediment-laden storm water runoff.
2) There has been extensive grading to create a construction pad for pole 40. Resulting loose fill material stretches ~50 feet down and ~150 feet across the steep slope below. Careful stabilization will be needed to prevent erosion or slumping.

3) Extensive grading was underway to create a construction pad for pole 38. Resulting loose fill material stretches ~75 feet down and ~150 feet across the steep slope below. Careful stabilization will be needed to prevent erosion or slumping into the tributary of Calleguas Creek below.

4) Stabilization of other pole sites should be straight forward with water bars, wattles, silt fence, etc.
5) A gravel bag on Conejo Center Drive was broken open and needs replacement.
6) The construction entrance on Lawrence Drive now has asphalt grindings at the gutter instead of slurry aggregate. This does not meet the specification for a construction entrance although it produces less trackout than the aggregate.

Safety:

1) Another rattlesnake was observed on site by pole 40, sunning on the freshly graded dirt.

SOUTHERN CALIFORNIA EDISON
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Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
August 30, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to Santa Rosa Valley, Poles #1-67
Construction Purpose: Replacing poles
Monitoring Dates: Wednesday August 24, Saturday August 27, Monday August 29

Previous Site Inspection: Thursday August 18

Previous issues (resolved):

Safety:

1) There is an Arizona crossing on the access road north of pole 15 that is badly cracked and undermined. It should be inspected for stability and/or repaired before heavy line trucks with high centers of gravity use it. **Resolved. Inspected by Kendra Heinicke and crews are directed to cover the crossing with steel plate for safety and to avoid damaging it further.**

Biological:

1) Drainage adjacent to pole 19 should be evaluated for unanticipated biological impacts. The 8/18/10 PowerPoint environmental awareness training specifically states that no impacts to this drainage are anticipated. The compacted pad extends across the drainage. **Resolved – evaluated by Manju Venkat and remediation proposed.**
2) Drainages adjacent to pole 38 should be evaluated for unanticipated biological impacts. The 8/18/10 PowerPoint environmental awareness training states that no impacts to drainages are anticipated. West of pole 38, fill material is 2-3 feet deep in a steep dry drainage. South of pole 38 fill material extends into riparian vegetation at the base of the slope. Remediation might include removal of the excess fill material and/or stabilization with plantings of appropriate native vegetation. **Resolved – evaluated by Manju Venkat and COSCA. Remediation proposed.**

Cultural: None

SWPPP:

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1) Immediate SWPPP concerns for poles 38 and 39 have been addressed with tarps on the exposed slopes and with sand bag berms to direct potential runoff.

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.

Biological:

1) Pole 59 needs avian-safe equipment installed on the distribution lines.
2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.
3) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. Currently this only applies to poles 59-61.

Cultural: None

SWPPP:

General and entrances

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) Existing gravel bags on adjacent roads are generally clogged from prior storms and many are missing. New gravel bags are needed on the roads before the next significant rain.
3) The southern entrance on Conejo Drive has been partially blocked by a dumptruck load of dirt and a load of asphalt grindings. This dirt did not originate from SCE but is in an area covered by the open construction permit. Best SWPPP practice would be to tarp these piles.
4) The construction entrance on Lawrence Drive now has asphalt grindings at the gutter covering the rip rap. This does not meet the specification for a construction entrance

although it produces less trackout than the slurry aggregate dumped previously. Asphalt should be removed and replaced with rip-rap.

Poles 41-67

1) The entire up-slope perimeter of the asphalt grindings by the substation needs to be protected from storm water run-on (poles 65-67). The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
2) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.
3) The lines of gravel bags east of the Academy Drive entrance (between poles 52-53) were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
4) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.
5) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
6) About twenty feet of fiber rolls near pole 47 have been torn up by off-road vehicles. These fiber rolls may be removed or should be replaced.
7) The road by pole 45 was undercut by a new gully during February storms. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
8) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
9) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.
10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.

Poles 24-40 (Conejo Center Drive north to Santa Rosa Road)

1) The newly graded road for poles 24-40 will need extensive drainage work to prevent erosion and sediment-laden storm water runoff.
2) The stream crossing east of pole 40 has been graded too widely for the existing culverts. Options include (a) lengthening the culverts, (b) stabilizing the road edges to prevent slumping in front of the culverts, (c) pulling back the road edges away from the ends of the culverts resulting in a narrower road. Separately, the culverts may be undersized for the drainage as the crossing had washed out previously. Recommended action includes increasing the diameter of the culverts, adding a third culvert, and/or adding a trash rack to protect the inlets.
3) There has been extensive grading to create a construction pad for pole 40. Resulting loose fill material stretches ~50 feet down and ~150 feet across the steep slope below. Careful stabilization will be needed to prevent erosion or slumping.
4) There has been extensive grading to create a construction pad for pole 39. Resulting loose fill material stretches ~50 feet down and ~75 feet across the steep slope below. Careful stabilization will be needed to prevent erosion or slumping into the tributary of Calleguas Creek below.
5) There has been extensive grading to create a construction pad for pole 38. Resulting loose fill material stretches ~75 feet down and ~150 feet across the steep slope below. Careful stabilization will be needed to prevent erosion or slumping into the tributary of Calleguas Creek below.
6) The uncompacted slopes below poles 38-40 are unstable enough that erosion is occurring just from the spray of the water truck.

Poles 1-23 (Santa Rosa Road north to Moorpark substation)

1) Grading for pole 19 pushed soil into a small drainage to the east. The soil could be pulled back or stabilization of the slope and drainage could be achieved with a culvert and gabion or with a combination of erosion control blanket, planting and rip rap.

Site Conditions/Weather: Fair until Friday, then overcast with drizzle. Thunderstorms were forecast at 20% chance and were present in the area Friday through Sunday. Windy Saturday when crews were installing plastic sheeting.

New observations at the site:

General:

1) Grading crews had completed majority of clearance on entire line.
2) Monitoring was conducted in conjunction with a job walk for footing contractors.
3) The Patriot Environmental crew members laying down tarps at poles 38-39 were remarkably courteous, professional, and obviously focused on safety.

Biological:

1) Permitted brush clearance for stringing location between poles 35 and 36 was not just cleared of brush but also graded two feet deep into soil.
2) What appeared to be a large dead bird was observed on the ground north of the Moorpark substation where the 220kV lines cross the railroad tracks. Manju Venkat was on site and was notified for identification and reporting.

Cultural:

1) No new issues

SWPPP:

1) Discussed a number of specific BMP recommendations with J. Kirby.

Safety:

1) No new issues

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL℠ Company

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
August 8, 2011

Prepared By: Doug Fischer, ARCADIS-US. doug.fischer@arcadis-us.com, 805-963-2363 (cell)

Construction Location: Newbury Substation to Santa Rosa Valley, Poles #67 - 24
Construction Purpose: Replacing poles
Monitoring Dates: Thursday August 4

Previous Site Inspection: Thursday July 28

Previous issues (resolved):

Safety: None

Biological: None

Cultural: None

SWPPP: None

Outstanding issues:

Safety:

1) The broken guy wire for pole 60 is taped down to pole. This taping temporarily addresses the potential trip hazard. Guy wire should be refastened if needed or removed entirely if not.

Biological:

1) Pole 59 needs avian-safe equipment installed on the distribution lines.
2) Flagging for Lyon's pentachaeta has been removed near pole 54. This should be replaced once the gnatcatcher restriction is lifted.
3) Within Lyon's pentachaeta critical habitat, the plastic sheeting covering soils (around poles, etc.) should be removed as soon as allowable by SWPPP standards to prevent inadvertent sterilization of soils. Currently this only applies to poles 59-61.

Cultural: None

SWPPP:

General and entrances

1) Many of the water bars on site have been damaged by vehicle traffic and need repairs. For long-term effectiveness many of the water bars need to be made significantly larger and to be thoroughly compacted.
2) Existing gravel bags on adjacent roads are generally clogged from prior storms and many are missing. New gravel bags are needed on the roads before the next significant rain.
3) The southern entrance on Conejo Drive has been partially blocked by a dumptruck load of dirt and a load of asphalt grindings. This dirt did not originate from SCE but is in an area covered by the open construction permit. Best SWPPP practice would be to tarp these piles.
4) The construction entrance on Lawrence Drive now has asphalt grindings at the gutter instead of slurry aggregate. This does not meet the specification for a construction entrance although it produces less trackout than the aggregate. Asphalt should be removed and replaced with rip-rap.

Poles 41-67

1) The entire up-slope perimeter of the asphalt grindings by the substation needs to be protected from storm water run-on (poles 65-67). The recommended BMPs include water bars and/or drainage swales to divert water off the dirt roads south and west of the substation and into adjacent storm drains. A minimum of two diversions would be needed, with sediment control as feasible.
2) The water bar by pole 61 was torn up by heavy trucks. It remained wet long after the rest of the road due to groundwater seepage. The recommended BMP is to rebuild that water bar over a base of rip-rap.
3) The lines of gravel bags east of the Academy Drive entrance (between poles 52-53) were overtopped by sediment and need maintenance once the gnatcatcher restriction is lifted.
4) The McCarthy drain by pole 48 needs maintenance as the rock drain was overtopped with sediment.

5) The BMPs at the road intersection by pole 48 are appropriate for temporary stabilization. Long-term stabilization could be achieved with additional water bars and/or ditches on either side of the intersection with appropriate over-side drains.
6) About twenty feet of fiber rolls near pole 47 have been torn up by off-road vehicles. These fiber rolls may be removed or should be replaced.
7) The road by pole 45 was undercut by a new gully during February storms. The recommended BMP is to stabilize the gully with 1-2 cubic yards of rip-rap.
8) The fiber roll by pole 43 has been overtopped by sediment and needs to be dug out in order to function properly.
9) The slope below pole 43 needs additional measures for long-term stabilization. Appropriate BMPs are being discussed.
10) The road to pole 41 has been graded without the placement of any water bars. This road is on more erodible soils than other roads in the project (based on pre-grading observations). As a result, water bars will need to be more closely-spaced than on other roads to achieve stabilization.

Towers 24-40

1) The newly graded road for poles 24-40 will need extensive drainage work to prevent erosion and sediment-laden storm water runoff.
2) There has been extensive grading to create a construction pad for pole 40. Resulting loose fill material stretches ~50 feet down and ~150 feet across the steep slope below. Careful stabilization will be needed to prevent erosion or slumping.
3) There has been extensive grading to create a construction pad for pole 38. Resulting loose fill material stretches ~75 feet down and ~150 feet across the steep slope below. Careful stabilization will be needed to prevent erosion or slumping into the tributary of Calleguas Creek below.

Site Conditions/Weather: Fair.

New observations at the site:

Regulatory Compliance Oversight Report
Moorpark Newbury Transmission Line Project
August 8, 2011

General:

1) Grading crews were working on the access road for poles 24-40. Water trucks were making regular trips to keep down dust.

Biological:

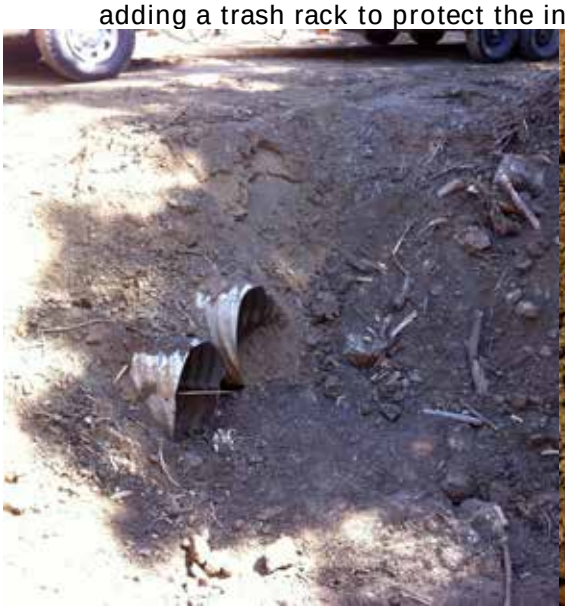
1) Brush clearing appeared complete for poles 24-40.

Cultural:

1) No new issues

SWPPP:

1) The stream crossing east of pole 40 has been graded too widely for the existing culverts. Options include (a) lengthening the culverts, (b) stabilizing the road edges to prevent slumping in front of the culverts, (c) pulling back the road edges away from the ends of the culverts resulting in a narrower road. Separately, the culverts may be undersized for the drainage as the crossing had washed out previously. Recommended action includes increasing the diameter of the culverts, adding a third culvert, and/or adding a trash rack to protect the inlets.



Inlets partially blocked.

Sediment falling in front of outlet.

2) Pads for poles other than 38 and 40 appear reasonably straight-forward to stabilize.
3) Several missing gravel bags on Conejo Center Drive and Academy Drive need replacement.

Safety:

1) No new issues

Appendix F4

Tree Permits

COUNTY OF VENTURA

Resource Management Agency
Planning Division
800 South Victoria Avenue
Ventura, CA 93009
(805) 654-2488, 477-7168 FAX

Date Issued: 09/02/2011
Date Expires: 02/29/2012
Fee: $315.00
Issued By:MALIN, CRAIG

MINISTERIAL TREE PERMIT AD11-0091
Assessor's Parcel No.: 163-0-210-280

APPLICANT:
SOUTHERN CALIFORNA EDISON
Address
6 POINT DRIVE 4TH FLOOR
BREA CA
MICHAEL CALVITTI
92821
Telephone (714) 672-5930
Email:

PROPERTY OR EASEMENT OWNER:
WESTERLING WILLIAM-VICKI
Address
10275 PRESILLA RD
CAMARILLO CA

93012
Telephone
Email:

Arborist's Name: DAVID HUGHES, BONTERRA CONSULTING
Arborist Phone: (626) 351-2000

Project Description:
Removal of two eucalyptus trees and major pruning of 18 eucalyptus tree to allow construction of electric transmission line.

Parent Permit Number: N/A

#1 Protected Tree or Tree Stand (if same species, action & code section)
Action: Remove
Code Section: Public-flood ctrl/utility. 8107-25.6e
After-the-Fact Request: NO
# of Trees: 2
Species/Type: Heritage
Species Detail (if Heritage): Eucalyptus

Tree Location: East property line
County Action: **Approved**

#2 Protected Tree or Tree Stand (if same species, action & code section)
Action: Alter
Code Section: Public-flood ctrl/utility. 8107-25.6e
After-the-Fact Request: NO
# of Trees: 18
Species/Type: Heritage
Species Detail (if Heritage): Eucalyptus

Tree Location: East property line
County Action: **Approved**

#3 Protected Tree or Tree Stand (if same species, action & code section)
Action:
Code Section:
After-the-Fact Request:
Tree Location:
# of Trees: 0
Species/Type:
Species Detail (if Heritage):
County Action:

# of remaining trees whose tree protection zones will be encroached upon: 0

If any, an Arborist Verification of Tree Protection Measures must be received prior to issuance of Tree Permit.

CUMULATIVE TOTALS

	Previously	New Total
Cumulative # of trees removed from parcel for reasonable use of/access to property..	0	1
Of these, # of oaks or sycamores.....	0	0
Cumulative # of trees removed from parcel for agriculture within the last 12 months....	0	0

ATTACHMENTS

(Y) Site Sketch/Plan
(N) AV - Tree Status
(N) AV - Tree Protection Measures
(N) AV - Dead Tree
(Y) AV - Major Pruning
(N) Proof of Emergency
(N) Forest Resource Mgmt Plan
(N) Other Describe:

(Y) Color Photos
(Y) AV - Hazardous or Conflicting Tree
(N) Arborist Report
(N) Contractor Verification
(N) Proof of Introduced Tree
(N) Farm Plan

FINDINGS: Can Findings of Approval for Reasonable Access to or Use of Property be made (if applicable)?
YES

Site Inspection Date:

Inspected By: MALIN, CRAIG

DECLARATIONS:
BY SIGNING BELOW I CERTIFY THE FOLLOWING:

- I am the property or easement owner **where the proposed work will be done**, or am authorized and empowered to act as an agent on behalf of the owner of record on all matters relating to this application.
- I am familiar with the information contained in the application and to the best of my knowledge believe such information is true and accurate.
- I have read the attached *Performance Standards for Ministerial Permits* and understand that these apply to this permit and agree to comply with these standards.
- I understand that the County shall not be responsible for any damage to property or persons caused by or related to trees located on private property. It is the property or easement owner's responsibility to maintain all trees on his or her property in a reasonable and safe manner, and any inspection performed by the County is limited to advisory assessment only.

Manjunath Venkat (for SCR)

Property or Easement Owner Where Work Will be Performed/ Applicant Signature

ISSUED BY: MALIN, CRAIG

Signature

Performance Standards for Ministerial Tree Permits

County of Ventura • Resource Management Agency • Planning Division
800 S. Victoria Ave., Ventura, CA 93009 • (805)654-2488 •
www.ventura.org/rma/planning/Permits/tree.html

All Ministerial Tree Permits issued by the Ventura County Planning Division shall be deemed to incorporate the following performance standards, pursuant to Sec. 8107-25.6 of the Ventura County Non-Coastal Zoning Ordinance, except as the permit may otherwise specifically provide. The Permittee is responsible for ensuring compliance with these standards.

Definition of Terms:

Tree Protected Zone (TPZ). Tree protection zone (TPZ) is used to describe the critical area of protection under a tree. Given the high sensitivity of native trees, especially oaks, great care must be taken when work is conducted near these trees. The TPZ extends out from the trunk to 5 feet beyond the dripline, **or** a minimum of 15 feet from the trunk—whichever is greater.

Protected Tree. As used in these Performance Standards, protected tree means trees protected under Ventura County's Tree Protection Ordinance that are to remain—*including those growing on adjacent parcels*—whose tree protection zones (TPZs) are within 20 feet of trees to be removed or the limits of the construction area (including access roads and storage areas).

Performance Standards

A. **Timing.** Pruning, removing or other tree alteration that could potentially disrupt known bird nests should take place between August 15th and February 1st. (More information at www.ventura.org/rma/planning/pdf/bio/Protection_of_Nesting_Birds.pdf)

B. **Tree Protection Fencing.** If there are remaining protected trees whose TPZs are within 20 feet of the construction envelope (e.g., any area that will be used during construction, including roads and storage areas), tree protection fencing shall be installed prior to any clearing, grubbing, trenching, grading, or land

disturbances. The fencing shall be installed around the edge of the TPZ (or at the location of their approved encroachment), unless otherwise recommended in an Arborist Verification, Arborist Report or by Planning Division staff.

Verification that tree protection fencing has been installed shall be provided to the Planning Division before construction commences.

Tree protection fencing shall remain in place during all phases of construction. Damaged fencing shall be immediately replaced or repaired.

1. Type of fencing. The fencing shall be temporary, readily visible, and a minimum of 4-feet high and constructed of chain link, orange plastic mesh fence, or a similarly durable material with stationary posts set at no greater than 10-foot intervals. The fencing shall effectively: 1) keep the foliage, crown, branch structure and trunk clear from direct contact and damage by equipment, materials or disturbances; 2) preserve roots and soil in an intact and non-compacted state; and 3) identify the TPZ.
2. Signing. One English language and one Spanish language, readily-visible, durable, waterproof sign shall be installed on the fence in 4 equidistant locations around each individual protected tree. Signs placed on fencing around a stand of protected trees shall be placed at approximately 50-foot intervals. The size of each sign must be a minimum of 16 inches wide and must contain the wording below. The lettering in the word "WARNING" (and Spanish equivalent) must be in capital letters at least 2 inches in height; the phrase "TREE PROTECTION ZONE" must be in capital letters at least 1 inch; size; all other lettering must be at least ½ inch in size.

WARNING

TREE PROTECTION ZONE

Entry prohibited. This fence shall remain in place
throughout the entire construction period.
To report violations, contact
VENTURA COUNTY CONDITION COMPLIANCE: 805/654-2457

ADVERTENCIA

ZONA DE PROTECCIÓN DE ÁRBOLES

Entrada prohibida. Esta cerca debe permanecer
en su lugar durante el periodo de construcción.
Para reportar violaciones, contacte al
ENFORZAMIENTO DE PERMISOS DEL CONDADO DE VENTURA:
805/654-2457

C. **Tree Protection Requirements Onsite and Conveyed to Workers.** The approved Tree Permit shall be on-site during construction activity. The Permittee shall provide a copy of the Tree Permit and these Performance Standards to all responsible parties who will be performing work around protected trees.

D. **Tree Protection Zone Restrictions.**

1. No ground disturbance, grading, trenching, construction activities or structural development shall occur within the tree protection zone (TPZ) except as specifically authorized by the Tree Permit.
2. No equipment, soil, or construction materials shall be placed within the TPZ. No oil, gasoline, chemicals, paints, solvents, or other damaging materials may be deposited within the TPZ or in drainage channels, swales or areas that may lead to the TPZ.
3. The placement of impervious paving materials in the TPZ shall be minimized. Pervious paving materials, such as interlocking pavers, gravel or pervious asphalt, may be used.
4. All work done within the TPZ, including brush clearance, digging, trenching and planting, shall be done

with hand tools or small hand held power tools that are of a depth and design that will not cause root damage.

5. Roots that are 2" or more in diameter inside the TPZ may not be cut without a tree permit. Where trenching or digging within the TPZ is specifically permitted, the work shall be conducted in a manner that minimizes root damage. This generally involves tunneling under roots, or boring or drilling trenches. Damage to minor roots shall be traced back and cleanly cut behind any split, cracked or damaged area. Any roots exposed by trenching or digging shall be kept moist and covered with earth as soon as possible. Upon completion and back fill of the trench, the area of wounded roots shall be thoroughly watered.
6. Grade changes outside of the TPZ shall not significantly alter drainage to protected trees. Grading within the TPZ shall use methods that minimize root damage, ensure that roots are not cut off from air, and permanently re-stabilize the soil in cases where grading predisposed the soil to erosion. The following apply:
   i. Unless approved in a tree permit, no fill greater than 6? shall be placed within the TPZ of protected trees and no fill whatsoever shall be placed within 10' feet of their trunks. Permitted grade fills over 6 inches or impervious overlay within the TPZ shall incorporate an approved permanent aeration system, permeable material or other approved system to minimize any potential damage to roots caused by reduced soil gas exchange.
   ii. Unless approved in a tree permit, no grade cuts greater than 4? shall occur within the TPZ of protected trees and no grade cuts whatsoever shall occur within 10' of their trunks. Permitted grade cuts within the TPZ exceeding 4 inches shall incorporate retaining walls or other systems that permanently stabilize the soil.
7. Unless approved in a tree permit, protected trees shall not be used for posting signs, electrical wires or pulleys; for supporting structures; and shall be kept free of nails, screws, rope, wires, stakes and other unauthorized fastening devices or attachments.

E. Tree pruning methods.

1. Pruning standards. All pruning shall be in compliance with the International Society of Arboriculture (ISA) Tree-Pruning Guidelines and ANSI Standard A300 (Part 1).
2. Deadwood. All dead wood removal or pruning shall be done in accordance with International Society of Arboriculture standards. Except for approved tree removal, climbing gaffs shall not be used by any tree climber on live wood.
3. Aesthetic pruning. No living limbs that amount to more than 20 percent of the trunk's girth may be removed from protected trees solely for the purpose of altering the appearance of a tree.

F. Tree removal methods.

1. Directional felling. Appropriate methods of felling trees, such as directional felling or rigging down, shall be used to avoid damage to remaining protected trees.
2. Stump removal. Unless root removal is recommended by an arborist for disease management, the stumps of the trees removed within the TPZ of the remaining trees should be ground down to just below the ground surface level and not excavated.
3. Debris disposal. In cases where a certified arborist has indicated that the spread of disease or insects is a concern, tree limbs and wood shall be disposed of in a safe manner as directed by the arborist.

G. Unanticipated Tree Damage. The Permittee shall report unanticipated damage to protected trees or their TPZs from construction activities to the Planning Division within 24 hours. Should unanticipated damage occur to protected trees or their TPZs from construction activities, the Permittee shall submit to the Planning Division within 2 weeks of the incident a report prepared by an arborist with an assessment of the tree damages.

Modifications to Performance Standards per Planning Division or Arborist Report:

By signing below I certify the following:

- I have read and understand these Performance Standards;
- I acknowledge that issuance of my Tree Permit is contingent upon my compliance with these Performance Standards;
- I agree to abide by these Performance Standards.

Manjunath Venkat (for SCR) — 9/2/2011

Applicant Signature — Date

COUNTY OF VENTURA

Resource Management Agency
Planning Division
800 South Victoria Avenue
Ventura, CA 93009
(805) 654-2488, 477-7168 FAX

Date Issued: 10/03/2011
Date Expires: 03/31/2012
Fee: $110.00
Issued By:

MINISTERIAL TREE PERMIT AD11-0099
Assessor's Parcel No.: 163-0-210-120

APPLICANT:
SOUTHERN CALIFORNIA EDISON
Address
1218 S. 5TH AVE
MONROVIA CA
MANJUNATH VENKAT
91016
Telephone (626) 262-2515
Email:

PROPERTY OR EASEMENT OWNER:
FUSCI STEPHEN
Address
2809 N REDONDO AV
CAMARILLO CA

93010
Telephone
Email:

Arborist's Name:
Arborist Phone:

Project Description:
Remove 35 Cottonwood trees of a treerow whose branches interfere with an existing Edison power transmission lines and towers. Approved by Section 8107-25.4 of the Non-Coastal Zoning Ordinance.

Parent Permit Number: N/A

#1 Protected Tree or Tree Stand (if same species, action & code section)
Action: Remove
Code Section: Public agency-safety. 8107-25.6b,c,f
After-the-Fact Request: NO
# of Trees: 35
Species/Type: Cottonwood
Species Detail (if Heritage): Cottonwood

Tree Location: Eastern property line
County Action: **Approved**

#2 Protected Tree or Tree Stand (if same species, action & code section)
Action:
Code Section:
After-the-Fact Request:
Tree Location:
# of Trees: 0
Species/Type:
Species Detail (if Heritage):
County Action:

#3 Protected Tree or Tree Stand (if same species, action & code section)
Action:
Code Section:
After-the-Fact Request:
Tree Location:
# of Trees: 0
Species/Type:
Species Detail (if Heritage):
County Action:

# of remaining trees whose tree protection zones will be encroached upon: 0
If any, an Arborist Verification of Tree Protection Measures must be received prior to issuance of Tree Permit.

CUMULATIVE TOTALS

	Previously	New Total
Cumulative # of trees removed from parcel for reasonable use of/access to property..	0	35
Of these, # of oaks or sycamores.....	0	0
Cumulative # of trees removed from parcel for agriculture within the last 12 months....	0	0

ATTACHMENTS

(Y) Site Sketch/Plan
(N) AV - Tree Status
(N) AV - Tree Protection Measures
(N) AV - Dead Tree
(N) AV - Major Pruning
(N) Proof of Emergency
(N) Forest Resource Mgmt Plan
(N) Other Describe:

(Y) Color Photos
(Y) AV - Hazardous or Conflicting Tree
(Y) Arborist Report
(N) Contractor Verification
(N) Proof of Introduced Tree
(N) Farm Plan

FINDINGS: Can Findings of Approval for Reasonable Access to or Use of Property be made (if applicable)? YES

Site Inspection Date: 10/03/2011 **Inspected By**:

DECLARATIONS:
BY SIGNING BELOW I CERTIFY THE FOLLOWING:

- I am the property or easement owner **where the proposed work will be done**, or am authorized and empowered to act as an agent on behalf of the owner of record on all matters relating to this application.
- I am familiar with the information contained in the application and to the best of my knowledge believe such information is true and accurate.
- I have read the attached *Performance Standards for Ministerial Permits* and understand that these apply to this permit and agree to comply with these standards.
- I understand that the County shall not be responsible for any damage to property or persons caused by or related to trees located on private property. It is the property or easement owner's responsibility to maintain all trees on his or her property in a reasonable and safe manner, and any inspection performed by the County is limited to advisory assessment only.

(For SLE)

Property or Easement Owner Where Work Will be Performed/ Applicant Signature

ISSUED BY:

per WW

Signature

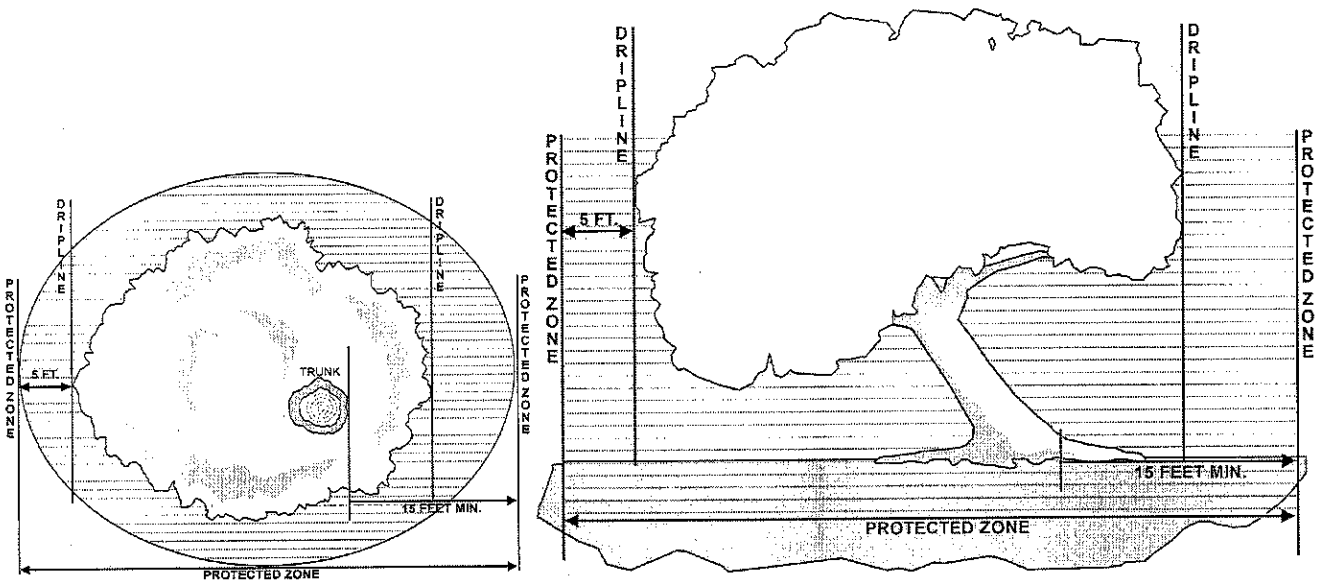
Performance Standards for Ministerial Tree Permits

County of Ventura • Resource Management Agency • Planning Division
800 S. Victoria Ave., Ventura, CA 93009 • (805)654-2488 •
www.ventura.org/rma/planning/Permits/tree.html

All Ministerial Tree Permits issued by the Ventura County Planning Division shall be deemed to incorporate the following performance standards, pursuant to Sec. 8107-25.6 of the Ventura County Non-Coastal Zoning Ordinance, except as the permit may otherwise specifically provide. The Permittee is responsible for ensuring compliance with these standards.

Definition of Terms:

Tree Protected Zone (TPZ). Tree protection zone (TPZ) is used to describe the critical area of protection under a tree. Given the high sensitivity of native trees, especially oaks, great care must be taken when work is conducted near these trees. The TPZ extends out from the trunk to 5 feet beyond the dripline, **or** a minimum of 15 feet from the trunk—whichever is greater.



Protected Tree. As used in these Performance Standards, protected tree means trees protected under Ventura County's Tree Protection Ordinance that are to remain—*including those growing on adjacent parcels*—whose tree protection zones (TPZs) are within 20 feet of trees to be removed or the limits of the construction area (including access roads and storage areas).

Performance Standards

A. **Timing.** Pruning, removing or other tree alteration that could potentially disrupt known bird nests should take place between August 15th and February 1st. (More information at www.ventura.org/rma/planning/pdf/bio/Protection_of_Nesting_Birds.pdf)

B. **Tree Protection Fencing.** If there are remaining protected trees whose TPZs are within 20 feet of the construction envelope (e.g., any area that will be used during construction, including roads and storage areas), tree protection fencing shall be installed prior to any clearing, grubbing, trenching, grading, or land

disturbances. The fencing shall be installed around the edge of the TPZ (or at the location of their approved encroachment), unless otherwise recommended in an Arborist Verification, Arborist Report or by Planning Division staff.

Verification that tree protection fencing has been installed shall be provided to the Planning Division before construction commences.

Tree protection fencing shall remain in place during all phases of construction. Damaged fencing shall be immediately replaced or repaired.

1. Type of fencing. The fencing shall be temporary, readily visible, and a minimum of 4-feet high and constructed of chain link, orange plastic mesh fence, or a similarly durable material with stationary posts set at no greater than 10-foot intervals. The fencing shall effectively: 1) keep the foliage, crown, branch structure and trunk clear from direct contact and damage by equipment, materials or disturbances; 2) preserve roots and soil in an intact and non-compacted state; and 3) identify the TPZ.
2. Signing. One English language and one Spanish language, readily-visible, durable, waterproof sign shall be installed on the fence in 4 equidistant locations around each individual protected tree. Signs placed on fencing around a stand of protected trees shall be placed at approximately 50-foot intervals. The size of each sign must be a minimum of 16 inches wide and must contain the wording below. The lettering in the word "WARNING" (and Spanish equivalent) must be in capital letters at least 2 inches in height; the phrase "TREE PROTECTION ZONE" must be in capital letters at least 1 inch; size; all other lettering must be at least ½ inch in size.

WARNING

TREE PROTECTION ZONE

Entry prohibited. This fence shall remain in place
throughout the entire construction period.
To report violations, contact
VENTURA COUNTY CONDITION COMPLIANCE: 805/654-2457

ADVERTENCIA

ZONA DE PROTECCIÓN DE ÁRBOLES

Entrada prohibida. Esta cerca debe permanecer
en su lugar durante el periodo de construcción.
Para reportar violaciones, contacte al
ENFORZAMIENTO DE PERMISOS DEL CONDADO DE VENTURA:
805/654-2457

C. Tree Protection Requirements Onsite and Conveyed to Workers. The approved Tree Permit shall be on-site during construction activity. The Permittee shall provide a copy of the Tree Permit and these Performance Standards to all responsible parties who will be performing work around protected trees.

D. Tree Protection Zone Restrictions.

1. No ground disturbance, grading, trenching, construction activities or structural development shall occur within the tree protection zone (TPZ) except as specifically authorized by the Tree Permit.
2. No equipment, soil, or construction materials shall be placed within the TPZ. No oil, gasoline, chemicals, paints, solvents, or other damaging materials may be deposited within the TPZ or in drainage channels, swales or areas that may lead to the TPZ.
3. The placement of impervious paving materials in the TPZ shall be minimized. Pervious paving materials, such as interlocking pavers, gravel or pervious asphalt, may be used.
4. All work done within the TPZ, including brush clearance, digging, trenching and planting, shall be done

with hand tools or small hand held power tools that are of a depth and design that will not cause root damage.

5. Roots that are 2" or more in diameter inside the TPZ may not be cut without a tree permit. Where trenching or digging within the TPZ is specifically permitted, the work shall be conducted in a manner that minimizes root damage. This generally involves tunneling under roots, or boring or drilling trenches. Damage to minor roots shall be traced back and cleanly cut behind any split, cracked or damaged area. Any roots exposed by trenching or digging shall be kept moist and covered with earth as soon as possible. Upon completion and back fill of the trench, the area of wounded roots shall be thoroughly watered.
6. Grade changes outside of the TPZ shall not significantly alter drainage to protected trees. Grading within the TPZ shall use methods that minimize root damage, ensure that roots are not cut off from air, and permanently re-stabilize the soil in cases where grading predisposed the soil to erosion. The following apply:
    i. Unless approved in a tree permit, no fill greater than 6? shall be placed within the TPZ of protected trees and no fill whatsoever shall be placed within 10' feet of their trunks. Permitted grade fills over 6 inches or impervious overlay within the TPZ shall incorporate an approved permanent aeration system, permeable material or other approved system to minimize any potential damage to roots caused by reduced soil gas exchange.
    ii. Unless approved in a tree permit, no grade cuts greater than 4? shall occur within the TPZ of protected trees and no grade cuts whatsoever shall occur within 10' of their trunks. Permitted grade cuts within the TPZ exceeding 4 inches shall incorporate retaining walls or other systems that permanently stabilize the soil.
7. Unless approved in a tree permit, protected trees shall not be used for posting signs, electrical wires or pulleys; for supporting structures; and shall be kept free of nails, screws, rope, wires, stakes and other unauthorized fastening devices or attachments.

E. Tree pruning methods.

1. Pruning standards. All pruning shall be in compliance with the International Society of Arboriculture (ISA) Tree-Pruning Guidelines and ANSI Standard A300 (Part 1).
2. Deadwood. All dead wood removal or pruning shall be done in accordance with International Society of Arboriculture standards. Except for approved tree removal, climbing gaffs shall not be used by any tree climber on live wood.
3. Aesthetic pruning. No living limbs that amount to more than 20 percent of the trunk's girth may be removed from protected trees solely for the purpose of altering the appearance of a tree.

F. Tree removal methods.

1. Directional felling. Appropriate methods of felling trees, such as directional felling or rigging down, shall be used to avoid damage to remaining protected trees.
2. Stump removal. Unless root removal is recommended by an arborist for disease management, the stumps of the trees removed within the TPZ of the remaining trees should be ground down to just below the ground surface level and not excavated.
3. Debris disposal. In cases where a certified arborist has indicated that the spread of disease or insects is a concern, tree limbs and wood shall be disposed of in a safe manner as directed by the arborist.

G. Unanticipated Tree Damage. The Permittee shall report unanticipated damage to protected trees or their TPZs from construction activities to the Planning Division within 24 hours. Should unanticipated damage occur to protected trees or their TPZs from construction activities, the Permittee shall submit to the Planning Division within 2 weeks of the incident a report prepared by an arborist with an assessment of the tree damages.

Modifications to Performance Standards per Planning Division or Arborist Report:

By signing below I certify the following:

- I have read and understand these Performance Standards;
- I acknowledge that issuance of my Tree Permit is contingent upon my compliance with these Performance Standards;
- I agree to abide by these Performance Standards.

R-9. B (for SCE) 10-7-11

Applicant Signature Date

Appendix F5

Habitat Restoration and Monitoring Plan

Southern California Edison
Moorpark-Newbury Park 66kV Line Project
Native Revegetation of Slopes
Associated with Towers 38, 39, and 40

CDFW SAA No. 1600-2011-0325-R

March 2012
Revised January 2013

Prepared For:

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EXECUTIVE SUMMARY

The Southern California Edison (SCE) Moorpark-Newbury 66kV Line Project Native Revegetation Plan proposes native revegetation for temporary impacts on slopes associated with Transmission Towers (Towers) 38, 39, and 40. The project area consists of three sloped sites along a SCE transmission line road approximately 0.3 miles northwest of Conejo Center Road and Rancho Conejo Boulevard. The property is managed by the Conejo Open Space Conservation Agency (COSCA) in the City of Thousand Oaks.

SCE has obtained a Streambed Alteration Agreement (SAA) No. 1600-2011-0325-R from the California Department of Fish and Wildlife (CDFW). The native revegetation complies with the requirements associated with the revised final CDFW SAA. The total impact area on the three slopes is approximately 0.5 acre from side-casting (Table 1). In addition, rocks dislodged from the side casting impacted a small ephemeral drainage (750 square feet or 0.02 acre) below Tower 38, which is a sub-tributary to another unnamed ephemeral drainage, and the Arroyo Conejo. The mitigation for the drainage impacts will be addressed separately. In addition, SCE will also coordinate with COSCA and the Storm Water Pollution Prevention Plan (SWPPP).

Table1. Summary of Revegetation Requirements

Location	Type of Impact	Type of Habitat Impacted	Ratio	Estimated Impact	Required Revegetation
Site A (Tower 38)	Temporary	coastal sage scrub/ chaparral	1:1	14,000 sq. ft. (0.32 acre)	0.32 acre
Site B (Tower 39)	Temporary	coastal sage scrub/ chaparral	1:1	2,500 sq. ft. (0.06 acre)	0.06 acre
Site C (Tower 40)	Temporary	coastal sage scrub/ chaparral	1:1	4,500 sq. ft. (0.10 acre)	0.10 acre
Total Revegetation Required				0.5 acres	0.48 acre

This mitigation plan has been prepared to address the onsite revegetation activities at Sites A, B, and C. The plan was originally prepared in March 2012.

Initial installation for the three sites occurred in March 2012. All sites were compacted and jute netting was installed in March 2012. The acreage of Site A will decrease from 0.49 acre to 0.32 acre due to construction of the retaining wall and removal of soil. The approximate size of the retaining wall is 0.024 acre. The upper slope above the spur road is approximately 0.06 acre. A temporary irrigation system with a water tank has been installed for broadcast watering. The sites were hydroseeded with a native seed mix appropriate for the coastal sage scrub and chaparral vegetation communities, with an emphasis on species that can provide initial erosion control. Monitoring and maintenance will occur for approximately three years in order to achieve effective native revegetation and meet revegetation objectives.

Site A slope failure occurred in April 2012 after installation and was re-engineered with the construction of a welded-wire retaining wall in December and January 2013. This mitigation plan has been revised to accommodate the re-engineering for Site A. Although Site A was re-installed, the schedule for all three sites was adjusted for completion to occur in May 2015.

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1.0 INTRODUCTION

The Southern California Edison (SCE) Moorpark-Newbury 66kV Line Project Native Revegetation Plan proposes native revegetation for temporary impacts created by the project. SCE obtained a Streambed Alteration Agreement (SAA) from the California Department of Fish and Wildlife (CDFW). The native revegetation plan complies with the requirements associated with the CDFW SAA No. 1600-2011-0325-R (Appendix A).

The project proposes native revegetation of three slopes adjacent to three transmission towers (Towers 38, 39, and 40) on a total of approximately 0.54 acre, which were temporarily impacted by project activities. Monitoring and maintenance will occur for a period of three years in order to achieve native revegetation objectives.

1.1 Project Location

The project site is located in the City of Thousand Oaks on property owned by Conejo Open Space Conservation Agency (COSCA) within the Rancho Conejo Open Space Preserve in Ventura County, California. The project site is approximately 0.3 miles northwest of Conejo Center Road and Rancho Conejo Boulevard (Figure 1 and 2). Each slope is shown on the project site maps (Figures 3 to 5). The coordinates of each slope is shown in Table 1 below. The slopes are referenced as Sites A, B, C, respectively.

The project is at an elevation of approximately 250 to 900 feet above mean sea level (msl) and is located on the Thousand Oaks and Simi Valley West U.S. Geological survey (USGS) 7.5-minute quadrangle maps.

Table 1: Project Site Coordinates

Project Site	Location (Latitude, Longitude)
Site A (Tower 38)	34°12'20.4114" N, -118°56'18.456" W
Site B (Tower 39)	34°12'21.492" N, -118°56'38.6874" W
Site C (Tower 40)	34°12'21.8514" N, -118°56'49.8114" W

1.2 Project Background

SCE proposes to construct the subtransmission line, which will be located between the Moorpark Substation, located at the northwest corner of Gabbert Road and Los Angeles Avenue in the City of Moorpark, and the Newbury Park Substation, located at 1295 Lawrence Drive in the City of Thousand Oaks. Construction activities partly involved improvements to existing roads to provide sufficient work areas for transmission pole setting activities.

SCE proposes to construct the new Moorpark-Newbury 66 kV subtransmission line, which includes the installation of new power poles and replacement and reconductor of existing power poles. The project activities at Towers 38, 39, and 40 have not been completed. Additional activities may, but are unlikely to affect the mitigation site. If any revegetation areas are impacted, SCE will immediately initiate revegetation activities.

Between July 25 and July 27, 2011, the road improvement activities resulted in soil materials being deposited by SCE on sloped surfaces near Towers 38, 39 and 40. Immediately following this incident, SCE halted all construction activities in the area of these referenced slopes. SCE's biologists, engineers, and managers conducted several site visits to assess the affected areas and to estimate the quantity of side cast materials covering the slopes. Initial revegetation activities

were performed in April 2012. Tension cracks were observed at the top of the slope adjacent to Tower 38 in May 2012, which indicated potential slope failure. Due to concerns over Site A, additional soil testing was conducted. Based on the results of additional evaluation, the design and installation of a retaining wall took place in December 2012 and January 2013. Regulatory Coordination

On September 23, 2011, SCE conducted a site visit with CDFW and COSCA representatives. CDFW indicated that SCE should obtain an SAA to address the Soil Disturbance and Project Impacts pursuant to CDFW's authority under California Fish and Game Code §§ 1600 et seq. The Soil Disturbance and Project Impacts did not affect species covered by the California Endangered Species Act (California Fish and Game Code §§ 2050 et seq.)

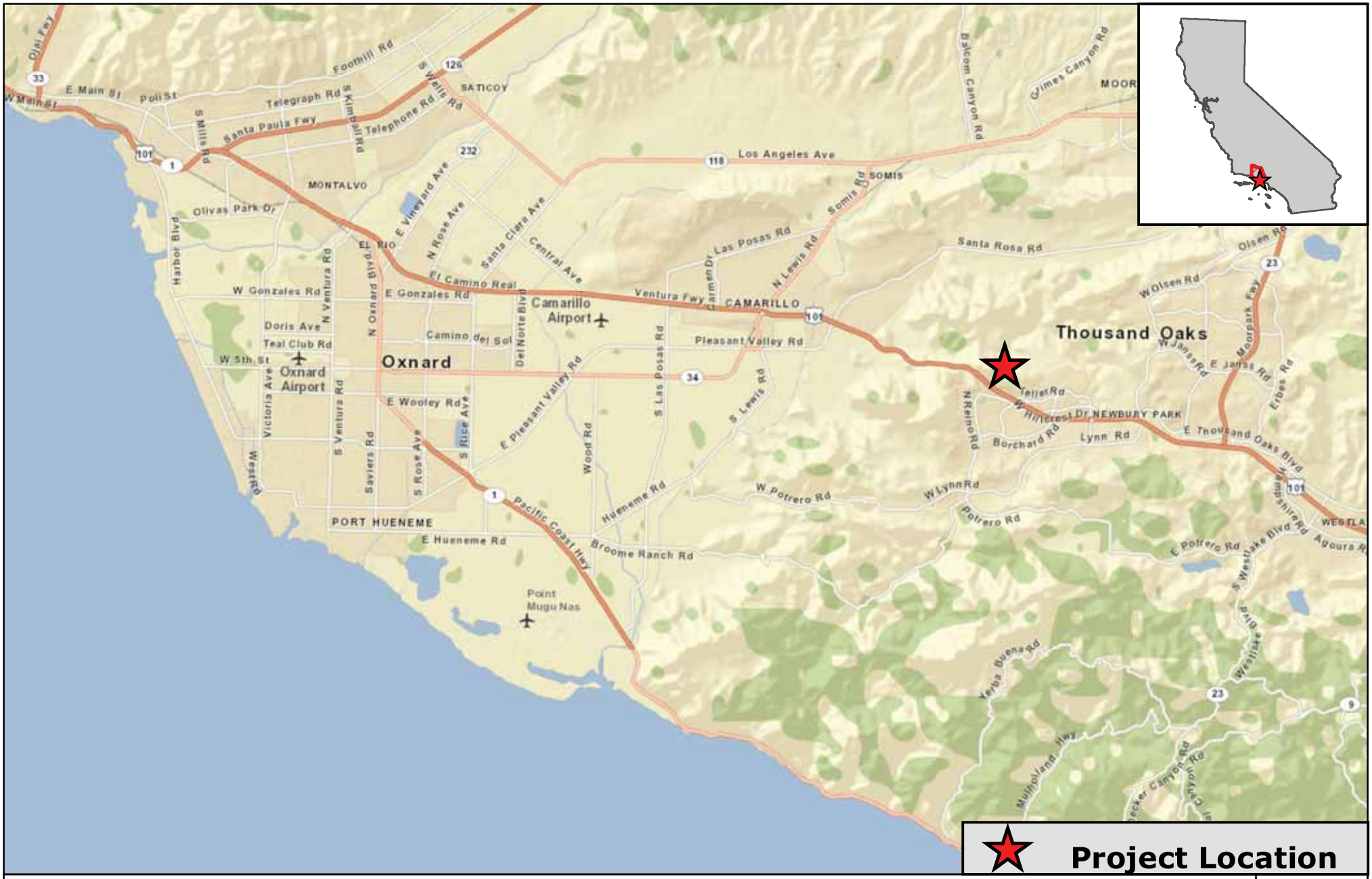
The CDFW SAA No. 1600-2011-0325-R5 was finalized on April 25, 2012. As part of the SAA permit compliance, CDFW indicated it would require SCE to restore the slopes directly impacted by the soil deposition, on a 1:1 mitigation basis. The total impact area on the three slopes is approximately 0.5 acre. In addition, CDFW indicated it would require SCE to provide compensatory mitigation at a 3:1 mitigation ratio, which is addressed separately. SCE will also coordinate with COSCA and Storm Water Pollution Prevention Plan (SWPPP) plan (RBF) Consulting 2011).

The estimate of impacts from the side casting of excess materials on the three slopes is shown in Table 2, below. The slopes are referenced as Sites A, B, C, respectively.

Table 2: Summary of Revegetation Requirements

Location	Type of Impact	Type of Habitat Impacted	Ratio	Estimated Impact	Required Revegetation
Site A (Tower 38)	Temporary	coastal sage scrub/ chaparral	1:1	14,000 sq. ft. (0.32 acre))	0.32 acre
Site B (Tower 39)	Temporary	coastal sage scrub/ chaparral	1:1	2,500 sq. ft. (0.06 acre)	0.06 acre
Site C (Tower 40)	Temporary	coastal sage scrub/ chaparral	1:1	4,500 sq. ft. (0.10 acre)	0.10 acre

The total impact area on the three slopes is approximately 0.5 acre. In addition, rocks dislodged from the side casting impacted a small ephemeral drainage (750 square feet or 0.02 acre) below Tower 38, which is a sub-tributary to another unnamed ephemeral drainage and the Arroyo Conejo. The impacts to the ephemeral unnamed drainage have been addressed separately by SCE through an agreement with COSCA. SCE, after initial coordination with CDFW, covered the impacted slopes with tarps to protect the loose soil materials from being washed down into the drainage below, due to potential rains. In addition, a reinforced silt fence was installed at the toe of the slopes at each site as added protection.

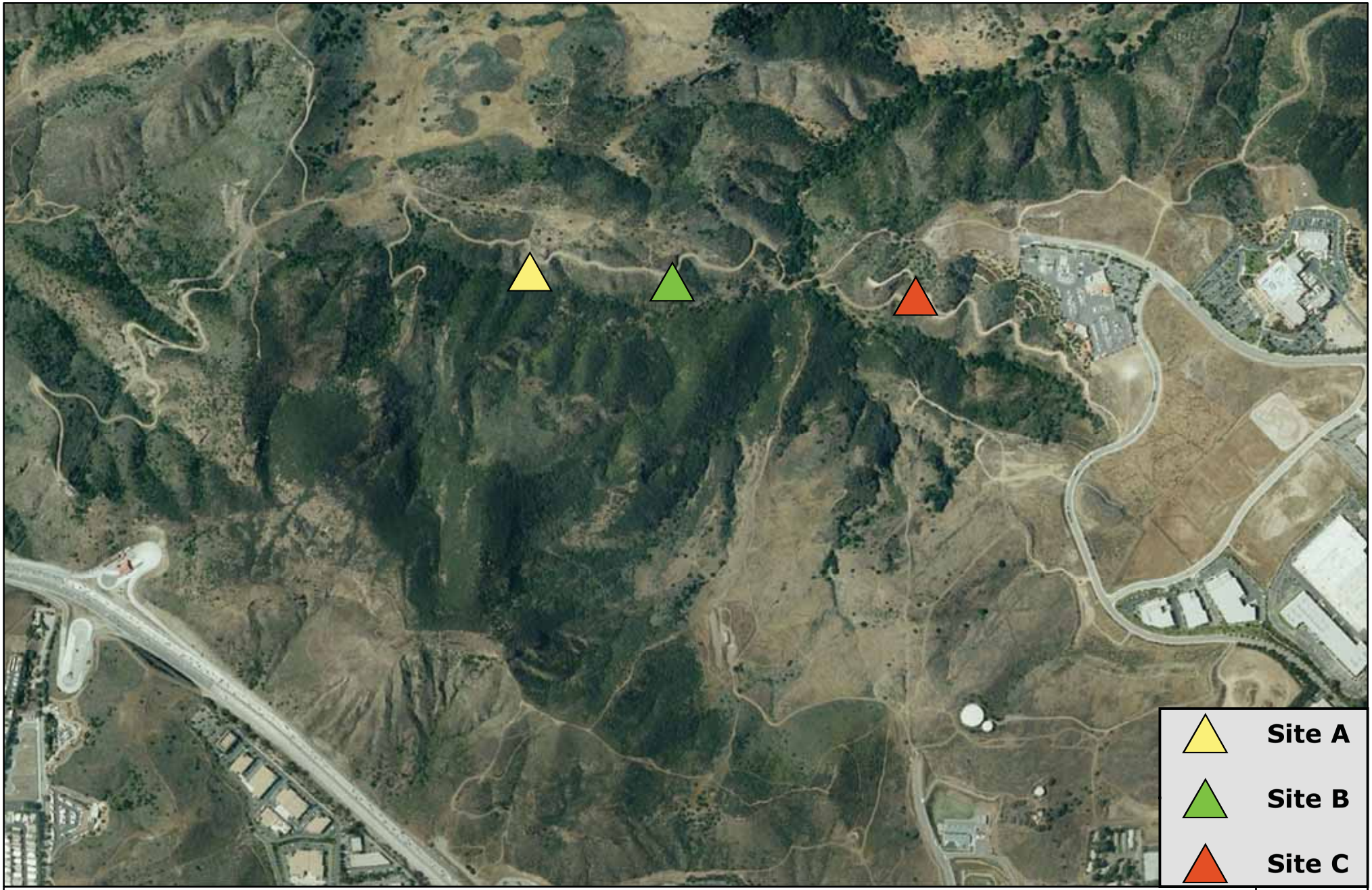


Regional Project Location

Southern California Edison, Moorpark-Newbury 66 KV Line Mitigation

FIGURE 1

Data Source: ESRI Basemap Aerial Imagery February 2012
Prepared by Wildscape Restoration, February 2012



Local Vicinity

FIGURE 2

Southern California Edison, Moorpark-Newbury 66 KV Line Mitigation

0 0.125 0.25 0.5 Miles

N

Data Source: ESRI Basemap Aerial Imagery February 2012
Prepared by Wildscape Restoration, February 2012

FIGURE 3

Site A Location

Southern California Edison, Moorpark-Newbury 66 KV Line Mitigation

0 125 250 500 Feet

N

Data Source: ESRI Basemap Aerial Imagery February 2012
Prepared by Wildscape Restoration, February 2012

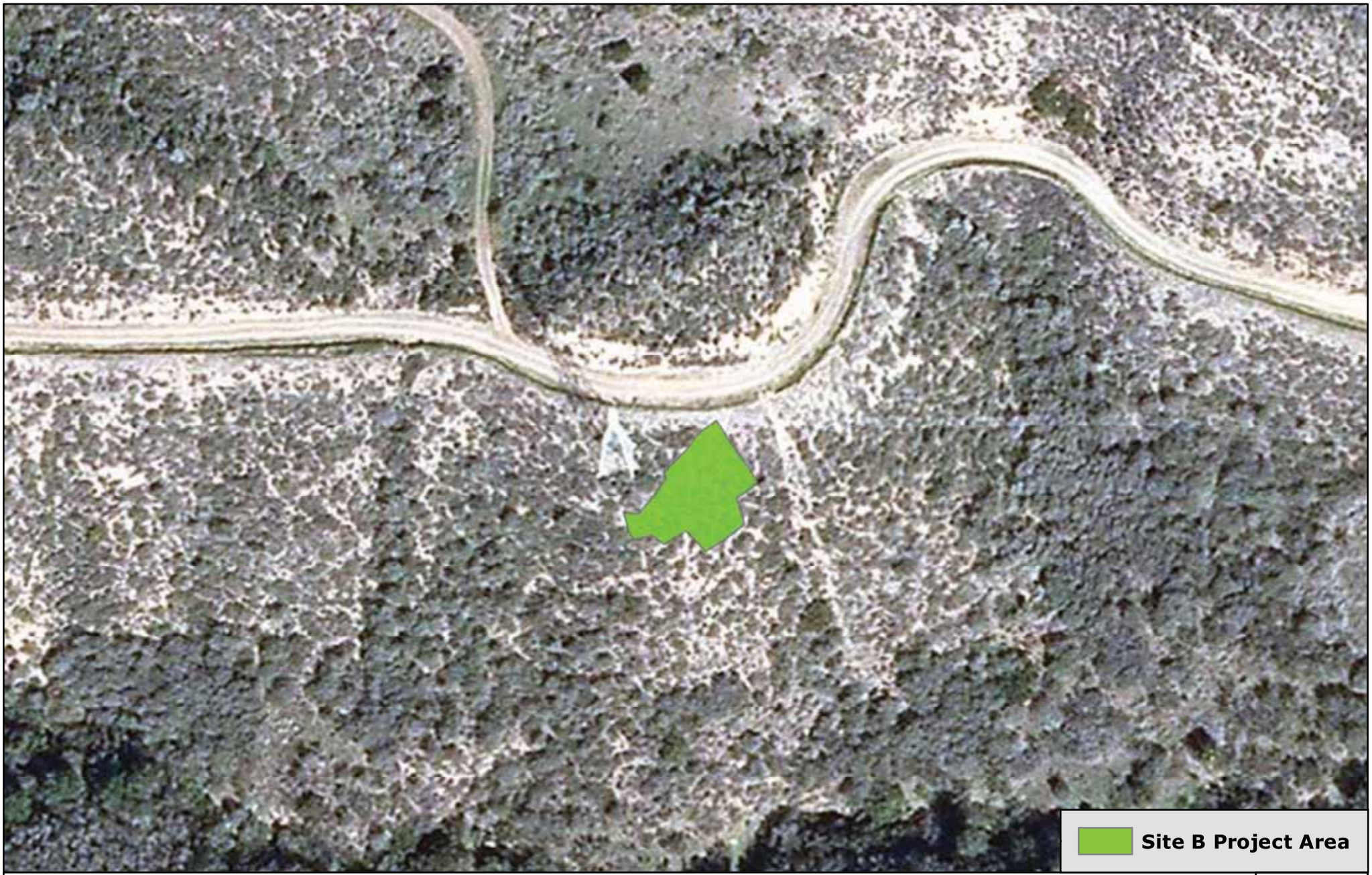


FIGURE 4

Site B Location

Southern California Edison, Moorpark-Newbury 66 KV Line Mitigation

0 45 90 180 Feet

N

Data Source: ESRI Basemap Aerial Imagery February 2012
Prepared by Wildscape Restoration, February 2012

FIGURE 5

Site C Location

Southern California Edison, Moorpark-Newbury 66 KV Line Mitigation

0 15 30 60 Feet

N

Data Source: ESRI Basemap Aerial Imagery February 2012
Prepared by Wildscape Restoration, February 2012

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Figure 6 - Site Photos

Photo 1: View of southwest facing portion of Site A.

Photo 2: View of upper terrace and access road of Site A.

Photo 3: View of lower terrace above Site A.

Photo 4: View looking west of Site B.

Photo 5: View of lower, eastern edge of Site B.

Photo 6: View of upper terrace and access road of Site B.

Figure 6 - Site Photos (continued)

Photo 7: View of Site C site looking northwest from base of slope

Photo 8: View of Site C looking northwest from base of slope.

Photo 9: View looking northeast of top section of erosion at Site C.

Photo 10: View of reference slope(1) from the bottom of Site A site looking west

Photo 11: View of reference slope (2) from the top of Site A site looking southwest

Photo 12: View of reference slope (3) looking east of Site A.

Figure 6 - Site Photos (continued)

Photo 13: View of reference slope (1) looking west from base of Site B.

Photo 14: View of reference slope (2) looking south from top of Site B.

Photo 15: View of reference slope (3) looking west from mid-slope of Site B.

Photo 16: View of reference slope (1) looking west from top of Site C.

Photo 17: View of reference slope (2) looking east from top of Site C.

Photo 18: View of steep reference slope (3) east of Site C.

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2.0 PROJECT DESCRIPTION

2.1 Responsible Parties

Project Proponent: Southern California Edison

Property Ownership: Conejo Open Space Conservation Agency

Preparers of the Plan: Wildscape Restoration, Inc.

2.2 Existing Functions and Values

The project site is located in open space with recreational trails in Rancho Conejo Open Space Preserve. SCE has easements within the open space for the development and maintenance of their transmission lines. The areas temporarily impacted are associated with construction of new transmission lines, and the maintenance of existing transmission lines and support structures.

The three sites are located on slopes above an unnamed drainage, which is a tributary to a tributary of Arroyo Conejo. The sites are on south-facing slopes consisting of loose soil with no vegetation. The surrounding vegetation consists of vegetation communities associated with California coastal sage scrub and chaparral. The unnamed drainage consists of willow woodland. Directly adjacent to access roads, disturbed habitat supports non-native, invasive species such as annual grasses and mustard.

2.2.1 Plants and Wildlife

In association with the vegetation communities described above, a variety of plant and wildlife species may occur. Common wildlife associated with upland communities include: mule deer, bobcats, coyotes, striped skunks, raccoons, and ground squirrels.

A list of plant species currently present at the project site is provided in Table 3 for native species and Table 4 for non-native species. These lists include all plant species observed during a brief field visit on December 22, 2011 and March 1, 2012. However, a comprehensive floristic survey was not performed and the visits were not conducted during the optimal season to detect all potential herbaceous species. Plant species selected for revegetation were derived from this list as well as common dominant species in the area.

The plant species identified in this plan utilize the scientific names as classified in the *The Jepson Manual***;** *Higher Plants of California,* 2nd edition, (Baldwin et al. 2012) and the vegetation communities are based on series identified in *A Manual of California Vegetation,* 2nd edition (Sawyer and Keeler-Wolf 2009).

Table 3: Native Plant Species Observed at Project Site

Scientific Name	Common Name
Artemisia californica	California sagebrush
Baccharis pilularis	coyote brush
Baccharis salicifolia	mule fat
Brickellia california	California brickelbush
Calystegia macrostegia	island morning glory
Ceanothus megacarpus	bigpod ceanothus
Cercocarpus betuloides	mountain mahogany

Table3: Native Plant Species Observed at Project Site (continued)

Scientific Name	Common Name
Encelia californica	canyon brittlebush (sunflower)
Eriogonum fasciculatum	California buckwheat
Heterotheca grandiflora	telegraph weed
Malacothrix saxatilis	cliff aster
Opuntia littoralis	prickly pear
Platanus racemosa	California sycamore
Populus fremontii	Fremont cottonwood
Quercus agrifolia	coast live oak
Rhamnus californica	California coffeeberry
Rhus ovata	sugarbush
Salix laevigata	red willow
Salix lasiolepis	arroyo willow
Salvia leucophylla	purple sage
Salvia mellifera	black sage
Yucca whipplei	chaparral yucca
Xanthium strumarium	cocklebur

Table 4: Non-Native Plant Species Observed at Project Site

Scientific Name	Common Name
Brassica nigra	black mustard
Bromus diandrus	ripgut brome
Bromus madritensis ssp. rubens	red brome
Carduus pycnocephalus	Italian thistle
Centaurea melitensis	tocalote
Erodium cicutarium	filaree
Foeniculum vulgare	fennel
Hirschfeldia incana	shortpod mustard
Lactuca serriola	prickly lettuce
Malva parviflora	cheeseweed
Medicago polymorpha	bur-clover
Nicotiana glauca	tree tobacco
Plantago lanceolata	English plantain
Piptatherum miliaceum	smilo grass
Polypogon monspeliensis	annual rabbits foot grass
Salsola tragus	Russian thistle
Sonchus asper	spiny sow thistle
Sonchus oleraceus	common sow thistle
Xanthium spinosum	spiny cocklebur

2.3 Vegetation Communities

2.3.1 Chaparral

Chaparral occurs within the project area and is primarily composed of woody, evergreen shrubs. It tends to occupy mountain slopes that are relatively high in elevation when compared to coastal sage scrub. Chaparral plants form dense thickets and are adapted to little water and to infrequent wildfires. Common plant species that occur in this vegetation community include chamise (*Adenostema fasciculatum*), various ceanothus species (*Ceanothus* spp.), mountain mahogany (*Cercocarpus betuloides*), California buckwheat (*Eriogonum fasciculatum*), coffeeberry (*Rhamnus californica*), scrub oak (*Quercus berberidifolia*), various sage species (*Salvia* spp.), and chaparral yucca (*Hesperoyucca whipplei*) (Sawyer and Keeler-Wolf 2009).

2.3.2 Coastal Sage Scrub

Coastal sage scrub occurs within the project area and is typically located on the lower elevation slopes. This vegetation grows on rocky, well-drained upper banks and terraces, usually with a south facing aspect. This habitat is comprised of drought-tolerant shrubs such as California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), California buckwheat (*Eriogonum fasciculatum*), purple sage (*Salvia leucophylla*), and black sage (*Salvia mellifera*) (Sawyer and Keeler-Wolf 2009). Other species found in this habitat include deerweed (*Acmispon glaber* [*Lotus scoparius]*), telegraph weed *(Heterotheca grandiflora)*, prickly pear (*Opuntia littoralis*), sugarbush (*Rhus ovata*), oaks (*Quercus* spp.), lemonade berry (*Rhus integrifolia*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and chaparral yucca (*Yucca whipplei*). Non-native species found within this plant community may include fat oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), tocalote (*Centaurea melitensis*), fennel (*Foeniculum vulgare*), shortpod mustard (*Hirschfeldia incana*), and Russian thistle (*Salsola tragus*).

2.3.3 Willow Woodland

Riparian habitat occurs in the unnamed drainage below Site A. The habitat consists of willow woodland, dominated by two willow species, red willow *(Salix laevigata*) and arroyo willow (*Salix lasiolepis*). The area adjacent to the unnamed drainage is characterized by a dense, closed-canopy stand, or an open stand with a shrubby understory. Dense stands are most likely to occur in areas of high moisture. These stands may also contain other native trees such as white alder (*Alnus rhombifolia*), California sycamore (*Platanus racemosa*), or Fremont cottonwood (*Populus fremontii*) (Sawyer and Keeler-Wolf 2009). The understory tends to be sparse and may contain patches of cattail (*Typha* spp.). The open willow woodland stands, which tend to occur in xeric areas, support Mexican elderberry, and Fremont cottonwood in the overstory in association with willow species. The understory in these stands contains mule fat (*Baccharis salicifolia)* and sandbar willow (*Salix exigua*).

2.3.4 Reference Sites

Reference sites were selected in close proximity to the project site and consisted of existing vegetation on both sides of the project areas. Sampling points were located in areas that were at least five meters (16.4 feet) from any disturbance related to the construction activities. Three equidistant points were assessed each on the left and right sides of the project area for a total of six sampling points. Points were located parallel to the slope and placement on the slope was relative to the top, middle, and toe of the project area. An area of approximately 10 square meters (107.6 square-feet) was visually assessed for percent cover of vegetation to the nearest

five percent. Results of the survey are presented in Table 5. The average vegetation cover for all three slopes is approximately 34 percent.

2.4 Project Goals

The project objectives include the following:

Reduction in erosion and associated damage.
Improvement of wildlife habitat.
Increased biodiversity.
Enhancement of coastal sage scrub and chaparral.
Slope stability.

Table 5. Percent Cover of Vegetation in Reference Sites

Sample #	Site A	Site B	Site C
1	30	40	70
2	45	25	45
3	35	40	35
4	20	15	60
5	20	25	35
6	30	30	10
Average	**30**	**29**	**43**

2.5 Stormwater Pollution Prevention Plan Compliance

SCE has prepared a SWPPP in compliance with water quality regulations. Best management practices and erosion control measures are being implemented to meet these requirements. In disturbed areas that were vegetated prior to temporary impacts, the area disturbed must be re-established to a uniform vegetative cover equivalent to 70 percent coverage of the preconstruction vegetative conditions.

3.0 SITE A: WELDED-WIRE RETAINING WALL CONSTRUCTION

Tension cracks were observed at Site A in May 2012, an indication of slope instability. A geotechnical study has recommended removal and recompaction of the slope, and the installation of a retaining.

Construction of a welded-wire retaining wall will occur at Site A in December 2012 and January 2013. A construction specification is included in Appendix B. The wall will be constructed of welded-wire cages, which will compress and reinforce soil, creating a stable configuration. As the welded-wire wall is built, soil is filled in and compacted. Wildscape has proposed the addition of soil amendments based on results of soil testing and a native seed mix to the backfill of the wall face to aid in revegetation efforts. These efforts will be coordinated with SCE and its contractor. Due to construction activities at Site A, initial weeding is not expected prior to revegetation installation. At Site A, soil samples were collected and analyzed on November 12, 2012. Recommendations for soil amendments by Fruit Growers Laboratory were prepared on November 20, 2012 and are shown in Table 6 below.

Additional erosion control and stormwater filtration will be provided by the installation of straw wattles or fiber rolls and the addition of a bonded fiber matrix in the hydroseed mix.

Table 6. Soil Amendment Recommendations

Soil Nutrient	Lbs./Acre
Nitrogen	20
Phosphorus (P2O5)	75
Zinc	18
Potassium (K2O)	630

*Provided by Fruit Growers Laboratory, Inc.

The fiber rolls will be installed at Site A on the lower and upper slope after construction has been completed and the slopes have been recompacted. The installation will occur after installation of a new irrigation system at Site A. The irrigation system will be similar to the previous installation. However, due to the construction of the welded-wire retaining wall, a micro-emitter irrigation system will also be installed on the face of the wall. No irrigation will be installed on the upper slope. Hydroseeding with a flexible growing medium (bonded fiber matrix) will occur on the lower slope, face of the retaining wall, and the upper slope after the irrigation and fiber rolls have been installed. Based on the initial hydroseeding germination and establishment results, six species were removed from the plant palette and three additional native grass species were added.

4.0 SCHEDULE OF INSTALLATION, MAINTENANCE, AND MONITORING

The schedule of project activities is summarized in Table 7 below. The schedule has been revised to accommodate re-installation activities at Site A. Monitoring of the site will occur monthly for approximately 5-6 months after installation. Monitoring will be limited thereafter to annual surveys. Maintenance treatments will occur quarterly in the project area for three years after the initial removal through May 2015. Project requirements indicate that the site must be maintained for three years or until performance criteria have been met.

5.0 NATIVE REVEGETATION INSTALLATION

5.1 Responsible Parties

Project Proponent: Southern California Edison

Contractor: Wildscape Restoration, Inc.

5.2 Rationale for Expecting Implementation Success

Construction impacts occurred in June 2011. The initial HMMP was approved by CDFW in April 2012. This HMMP has been revised to include the re-installation of native vegetation at Site A due to the installation of a retaining wall to stabilize the slope. It is anticipated that successful native revegetation will be attained within three years of initial installation by May 2015.

5.3 Personnel Qualifications

In an effort to facilitate the successful completion of the project, qualified and experienced personnel must be retained. According to California regulations, a licensed contractor must be retained for projects (labor and materials) totaling $500.00 or greater. All pesticide application must be completed by a licensed pest control business.

Table 7. Implementation Schedule

Proposed Task Schedule (Subject to Change)	Revegetation Installation	Weed Control	Supplemental Seeding	Supplemental Water	Monitoring
March 2012				X	X
April 2012	X			X	X
May 2012				X	X
June 2012				X	X
July 2012				X	X
August 2012				X	X
September 2012				X	X
October 2012			X (Sites B & C)	X	
December 2012					X
January 2013				3X	X
February 2013		X		3X	X
March 2013		X		2X	X
April 2013		X		X	X
May 2013		X		X	X (Annual)
June 2013				X	
July 2013				X	
August 2013				X	
September 2013				X	
October 2013			X (Site A)	2X	
November 2013		X		2X	
December 2013				2X	
January 2014		X		2X	
February 2014				X	
March 2014		X		X	
April 2014				X	
May 2014		X		X	X (Annual)
January 2015		X			
March 2015		X			
May 2015		X			X (Annual)

5.3.1 Landscape Contractor

A qualified landscape contractor must be retained for native plant revegetation and site maintenance activities. The contractor must have a current landscape contractor's C-27 license issued by the California Contractor's State License Board (CSLB) and experience with native habitat revegetation. In addition, the contractor or contractor personnel must have work experience including at least three habitat revegetation projects in southern California. The contractor or subcontractor must also be a licensed pest control business with the California Department of Pest Regulation (DPR) and registered with the Ventura County Agricultural Commissioner. The pest control business personnel must have work experience in non-native invasive plant removal in open space. The site supervisor must be licensed with a DPR Qualified Applicator's License (QAL) or Qualified Applicator's Certificate (QAC) in the aquatic classification.

5.3.2 Biological Monitor/Restoration Ecologist

A qualified biological monitor and Restoration Ecologist must be retained for all necessary monitoring activities. The monitor must have experience with habitat restoration, non-native invasive plant removal, and special status species monitoring in southern California, including familiarity with special status plants and wildlife that may occur in the area.

5.4 Pre-construction Surveys, Resource Education, Biological Monitoring,

SCE will coordinate with the contractor to avoid impacts to biological resources. All personnel will comply with the requirements of the CDFW SAA. Pre-construction surveys for threatened, endangered, and other sensitive plant and animal species will be conducted, if necessary. Contractor personnel will be educated on potential biological resources on the project prior to initiating work. A biological monitor will be present during initial installation activities, if necessary.

5.5 Staging Areas

Movement of personnel and equipment will be limited to designated work zones, staging areas, and access roads. The location for the staging area will be adjacent to each slope area within the access road right-of-way. The selection of the staging area was based on available space, ease of access to the staging area, ease of access between the project site and the staging area, and avoidance of impacts to any sensitive species.

5.6 Site Access

Site access would be through the COSCA gate located along Conejo Center Drive, which is 0.3 mile west of Rancho Conejo Drive. There are existing access roads through the SCE easement area.

5.7 Site Boundaries and Signage

The project area will have a combination of stakes and flagging to define the boundary. The stakes will be made visible so anyone working within the site will be able to identify the boundary limits. Along the boundaries of the project site, signs will be placed to inform the public that revegetation activities are taking place including the potential use of herbicides.

5.8 Site Preparation

5.8.1 Grading and Erosion Control

Side-cast material and vegetation were cleared and graded at all three sites. Erosion prevention tarps were removed between March 5 and March 7, 2012. Side-cast material was compacted and jute net was installed prior to hydroseeding on March 8, 212.

5.8.2 Soil Amendments

Soil sampling is often recommended for project sites where soil has been disturbed. Soil sample results may assist in plant selection and maintenance. No soil samples were collected during initial installation; however, soil samples may be recommended during the course of the project if plant growth is inhibited by adverse soil conditions. In addition, native plants with tolerance for specific soil conditions may be substituted for species in the current palette.

5.8.3 Initial Weeding

Initial weeding is typically used to remove weeds in a given area prior to revegetation. The grow-and-kill method involves irrigating and/or fertilizing an area until weed seed germination occurs and weeding to deplete the seed bank. The weed seedlings are sprayed with herbicide within a few weeks of germination. The process should be repeated several times to kill both summer-germinating and winter-germinating weeds. Due to the need for immediate erosion control, with tarps, few weeds were established. Initial weeding was minimal at all sites in March 2012.

5.9 Temporary Irrigation

Upland plant species should receive deep watering in the fall through spring and little or no summer water. Based on the late application of seed to the project site, irrigation throughout the first year is necessary to establish vegetation. Due to seasonal changes and the differing needs of various vegetation communities, irrigation schedules should be appropriately calibrated. Irrigation should be discontinued prior to the rainy season of Year 3 (after two full years), unless unusually severe drought or heat conditions threaten the survival of the plantings.

A temporary irrigation system comprising of water storage tanks, above ground overhead sprinklers, and micro-spray emitters has been installed at all sites in March 2012. Irrigation at Site A was discontinued on April 20, 2012 and was removed on September 7, 2012 due to slope stability concerns. There are no water or electricity sources onsite. The water storage tanks have been filled by a water tank on a bi-weekly basis in order to reduce site traffic and disturbance as requested by COSCA. The irrigation system has a battery-powered controller to schedule watering. Aboveground irrigation lines will be installed with overhead rotary heads or micro-spray emitters. The retaining wall will have a drip system installed on its surface. All pipes and tubing should be stabilized with pins or clips to prevent disturbance from foot traffic, wildlife activity, or high winds.

Irrigation schedules should be adjusted as conditions and situations dictate in order to provide appropriate moisture amounts during the life of the projects. Healthy root growth is also facilitated by utilization of an irrigation schedule that emphasizes infrequent, deep watering rather than frequent, short duration watering. The irrigation system will be operated via an irrigation controller and pump, if necessary, from March through May during the first year and from October through May during the second year. Additional water may be supplied monthly

during the summer season of the first year, if deemed necessary to prevent seedling mortality. Water will be provided to the irrigation storage tanks biweekly as needed, up to 8 visits per year. Each water truck visit will provide enough water for two irrigation events.

5.10 Plant Materials and Methods

5.10.1 Plant Materials

Plants for the project site may be established through container stock, cuttings, or seed. There are advantages as well as disadvantages to each planting methodology. Due to the steep slopes, erosion is an immediate concern. Hydroseeding will be the most appropriate method to achieve revegetation and compatibility with the erosion control activities proposed by SCE. Seeded plants adjust well to site conditions; however, germination and establishment of each species varies and does not provide immediate cover. The seed material should be selected based on site conditions, species that readily establish from seed, availability, and cost.

Use of appropriate plant material is essential to project success, as plants of a single species may vary considerably across their native range. Thus, while a particular plant species may be native to the region, it may not be appropriate for a site if collected from a distant or disjunct location. The landscape contractor should consult with the Restoration Ecologist to determine acceptable source locations for all plant materials.

All plant materials should be sourced, ordered, and secured by the landscape contractor prior to initiation of site preparation. Copies of shipping lists for all purchased plant materials will be provided by the landscape contractor to the Restoration Ecologist. All plant materials will be inspected by the Restoration Ecologist prior to installation to ensure their conformance to the planting plan, and that they are free of weeds and pest insects. Horticultural varieties of native plants are not recommended for habitat restoration. Any substitutions will be approved by the SCE Biologist and coordinated with the Restoration Ecologist prior to installation.

5.10.2 Plant Palette

The plant palette consists of a variety of grasses, wildflowers, and shrubs, which are appropriate for the site and comply with erosion control requirements. The final seed mix was developed considering several factors such as availability of seed, location of collection, and cost effectiveness. The seed mix for the initial installation is detailed in Table 8 below. The proposed seed mix for the Site A reinstallation is listed in Table 9.

Table 8. Seed Mix – Initial Installation

Species	Common Name	Bulk lbs./ Site A	Bulk lbs./ Site B	Bulk lbs./ Site C
Artemisia californica	California sagebrush	0.00	0.04	0.01
Baccharis pilularis	coyote brush	0.02	0.13	0.03
Ceanothus megacarpus	bigpod ceanothus	0.03	0.21	0.04
Cercocarpus betuloides	mountain mahogany	0.03	0.28	0.06
Collinsia heterophylla	Chinese houses	0.02	0.16	0.03
Elymus glaucus	blue wildrye	0.01	0.06	0.01
Encelia californica	California bush sunflower	0.08	0.66	0.13
Eriogonum cinereum	ashy leaf buckwheat	0.36	2.97	0.61
Eriogonum fasciculatum	common buckwheat	0.19	1.52	0.31
Eschscholzia californica	California poppy	0.03	0.22	0.05

Table 8. Seed Mix – Initial Installation (continued)

Species	Common Name	Bulk lbs./ Site A	Bulk lbs./ Site B	Bulk lbs./ Site C
Hazardia squarrosa	saw-toothed goldenbush	0.47	3.84	0.78
Hemizonia fasciculata	common tarweed	0.02	0.15	0.03
Hesperoyucca whipplei	chaparral yucca	0.06	0.49	0.10
Heteromeles arbutifolia	toyon	0.28	2.26	0.46
Heterotheca grandiflora	telegraph weed	0.00	0.02	0.00
Leymus (Elymus) condensatus	giant wildrye	0.01	0.09	0.02
Leymus (Elymus) triticoides	creeping wildrye	0.09	0.76	0.16
Lupinus succulentus	arroyo lupine	0.18	1.49	0.30
Nassella (Stipa) pulchra	purple needlegrass	0.02	0.15	0.03
Phacelia cicutaria	caterpillar phacelia	0.00	0.02	0.00
Rhamnus ilicifolia	hollyleaf redberry	0.03	0.28	0.06
Rhus integrifolia	lemonadeberry	0.42	3.41	0.70
Rhus ovata	sugarbush	0.25	2.05	0.42
Salvia leucophylla	purple sage	0.03	0.22	0.05
Salvia mellifera	black sage	0.02	0.16	0.03
Native Erosion Control Species				
Acmispon glaber [Lotus scoparius]	deerweed	0.40	3.25	0.66
Bromus carinatus var. carinatus	California brome	1.11	9.09	1.85
Plantago ovata	wooly plantain	0.62	5.02	1.03
Trifolium tridentatum	tomcat clover	0.37	3.05	0.62
Total Bulk Pounds Per Site		**5.15**	**43.40**	**8.58**

Table 9. Site A Reinstallation Seed Mix

Species	Common Name
Acmispon glaber [Lotus scoparius]	deerweed
Artemisia californica	California sagebrush
Baccharis pilularis	coyote brush
Bromus carinatus var. carinatus	California brome
Ceanothus megacarpus	bigpod ceanothus
Elymus glaucus	blue wildrye
Encelia californica	California bush sunflower
Eriogonum fasciculatum	common buckwheat
Eschscholzia californica	California poppy
Hazardia squarrosa	saw-toothed goldenbush
Hemizonia fasciculata	common tarweed
Hesperoyucca whipplei	chaparral yucca
Heteromeles arbutifolia	toyon
Heterotheca grandiflora	telegraph weed
Hordeum brachyantherum	meadow barley
Lupinus succulentus	arroyo lupine

Table 9. Site A Reinstallation Seed Mix (continued)

Species	Common Name
Melica californica	California melic
Nassella (Stipa) pulchra	purple needlegrass
Phacelia cicutaria	caterpillar phacelia
Rhus integrifolia	lemonadeberry
Rhus ovata	sugarbush
Salvia leucophylla	purple sage
Salvia mellifera	black sage
Vulpia microstachys	small fescue
Yucca whipplei	

5.10.3 Planting Schedule

Most seeding should be planted in the late fall (October-December). Upland plants become active as a result of winter rains, so installation should be timed to allow plants to benefit from winter precipitation. Since the project sites need to comply with the SWPPP, the seeding schedule was advanced to April 2012. Irrigation will be installed and used to compensate for potential lack of precipitation due to the late spring seeding schedule. Reinstallation of Site A is scheduled for January 2013 after construction of the retaining wall is completed.

5.10.4 Site Preparation and Erosion Control

Hydroseeding consists of a hydraulic application of a slurry mixture containing water, cellulose wood fiber, seed, and organic soil stabilizer to the soil surface. Prior to hydroseeding, the soil surface should be prepared.

Erosion control activities will include final grading and soil compaction. If possible, soil should be tilled to a depth of 4" to 6" inches. In addition, the soil surface should be cleared of large debris. Mow, rake, and remove any dry brush or non-native vegetation that may interfere with hydroseeding.

Water all plant areas thoroughly to saturate upper layers of soil prior to the hydroseeding operation. Allow the planting area soil surface to dry out for one day only prior to the hydroseeding. Exercise care not to allow the soil surface to be overly saturated with water prior to the hydroseeding. At the same time, the soil surface should not become too dry during this period. There should be some residual moisture within the first 0.25 inch of the soil surface.

5.10.5 Hydroseeding

Hydroseed will be applied using a two-step technique. The hydroseeding mixture will be composed of water, cellulose wood fiber or mulch, seed, and organic soil stabilizer. Alternatively, a bonded fiber matrix product may be used to replace the wood fiber or mulch and organic soil stabilizer. There are various types of this product for different levels of erosion control and may assist with revegetation in a hydroseed application. Equipment shall have a built-in agitation system and operating capacity sufficient to agitate, suspend, and homogeneously mix slurry. Water should be obtained from a local, clean source. Application of hydroslurry should comply with product specifications. Initial hydroseeding applications for all site utilized a mulch and tackifier with native seed. The re-application of Site A will utilize a bonded fiber matrix product for additional erosion control.

Wood fiber, mulch, or straw shall be produced from a natural or recycled straw fiber; these materials should be free from plastic materials or other non-biodegradable substances. Fiber shall be of such character that the fiber will disperse into uniform slurry when mixed with water. Fiber and other mulch ingredients shall be free from growth or germination inhibiting ingredients.

Seed material should be obtained from a reputable native seed supplier. Seed shall comply with U.S. Department of Agriculture rules and regulations under the Federal Seed Act. Purity and germination rates shall be warranted by the seed supplier. Suppliers shall certify that laboratory and field-testing of their product has been accomplished and that their product meets the product specifications of the plant palette based on such testing. All seed should be furnished in sealed standard containers and each plant species should be packaged separately rather than pre-mixed. Seed that has become wet, moldy, or otherwise damaged in transit or in storage shall not be used and will be rejected and removed from site.

6.0 SITE MAINTENANCE

The contractor will perform project maintenance over a three-year period at the project site to facilitate compliance with the requirements and specifications set forth in the native revegetation plan and regulatory permits, and to facilitate successful establishment of native habitat. Maintenance will consist of quarterly site visits per year in Years 1 and 2, and three site visits in Year 3. Additional monthly watering during the summer of the first year will be conducted if necessary. The maintenance and monitoring schedule is provided in Table 8 above.

6.1 Responsible Parties

Project Proponent: Southern California Edison

Contractor: Wildscape Restoration, Inc.

6.2 Non-Native Invasive Plant Species Removal

Non-native plant species are expected to become established within the project site due to their presence in adjacent areas (see Table 4 above). Removal of non-native invasive plants is vital to facilitate success of the project. Weed removal should begin before planting occurs, if necessary, and should continue throughout the life of the project. Weed establishment will be highest in the spring and early summer. During the fall and winter, there will be less maintenance required. Protective measures should be taken to avoid damage to desirable plants; in many cases, hand-pulling may be used in lieu of herbicides to reduce the chance of damage from spray drift. As the project progresses, weeding should become less frequent as native plants begin to outcompete non-native species successfully. Weeding maintenance will include hand removal, mechanical removal, and/or herbicide application via foliar spray or cut-and-paint methods, as necessary.

6.2.1 Manual Removal

For small seedlings of perennial shrubs and trees, and large, widely scattered herbs, manual removal, via hand pulling or weed wrench, may be utilized to achieve control. Weed wrenches remove both aboveground and belowground portions of some larger plants. In the case of shallow-rooted plants, hand removal may result in complete mortality and reduce the amount of re-treatments needed. The aboveground sections of large herbaceous weeds such as poison

hemlock should be removed by hand-cutting with weed whips or similar equipment. Manual removal may occur during any stage of the life cycle of many plants.

6.2.2 Herbicide Application

Herbicide application is recommended for non-native invasive plants that are not easily removed by hand such as large trees, deep-rooted plants, or for large areas containing numerous seedlings. No herbicide shall be used on native vegetation. Herbicides will be applied under controlled circumstances following all label requirements. BMPs for herbicide use and application are provided in Appendix C.

Proposed herbicides should be approved by the Environmental Protection Agency (EPA) and DPR for use on a particular species or habitat type. Herbicide labels should be thoroughly reviewed to determine appropriateness of use. Aquatic approved formulations, such as the glyphosate-based Aquamaster™, should be used in locations where there is risk of the herbicide contacting water during application. A DPR and EPA approved non-ionic surfactant such as Agri-Dex® will be used with all herbicide applications. A non-toxic colorant will also be added to the spray mix to enable crews to see where herbicide has already been applied after the initial evaporation of the solution. Herbicide application should not occur if rain is forecast greater than 50 percent within the next 24 hours, and spray applications should not occur when winds over 10 mph are observed.

6.2.2.1 Cut-and-Paint Method

The cut-and-paint method, also known as the cut-and-daub method or the cut-stump method, will be used to remove the target species in areas where non-native plants are closely mixed with native species, or in areas where spray drift from foliar herbicide application is at risk of contacting water or desirable native vegetation. This method combines the removal of aboveground biomass with the application of herbicide to the remaining cut stem surface.

For this removal technique, work crews use gas-powered chainsaws, loppers, weed whips, or similar hand equipment to cut aboveground biomass. The main stem or trunk of the plant is cut as close to the ground as possible. All biomass will be removed from the site for disposal at a landfill.

The next phase of this method involves the use of a hand-held sponge painter or a hand pump sprayer to apply a full-strength herbicide solution to the stems of the cut plants. Since translocation ceases within minutes after cutting, herbicide will be applied immediately to the freshly cut stems or trunks for best efficacy.

6.2.2.2 Foliar Spray

Foliar spray involves the application of a diluted herbicide (concentrations in accordance with labels) to the stems and leaves of a targeted plant. This method will be used at the project site for the treatment of resprouts after the aboveground biomass of the targeted species has been cut or ground. The leaves and stems need to be adequately wetted with spray solution, and care must be taken to avoid spraying non-target vegetation. Work crews will use backpack sprayers, or truck-mounted spray equipment to apply herbicide to the target species.

6.2.3 Onsite Mulching

Herbaceous weed material that has been pulled can be left onsite to decompose naturally as mulch if no seeds or viable propagules are present. Plants treated with foliar spray will be left

in place to decompose naturally unless they present an immediate flood or fire hazard. Plants will be left in place after spraying in order to allow adequate time for the herbicide to be effective. Once mortality is achieved, aboveground biomass will be removed, if necessary, using manual or mechanical methods.

6.2.4 Biomass Disposal

When seed-bearing weeds are removed for the project, their biomass will be hauled offsite for disposal at a local landfill to avoid re-infestation of the site. Cut, seed-bearing weed material may be stored in staging areas for a maximum of five days before transport to a landfill. This biomass will be placed on and covered by a plastic sheet or tarp during storage and transport to prevent the seeds from dispersing. Cut biomass that does not contain viable seed may be chipped prior to disposal to reduce the volume of material to be transported and the number of trips to be made to the landfill.

6.3 Litter Removal

Litter and debris will be placed into trash bags and will be properly disposed.

6.4 Irrigation Maintenance

Wildscape will provide supplemental water application for Years 1 and 2. The irrigation system will be inspected during each maintenance visit. Routine maintenance is vital to preserve the efficiency of the irrigation system. Regular inspections and repairs decrease the amount of water lost from punctures and broken pipes, as well as potential erosion problems caused by damaged systems. Other common maintenance issues include the malfunctioning of micro-spray emitters and irrigation tubing due to hard water deposits or damage from animal activity. During the wet season, when the irrigation system may be turned off or used only minimally, maintenance activities should decrease.

6.5 Vandalism

Vandalism is a potential issue at all sites, due to the presence of recreational trails. If vandalism occurs, appropriate measures should be taken to prevent further damage

6.6 Areas of Low Germination

Re-seeding will be performed in the fall after initial seeding to meet overall plant cover requirements, if necessary. Patches of bare ground larger than 36 inches by 36 inches in previously seeded areas should be reseeded by hand. If appropriate, the same seed mixture used during installation should be applied. However, if it is evident that environmental or soil conditions have inhibited germination, site-specific plant palette changes may be made. Plants chosen should be locally native, appropriate to the environmental conditions of the site, and approved of by the Restoration Ecologist. A supplemental seed mix was prepared and applied in November 2012 for Sites B and C, which is provided in Table 10. A similar seed mix will be utilized for Site A, if needed.

Table 10. Supplemental Seed Mix

Species	Common Name	Bulk lbs./Acre
Acmispon glaber [Lotus scoparius]	deerweed	0.2
Artemisia californica	California sagebrush	0.1
Baccharis pilularis	coyote brush	0.2
Bromus carinatus var. carinatus	California brome	0.5
Ceanothus megacarpus	bigpod ceanothus	0.1
Elymus glaucus	blue wildrye	0.3
Encelia californica	California bush sunflower	0.3
Eriogonum fasciculatum	common buckwheat	0.4
Eschscholzia californica	California poppy	0.3
Hazardia squarrosa	saw-toothed goldenbush	1.2
Hemizonia fasciculata	common tarweed	0.05
Hesperoyucca whipplei	chaparral yucca	0.0
Heteromeles arbutifolia	toyon	0.5
Heterotheca grandiflora	telegraph weed	0.05
Hordeum brachyantherum	meadow barley	0.35
Lupinus succulentus	arroyo lupine	0.9
Melica californica	California melic	0.1
Nassella (Stipa) pulchra	purple needlegrass	0.2
Phacelia cicutaria	caterpillar phacelia	0.05
Rhus integrifolia	lemonadeberry	0.8
Rhus ovata	sugarbush	0.25
Salvia leucophylla	purple sage	0.1
Salvia mellifera	black sage	0.05
Vulpia microstachys	small fescue	0.1
Yucca whipplei	chaparral yucca	0.1

6.7 Protection from Herbivores

In some cases, herbivores such as rabbits and gophers may cause significant damage to native plantings. Plants should be monitored for damage, and if damage becomes severe, plants may be protected using fencing, wire cages, or other enclosures.

Trapping is an additional alternative to rodent control. This control measure should also be done with approval by CDFW and the SCE Biologist, and in consultation with the Restoration Ecologist. However, the use of anticoagulant-based rodent poisons should be avoided. Their use has been shown to cause mortality of meta-predators such as bobcats, and they are not particularly successful at reducing rodent populations over the long term.

7.0 ADAPTIVE MANAGEMENT PLAN

7.1 Responsible Parties

Project Proponent: Southern California Edison

Contractor: Wildscape Restoration

SCE shall be responsible for implementing an adaptive management plan with contingency measures to facilitate success of the project site. Contingency measures will be initiated if flood, fire, or the introduction of a new non-native species negatively impacts the project site. Funding for the implementation of contingency measures will be provided by SCE.

A qualified Restoration Ecologist should identify adaptive management techniques and contingency measures over the three-year maintenance period to facilitate success of the project site. A qualified landscape contractor with native habitat restoration experience should implement contingency measures to facilitate success of the project site.

If an unforeseen, catastrophic event (e.g. flood, fire, vandalism) removes or kills the majority (>50%) of native species after the vegetation has met the final performance goals, the permittee will not be responsible for replanting the damaged areas. If said event(s) precede(s) achievement of the final goals, the permittee will be responsible for replanting the area one time only, and will extend the monitoring period as appropriate following replanting".

However, in the occurrence of an "unlawful act," SCE or its successors or assigns will be responsible for maintaining the site. An "unlawful act" is defined as the unlawful act of another and shall include an event, or series of events, such as intentional dumping of debris or fill within or immediately adjacent to the project area or its watershed, or the discharge of such substance by any person or entity other than the property owner in violation of a statute, ordinance, regulation or permit, in which an event or series of events has a material or detrimental impact on the native vegetation, soils, or wildlife of the project area. It is assumed that such an event, or series of events, could not reasonably have been prevented by the property owner. However, SCE or their successors or assigns shall take reasonable precautions to prevent unlawful acts from occurring.

7.2 Contingency Measures

Potential challenges to site success and possible remedial measures are described in Table 11 below.

8.0 MONITORING AND REPORTING

8.1 Responsible Parties

Project Proponent: Southern California Edison

Restoration Ecologist: Wildscape Restoration

8.2 Installation Completion Report (As-Built Plan)

A brief summary report of all revegetation activities will be prepared upon completion of initial installation. The installation completion report will document the materials installed and the methods of installation for all areas. The report will also include additional maps (as-built plans) to show the main installed irrigation components and water tank locations. Since the project sites are being hydroseeded, specific plant locations will not be shown on the as-built plans.

Table 11. Contingency Measures

Potential Challenge	Potential Contingency Measures
Drought	In the case of severe drought, irrigation may be extended beyond the planned two-year period.
Storm and Wind Damage	If unusually severe storm or wind damage occurs, regulatory agencies will be contracted to identify extent of revegetation effort necessary for habitat recovery.
Non-Native Invasive Species	If continuing invasions occur, efforts to find the source population should be made. Increased application of control measures should aid in attaining control.
Poor Soil Conditions	If selected plants do not tolerate certain areas of soil, the plant palette should be changed to include species that are more tolerant. If necessary, soil amendments may be used.
Excessive Erosion	If erosion becomes severe, measures should be taken such as installation of erosion control features.
Vandalism	Efforts should be taken to exclude vandals. If vandalism occurs, appropriate measures should be taken to prevent further damage.
Excessive Predation by Herbivores	Plant cages should be added to establishing woody plants if herbivory is severe; control measures such as trapping and relocation may occur.
Loss of Wildlife Utilization	If a problem is noted, changes in the structure of the site may be made, or additional plant material should be installed.
Wildfire	If a wildfire occurs, regulatory agencies will be contacted to identify extent of revegetation effort necessary for habitat recovery.

8.3 Progress Monitoring (Qualitative Data Collection)

Project plantings should be monitored for a period of three years to facilitate achievement of success criteria. Plants should be inspected once monthly for the first five months during Year 1 (April 2012 to September 2012). Due to the re-installation of Site A, monthly monitoring is recommended from December 2012 to April 2013. Annual surveys will begin in May 2013 through May 2015. Monitoring will be performed by the Restoration Ecologist and/or landscape contractor to document and evaluate the success of the revegetation for the duration of the project. Qualitative monitoring efforts will consist of collecting data on the status of the project site, including the presence of target species, regeneration of native species, natural and human disturbances in the area, and general conditions of the site. Site A wall and slope construction and revegetation requires a revision to the project schedule (see Table 9 above).

8.4 Annual Monitoring Reports (Quantitative Data Collection)

Quantitative monitoring will occur in May or June when plants are actively growing. At this time, plants with diverse life histories, including winter and summer annuals, can be observed and percent cover will represent all plants present. During the summer/fall dry season or winter, many plant species are dormant and may not be detected during surveys at those times of year.

Data for the annual reports will be collected using a modified point-intercept technique. This technique allows for objective determination of plant cover of shrublands and communities consisting of low growing plants. Due to the steepness of the slopes, this method will also reduce the need for carrying sampling equipment, which would compromise worker safety. At each site, transect directions will be set parallel to horizontal and number of transects will be

determined by the size of the site. A sampling point will be selected at the beginning of each transect and subsequent points will be selected every four steps until the end of the transect line is reached. At least 100 points will be observed for each site. For each point, cover type (plant or bare ground) will be recorded. Plant identity at each point will also be recorded. Relative cover of each species can be determined by the formula:

Cover of species A = (number of hits of species A/total number of points) x 100

Total plant cover can be determined by summing the cover percentages for each species. Total cover can exceed 100 percent because of overlapping plant canopies. A flora will also be prepared to document natural recruitment of species and establishment of planted species (if any). Annual reports will be prepared by the Restoration Ecologist and submitted to SCE and CDFW. These reports will contain quantitative data on the status of the project such as percent cover of native plant species, percent cover of non-native plant species or weeds, and dominant shrub heights.

Permanent photographic reference points will be established to document the progress of the project site. Progress photographs will be taken from each reference point during annual monitoring visits, with location coordinates included in progress reports. The location, direction, and angle of view will also be recorded with each photograph. A minimum of one permanent photographic reference point per slope will be established to document the progress of the project site. Photo point locations will be recorded with a GPS unit, and included in project reference maps that accompany the annual monitoring reports.

8.5 Performance Standards for Target Dates and Success Criteria

Performance standards for the project were developed upon an analysis of adjacent reference sites. It is expected that vegetation will recover to pre-project levels after five years from revegetation. Plant growth and cover is dependent on climatic conditions and may be higher in wet years and lower in dry years. The project site's original vegetation cover has been estimated at 34 percent based on an analysis of reference sites adjacent to the three slopes. Vegetative cover varied depending on slope steepness, aspect, and hydrology. Vegetation consisted of Performance standards and targets dates are shown in Table 12.

Table 12. Performance Standards and Target Dates

Type of Vegetative Cover	Criteria for Percentage of Cover for Each Year
Year 1	
Native Plant Cover	10%
Non-Native, Invasive Species	≤5% (Woody and Herbaceous)
Year 2	
Native Plant Cover	12%
Non-Native, Invasive Species	≤3% (Woody and Herbaceous)
Year 3	
Native Plant Cover	18%
Non-Native, Invasive Species	0% (Woody), ≤1% (Herbaceous)

Vegetative cover in year one may be much higher than the initial performance standard due to the addition of fast-growing erosion control plant species. These species are included to meet the SWPPP requirements described in Section 6.5 below. Many of these species are unlikely to be persistent after the first year as the irrigation decreases over time. It is then expected that vegetative cover will decrease in year two. Native forb and shrub species are expected to become established and increase in cover over time.

8.6 SWPPP Vegetation Requirements

In disturbed areas that were vegetated prior to temporary impacts, the area disturbed must be re-established to a uniform vegetative cover equivalent to 70 percent coverage of the preconstruction vegetative conditions. Where preconstruction vegetation covers less than 100 percent of the surface, such as in arid areas, the 70 percent coverage criteria is adjusted by multiplying the preconstruction vegetation cover by 70 percent.

The SWPPP requirement is 70 relative percent of cover of the original vegetation within one year of the completion of the erosion control activities, which is approximately 24 percent. Vegetative cover at year one for erosion control purposes may consist of a mix of native and non-native vegetation.

9.0 COMPLETION OF NATIVE REVEGETATION

All of the performance standards must be met for the project to be considered a success. When performance standards have been met, permitting agencies will be notified in writing by the Restoration Ecologist. The notification will be accompanied by the most recent annual monitoring report and any supplemental information necessary to document attainment of the success criteria.

The Restoration Ecologist will provide agency confirmation to SCE that the project is complete by providing a written notification of completion following a site inspection by appropriate representatives from CDFW.

10.0 REFERENCES

Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California,* second edition. University of California Press, Berkeley, California.

RFB Consulting. 2011. Storm Water Pollution Prevention Plan (SWPPP) for Construction Activities; California 2009-0009-DWQ Construction General Permit.

Sawyer, J.O., and T. Keeler-Wolf. 2009. *A Manual of California Vegetation (2nd ed.)*. California Native Plant Society. Sacramento, California.

APPENDIX A

PROJECT PERMIT

CDFW SAA #1600-2011-0325-R

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CALIFORNIA DEPARTMENT OF FISH AND GAME
SOUTH COAST REGION
3883 Ruffin Road
San Diego, CA 92123

STREAMBED ALTERATION AGREEMENT
NOTIFICATION NO. 1600-2011-0325-R5 REVISION 2
Moorpark-Newbury Park 66kV Line Area

Southern California Edison
REMEDIATION ACTIVITIES PROJECT

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Game (DFG) and Southern California Edison, (Permittee) as represented by Hazem Gabr, Water Quality Section, 1218 South 5th, Avenue, Office 230V, Monrovia, CA, 91016. Permittee is represented further by Richard Haywood (626-404-4048) a Contingent Biologist acting on behalf of Permittee.

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified DFG on October 27th, 2011, that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, DFG has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project area is located within Unnamed tributaries to Conejo Creek, located along Oak Grove Fire Road (at Towers 38, 39, and 40), Thousand Oaks City, Ventura County, California: Latitude 34°12'21.6", Longitude -118°56'49.2", USGS Quad: Newbury Park.

PROJECT DESCRIPTION

The project is limited to the remediation of three areas that were impacted during the work along Oak Grove Fire Road and also at Towers 38, 39, and 40. This work created unintended areas where fill was deposited along the banks of an unnamed tributary to Conejo Creek. The fill consists of small boulders, gravel, sands and other materials that were placed along a steep bank within coastal sage scrub and some mulefat scrub habitat. An estimated 0.50 acres was impacted due to fill placement. These surface materials will be compacted and the area will be re-vegetated to prevent future erosion problems. Off-site restoration will also be conducted in partnership with the Conejo Open Space Conservation Authority (COSCA). The off-site restoration is discussed in more detail later in the Agreement within Section 3.

PROJECT IMPACTS

Based on a site visit conducted on September 23rd, 2011 by DFG staff Rick Mayfield, and based on information received from the Permittee, existing fish or wildlife resources the project could substantially adversely affect include: **Reptiles:** coastal western whiptail (*Cnemidophorus tigris multiscutatus*), San Diego horned lizard (*Phrynosoma coronatum blainvillii*); **Birds:** coastal California gnatcatcher (*Polioptila californica californica*), Cooper's hawk (*Accipiter cooperii*), Northern harrier (*Circus cyaneus),* burrowing owl *(Athene cunicularia)*; small mammals, and all other wildlife resources in the area that utilize costal sage scrub habitat, including the associated vegetation within the unnamed tributary which provides habitat for such species in the area.

The adverse effects the project could have on the fish or wildlife resources identified above include the temporary impacts associated with the restoration of the site.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative requirement described below.

1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to DFG personnel, or personnel from another state, federal, or local agency upon request.

1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.

1.3 Notification of Conflicting Provisions. Permittee shall notify DFG if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, DFG shall contact Permittee to resolve any conflict. If any subsequent provisions related to the project and not addressed prior to the issuance of this Agreement, then DFG shall be contacted to discuss possibility of amending this Agreement.

1.4 Project Site Entry. Permittee agrees that DFG personnel may enter the project site at any time to verify compliance with the Agreement. DFG shall contact the appropriate staff to ensure that should any safety issues are addressed prior to entering the site.

1.5 Personnel Compliance On Site. If the Permittee or any employees, agents, contractors and/or subcontractors violate any of the terms or conditions of this agreement, all work shall terminate immediately and shall not proceed until DFG has been contacted and the issue remedied, or DFG has taken all of its legal actions.

1.6 Pre-project briefing. A pre-maintenance meeting/briefing shall be held involving all the contractors and subcontractors, concerning the conditions in this Agreement.

1.7 Notification Prior to Work. The Permittee shall notify DFG, in writing, at least five (5) days prior to the start of project activities. Notification shall be sent to DFG at 3883 Ruffin Road, San Diego 92123 and directed to the local DFG staff working on this project. Notification can be emailed to DFG at R5LSACompliance@dfg.ca.gov Please reference the Streambed Agreement Number (1600-2011-0325-R5) in the document.

1.8 Implementation Requirements. The agreed work includes activities associated with the Project Location and Project Description that is provided above. Specific work areas and other measures are described on/in the plans and documents submitted by the Permittee with the Notification Package and shall be implemented as proposed unless directed differently by this Agreement.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

Biological Surveys, Monitoring, and Time Restrictions

2.1 Nesting and/or Breeding Bird Surveys. The Permittee shall not remove otherwise disturb vegetation or conduct any other project activities on the project site from March 1st to September 1st to avoid impacts to breeding/nesting birds. If activities occur within this time period, the Permittee shall have a qualified biologist survey breeding/nesting habitat within the project site and adjacent to the project site for breeding/nesting birds. Three surveys shall be conducted over a 10-day period with the last survey being conducted no more than three days prior to the initiation of project activities. Survey results shall be provided to DFG no less than 24 hours prior to the start of work. An email summary or electronic report with a letter report to follow may be submitted to meet this requirement.

2.2 Active Breeding and/or Nest Presence. If breeding activities and/or an active bird nest is located, DFG shall be contacted immediately to discuss mitigation measures and work may need to be delayed to implement these measures. Any breeding habitat/nest site shall be fenced and/or flagged a minimum of 200 feet for passerines, and 300 feet for raptors and special status bird species in all directions. The buffer area shall not be disturbed until the nest becomes inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, and the young will no longer be impacted by the project. Modifications to the buffer zones may be acceptable upon concurrence from DFG and with the proper measures to ensure no impacts will occur.

Be advised, migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code that prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA).

2.3 Raptor Nesting Surveys. Prior to any work during the raptor nesting season, January 31st to September 1st, a qualified biologist shall conduct a site survey to determine appropriate raptor habitat. If habitat occurs, then the biologist shall survey for active nests during the week prior to any scheduled work. If an active nest is located, then no work shall be conducted within a 300 foot radius from the nest until the young have fledged and are independent of the adults.

2.4 Pre-project Survey. The Permittee shall have a qualified wildlife biologist conduct a single pre-project survey of the project area within a 30-day period prior to the start of project activities. This shall consist of a general survey to ensure no unforeseen biological resources will be impacted during work. Survey results, analysis, and recommendations shall be provided to the Department no later five days prior to the start of work.

2.5 Focused Surveys for Sensitive Species Habitat. The survey discussed above shall include a focused survey to determine if potential habitat is present for any special status species. If any special status species habitat is present at the site then focused or protocol surveys may be needed to determine presence of absence of these species, including surveys that conform to DFG approved guidelines for specific species.

2.6 Species Protection Plan. Should any special status, sensitive, or rare species be found during any project surveys, and work must be done in these identified areas, Permittee shall develop and implement a plan for the protection of these species. This plan shall be approved by the DFG prior to commencing work.

2.7 Threatened and/or Endangered Species. An Incidental Take Permit (ITP) from DFG may be required if the project, project construction, or any project-related activity during the life of the project will result in "take," as defined by the Fish and Game Code, of any species protected by CESA (Fish & G. Code, §§86, 2080, 2081, subd. (b), (c)). This Agreement does not authorize take of any rare, threatened or endangered species that may occur within or adjacent to the proposed work area. If there is a potential for take, the Permittee may request consultation with DFG and obtain the necessary state permits and/or submit plans to avoid any impacts to the species. Consultation with USFWS or NOAA would be required to receive take authority for federal threatened and endangered species.

2.8 On Site Biological Monitoring. A qualified biological monitor with all required collection permits shall be on site during all fill removal activities, including looking for species prior to work on specific days. The monitor shall remain on site to ensure the proper restoration has, or is occurring and is not having any negative impacts on the resources. If any life stages of any native vertebrate species are found in the path of construction, the monitor shall relocate the species to a pre-determined, safe location. The monitor shall return to the site should any biological issues arise.

2.9 Reporting Observations to CNDDB. The Permittee shall be responsible for reporting observations of threatened, endangered or species of special concern to the Departments Natural Diversity Data Base (CNDDB) within ten (10) days of the sighting. This includes sightings that occurred during pre-project surveys and throughout the project and restoration term. Please include local Department personnel on these CNDDB documents to ensure the data is recorded.

2.10 Night Work Restriction. The Applicant's activities shall be limited to the period of daylight hours; no night work is authorized unless deemed an emergency situation as described within DFG Code 1610.

2.11 Reporting Requirement. The above required documentation, reports and surveys shall be submitted to the local DFG staff to ensure timely review. When feasible, this documentation can be simultaneously sent to R5LSACompliance@dfg.ca.gov where it can be directly recorded into the project specific database file. Please note the Streambed Alteration Agreement number in the subject line.

Equipment and Access

2.12 Staging and Vehicle Storage. Staging/storage areas for equipment and materials shall be located outside of the stream.

2.13 Authorized Vehicles. Vehicles shall not be driven or equipment operated in water covered portions of a stream, or where wetland vegetation, riparian vegetation, or aquatic organisms may be harmed or destroyed.

Turbidity and Siltation

2.14 Unauthorized Materials. All materials placed in area where they could be washed downstream or could be deleterious to aquatic life shall be completely removed.

2.15 Erosion Prevention. Devices shall be installed at the work site to prevent the movement of fill materials down the bank. This includes silt fencing, straw-based components, and other methods that will create a cleaner work area and ensure all materials are removed from the site that were deposited there.

2.16 Soil Stabilization. After excess fill is removed, the native soil areas shall be stabilized with mulch and seeding and can include other devices to stabilize the area and prevent excess erosion.

2.17 Predicted Rain. If measurable rain with 50% or greater probability is predicted for the following day of work, no work shall occur. During the rainy season, protective measures to prevent siltation/erosion shall be in place and maintained.

2.18 Runoff Control. Preparation shall be made so that runoff from steep, erodible surfaces will be diverted into stable areas with little erosion potential. Water checks shall be placed on dirt roads, or other work areas to control erosion.

Pollution, Litter and Cleanup

2.19 Pollutants, Debris, and Trash Materials. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, construction waste, cement or concrete or washings thereof, asphalt, paint, oil or other petroleum products or any other substances which could be hazardous to aquatic life, or other organic or earthen material from any logging, construction, or other associated project-related activity shall be allowed to contaminate the soil and/or enter into or placed where it may be washed by rainfall or runoff into, waters of the State. Any of these materials, placed within or where they may enter a stream, by the Permittee or any party working under contract, or with the permission of the Permittee, shall be removed immediately. When project-related activities are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any stream or lake.

2.20 Pollution Compliance. The Permittee shall comply with all litter and pollution laws. All contractors, subcontractors and employees shall also obey these laws and it shall be the responsibility of the Permittee to ensure compliance.

2.21 Pollution Prevention. Stationary equipment such as motors, pumps, and generators shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak. No equipment maintenance shall be done within or along any stream channel where petroleum products or other pollutants from the equipment may enter these areas under any flow.

Vegetation Removal Measures

2.22 The work area should be limited to the fill removal areas to prevent any vegetation damage beyond these limits.

2.23 In areas of temporary disturbance, where vegetation may be impacted or removed, native shrubs shall be trimmed, or cut to ground level with hand operated power tools rather than by heavy equipment.

3. Compensatory Mitigation Measures

To compensate for impacts to the resources identified above that cannot be avoided or minimized, Permittee shall implement each habitat enhancement or mitigation measure listed below.

3.1 Mitigation and Restoration. The Permittee shall submit an On-Site Restoration Plan for DFG review within 30 days of signing this Agreement. The On-Site Plan shall include the removal of fill materials deposited in the described area in a manner that will minimally impact native vegetation, native soil and seed banks. The fill materials shall be compacted and stabilized and the area shall then be re-vegetated (this will occur over an estimated at 0.65 acre area). Due to the impacts from the on-site fill materials and the various habitat types and resources that were impacted, off-site mitigation shall also be implemented. Off-site mitigation shall be in the form of a fee transfer to the Conejo Open Space Conservation Agency (COSCA) in the amount of $19,500 to fund restoration, enhancement, or preservation activities consisting of similar habitat types to the project area. This will occur on COSCA managed lands and within the same watershed or other, agreed to, designated area.

The on-site restoration plan will be prepared by Wildscape Restoration. The plan should include at minimum: (a) the location of the mitigation site; (b) the plant species to be used and the time of year that the planting will occur; (c) a description of any needed irrigation methodology; (d) measures to control exotic vegetation on site; (e) and a detailed monitoring program, including three years of monitoring at the on site location. DFG will review this plan and provide email or letter documentation of the approval or will provide the Permittee with any comments needed to re-draft the plans so it can be approved by DFG.

3.2 Off-Site Mitigation. For off-site mitigation, the Permittee shall: (a) proceed with a fee transfer payment in the amount of $19,500 to COSCA. The fee transfer shall be finalized no later than 90 days after the issuance of the Agreement and at that time, proof of payment will be submitted to the DFG along with any other documentation related to this effort; (b) the off-site location, duration, and type of mitigation shall be determined through consultation between DFG and COSCA and will be documented in a mitigation plan to be completed by December 31st, 2012; (c) off-site mitigation shall be initiated no later than September 1st, 2013, unless any requests to alter this date are made; (d) off-site mitigation activities and monitoring should occur over several years and periodic, or annual, monitoring reports shall be provided to DFG

that describe these activities; (e) when off-site mitigation activities are completed, a final monitoring report shall be submitted to DFG that summarizes the off-site mitigation activities; (f) annual reports should include, but are not limited to, summary of existing site conditions, additional mitigation actions (as applicable), recommendations where additional mitigation actions are needed (as applicable), summary of non-native vegetation removal and native plant growth, and photo-documentation; (g) the conditions and criteria listed below can be used as guidelines for the off-site mitigation but will not be used to assess the success or completion of the off-site mitigation area.

3.3 Annual Monitoring Reports for On-Site Restoration. Annual mitigation monitoring reports shall be submitted to DFG each year for 3 years after implementation of the on-site restoration. The first report shall be submitted one year after completion of the installation of mitigation plantings/seeding/non-native vegetation removal. This report shall include information on native vegetation survival, percent cover, any plants replaced, an overview of the re-vegetation and non-native plant control efforts, and the method used to assess these parameters. Photos from designated photo stations shall also be included to show progress. Any wildlife observations made at the site during monitoring visits shall be recorded and included in the reports.

3.4 Restoration Criteria (subject to change – see last measure in this section).

- All plants shall be planted in randomly spaced, naturally clumped patterns.

- Cuttings (if used) should be bundled in groups of 3-5 and placed on appropriate centers to ensure potentially higher survival and growth rates.

- All plantings shall have a minimum of 60% survival, by species, the first year and 80% survival thereafter OR shall attain 45% cover after year two and 60% cover after year three.

- Prior to the mitigation site being determined successful, they shall be entirely without supplemental irrigation for a minimum of one year (if irrigation needed). Any necessary minor irrigation through the hottest/drought time periods is acceptable. Irrigation should be used in some form when natural moisture conditions are inadequate.

- No single species shall constitute more than 65% of the vegetative cover.

- No woody invasive species shall be present, and herbaceous invasive species shall not exceed 5% cover. These invasive species shall be treated vigorously and demonstrated to be well under control or absent from the site during the last 18 months of restoration: tree tobacco, castor bean, tamarisk, and *Arundo donax.*

- If the survival and cover requirements have not been met, replacement planting, or other agreed upon methods shall be implemented to achieve these requirements. Any replacement plants shall be monitored with similar survival and growth requirements for 1-2 years after planting, depending on their progress.

- Plant material shall be derived from native sources; ideally, plant materials should be taken from salvaged/disturbed areas. Any applied seeds shall be obtained from randomly selected native trees/shrubs occurring locally within the same drainage, or from a source that can supply and demonstrate that the materials are of a local source. Materials from non-local

resources shall be coordinated with DFG and may be determined not adequate for restoration purposes.

- PROVISION to the Success Criteria: The above criteria may be altered if the Permittee identifies areas adjacent to the project site with similar and undisturbed habitat to that which is being restored. If data is collected and analyzed for this adjacent area(s), and is included within the restoration plan, then it can serve as a reference site and be used to set new success criteria parameters that may differ from the above measures. Any new success criteria that is proposed shall be detailed in the plan and shall be subject to DFG approval.

3.5 Exotic Species Removal and Control (part of the on-site restoration criteria)

- The Applicant shall remove any non-native vegetation from the work area and shall dispose of it in a manner and a location which prevents its reestablishment. Removal and subsequent treatments shall be done at least three times annually, or as needed, through the term of restoration.

- Whenever possible, invasive species shall be removed by hand or by hand-operated power tools rather than by chemical means. If herbicide treated non-native vegetation is required within or directly adjacent to a watercourse that has recently had or may soon have flowing or ponded water, the Permittee shall employ only those herbicides which are approved for aquatic use. If surfactants are required, they shall be restricted to non-ionic chemicals, which are approved for aquatic use.

- The Applicant shall apply herbicides in accordance with state and federal law. No herbicides shall be used where local, state, or federally sensitive species are observed or known to occur. No herbicides shall be sprayed when the presence of wind is a factor in overspray.

3.6 Final Report and Mitigation Sign Off. After the 3rd monitoring year report has been submitted and reviewed by DFG, and if the site has met the success criteria identified in the mitigation plan, DFG shall request a site visit to determine if the mitigation is deemed complete. The mitigation site should be free of trash and any irrigation infrastructure should be removed.

CONTACT INFORMATION

Any communication that Permittee or DFG submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or DFG specifies by written notice to the other.

To Permittee:
Southern California Edison, Hazem Gabr, Water Quality Section
1218 South 5th Avenue, Office 230V, Monrovia, CA, 91016
Office (626) 462-8715

To DFG:
Department of Fish and Game, South Coast Region
3883 Ruffin Road, San Diego, California 92123
Attn: Lake and Streambed Alteration Program
Notification #1600-2011-0325-R5
Work notifications or project documents can be e-mailed to R5LSAComplaince@dfg.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute DFG's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

SUSPENSION AND REVOCATION

DFG may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before DFG suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before DFG suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused DFG to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes DFG from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects DFG's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 *et seq.* (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

DFG may amend the Agreement at any time during its term if DFG determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by DFG and Permittee. To request an amendment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter DFG approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to DFG a completed DFG "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). DFG shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (Fish & G. Code, § 1605, subd. (f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of DFG's signature, which shall be: 1) after Permittee's signature; 2) after DFG complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall expire on December 31st, 2014, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify DFG in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR Southern California Edison-Mr. Gabr

H. Gabr — 3/15/2012

Print Name HAZEM GABR — Date

Title: SCE WATER QUALITY MANAGER

FOR DEPARTMENT OF FISH AND GAME

26 Mar 2012

Leslie S. MacNair — Date

For

South Coast Region

Environmental Program Manager

Agreement Prepared by: Jeff Humble, Environmental Scientist

APPENDIX B

HILFIKER WELDED-WIRE RETAINING WALL STANDARD DRAWING

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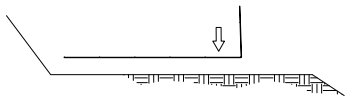
STEP 1

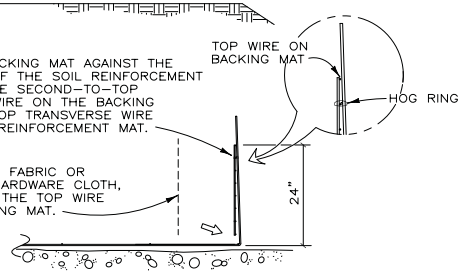
PLACE THE FIRST COURSE OF SOIL REINFORCEMENT MATS ON PREPARED FOUNDATION



STEP 2

PLACE THE BACKING MAT AGAINST THE INSIDE FACE OF THE SOIL REINFORCEMENT MAT. CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP TRANSVERSE WIRE ON THE SOIL REINFORCEMENT MAT.

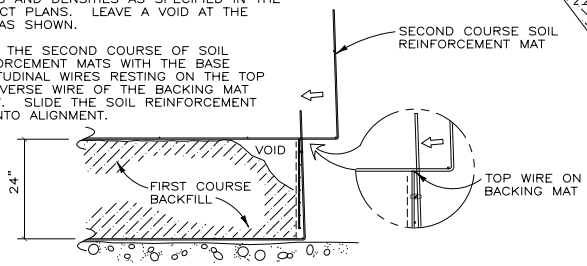
INSTALL FILTER FABRIC OR CONTINUOUS HARDWARE CLOTH, HOG-RING TO THE TOP WIRE ON THE BACKING MAT.



STEP 3

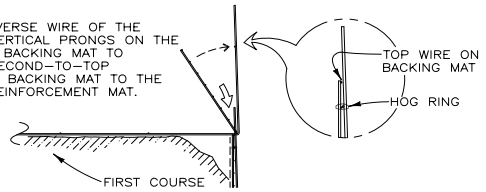
PLACE AND COMPACT THE BACKFILL IN LAYERS AND DENSITIES AS SPECIFIED IN THE PROJECT PLANS. LEAVE A VOID AT THE FACE AS SHOWN.

PLACE THE SECOND COURSE OF SOIL REINFORCEMENT MATS WITH THE BASE LONGITUDINAL WIRES RESTING ON THE TOP TRANSVERSE WIRE OF THE BACKING MAT BELOW. SLIDE THE SOIL REINFORCEMENT MAT INTO ALIGNMENT.



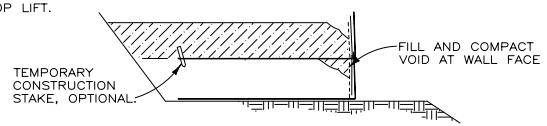
STEP 4

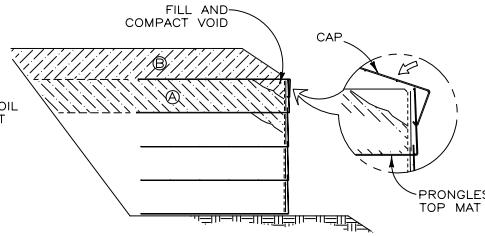
HOOK THE BOTTOM TRANSVERSE WIRE OF THE BACKING MAT OVER THE VERTICAL PRONGS ON THE LOWER MAT. ROTATE THE BACKING MAT TO VERTICAL AND CLIP THE SECOND-TO-TOP TRANSVERSE WIRE ON THE BACKING MAT TO THE TOP WIRE ON THE SOIL REINFORCEMENT MAT.



STEP 5

INSTALL THE FILTER FABRIC OR CONTINUOUS HARDWARE CLOTH. PLACE AND COMPACT THE BACKFILL TO THE BASE ELEVATION OF THE NEXT MAT. REPEAT STEPS 3 THROUGH 5 TO THE TOP LIFT.



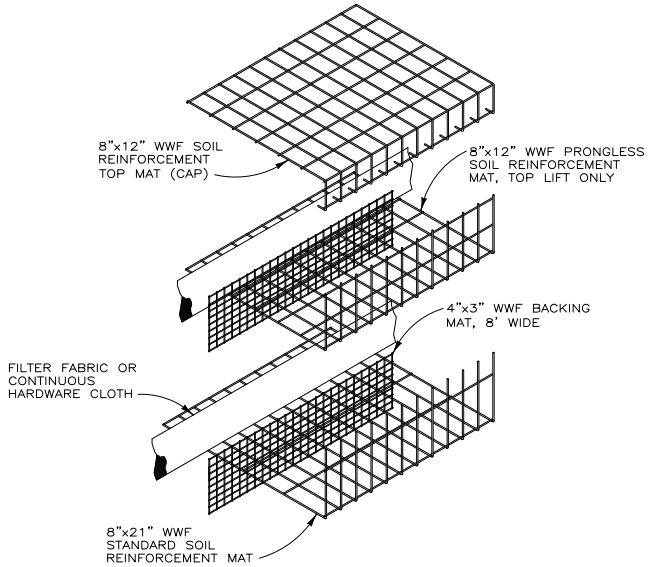


STEP 6: TOP LIFT

PLACE THE TOP LIFT PRONGLESS MAT, BACKING MAT AND FILTER FABRIC OR CONTINUOUS HARDWARE CLOTH. PLACE AND COMPACT BACKFILL IN AREA "A". HOOK THE CAP OVER THE MIDDLE TRANSVERSE WIRE ON THE PRONGLESS MAT, AND ROTATE INTO PLACE. BACKFILL "B" TO 1'-6" MIN. COVER OVER THE CAP.

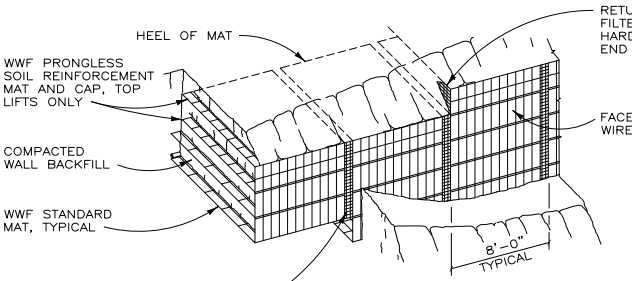
CONSTRUCTION SEQUENCE

NOT TO SCALE



WALL COMPONENTS

NOT TO SCALE



PICTORIAL ELEVATION

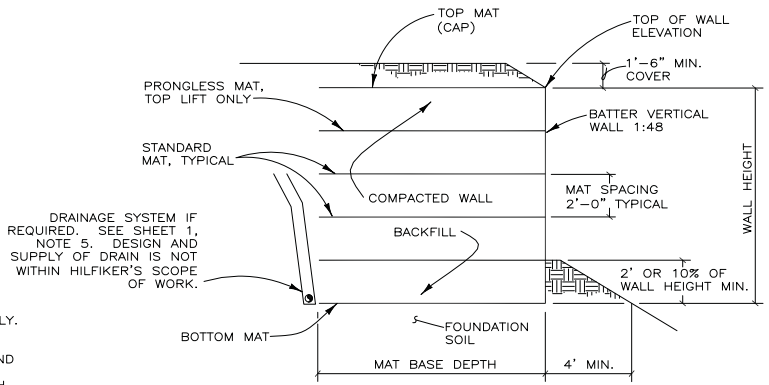
NOT TO SCALE

NOTES:

1. THESE DETAILS ARE INTENDED FOR INFORMATION ONLY. THEY MAY OR MAY NOT APPLY TO SPECIFIC PROJECTS.

2. THESE DETAILS SHOW HARDWARE CLOTH USED BEHIND THE BACKING MATS. IN SOME APPLICATIONS, FILTER FABRIC WILL BE REQUIRED INSTEAD OF HARDWARE CLOTH. IN THAT CASE, THESE DETAILS SHOULD BE REVISED ACCORDINGLY.

3. WWF = WELDED WIRE FABRIC



TYPICAL SECTION

NOT TO SCALE

WELDED WIRE WALL STANDARD DETAILS

REV.NO.	DATE	BY	DESCRIPTION
1	6 JAN 03	DR	MINOR REVISIONS
2	25 SEP 06	AMJ	MINOR REVISIONS
3	12 SEP 07	AMJ	MINOR REVISIONS, UPDATED BORDER
4	17 SEP 07	JTE	CHANGED LOGO, FIXED LEADERS

GRAPHIC SCALE
LINE IS 20 UNITS LONG ON ORIGINAL DRAWING
0 10 20

PROJ.MGR.
ENGINEER
CADD BY DR/AMJ

HILFIKER RETAINING WALLS
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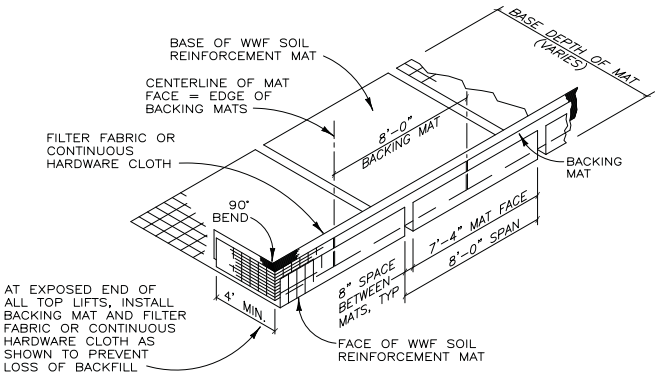
WEB SITE www.hilfiker.com E-MAIL info@hilfiker.com

DWG DATE NOV 98
REVISION DATE 1 NOV 07
SCALE NOTED

STANDARD DRAWING
WELDED WIRE RETAINING WALL
24" LIFTS
STANDARD DETAILS

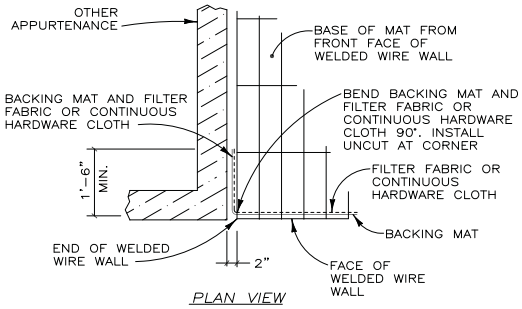
PROJECT NO.
SHEET 1 OF 3



ISOMETRIC VIEW

WELDED WIRE WALL COMPONENTS WITH RETURN MAT

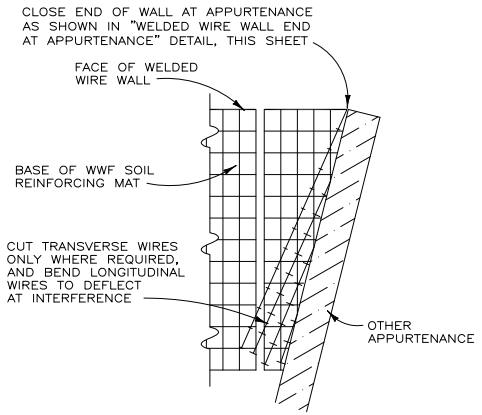
NOT TO SCALE



PLAN VIEW

WELDED WIRE WALL END AT OTHER APPURTENANCE

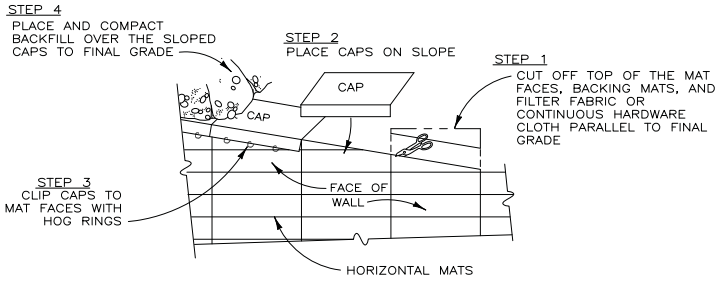
NOT TO SCALE



PLAN VIEW

DEFLECTED LONGITUDINAL WIRES

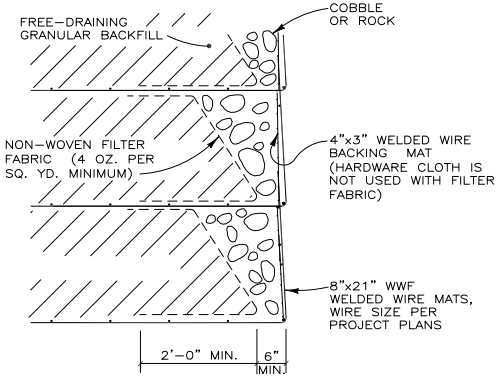
NOT TO SCALE



PICTORIAL ELEVATION

SLOPED CAP MAT DETAIL

NOT TO SCALE



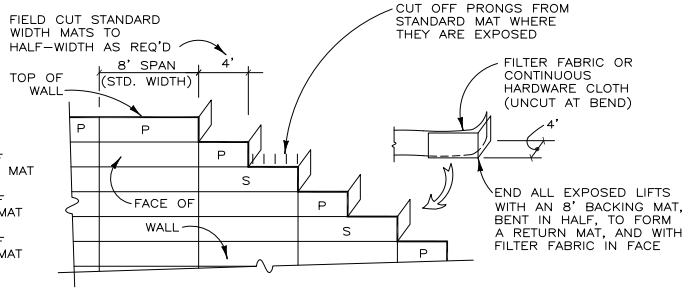
SECTION

ROCK FACING DETAIL

NOT TO SCALE

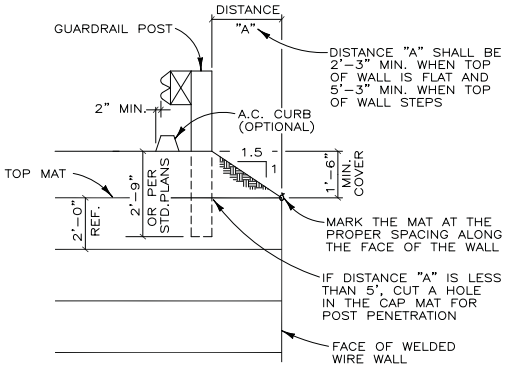
LEGEND
(THIS DETAIL ONLY)

P	8"x12" WWF PRONGLESS MAT
S	8"X12" WWF STANDARD MAT
	8"X21" WWF STANDARD MAT



RETURN MATS AND TOP OF WALL DETAIL

NOT TO SCALE



SECTION

GUARDRAIL DETAIL

NOT TO SCALE
(FENCE DETAIL SIMILAR)

WELDED WIRE WALL STANDARD DETAILS

REV.NO.	DATE	BY	DESCRIPTION
1	6 JAN 03	DR	MINOR REVISIONS
2	25 SEP 06	AMJ	MINOR REVISIONS
3	12 SEP 07	AMJ	MINOR REVISIONS, UPDATED BORDER
4	1 NOV 07	JTE	CHANGED LOGO, FIXED LEADERS

GRAPHIC SCALE
LINE IS 20 UNITS LONG ON ORIGINAL DRAWING
0 10 20

PROJ.MGR.
ENGINEER
CADD BY DR/AMJ

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WEB SITE www.hilfiker.com E-MAIL info@hilfiker.com

DWG DATE NOV 98
REVISION DATE 1 NOV 07
SCALE NOTED

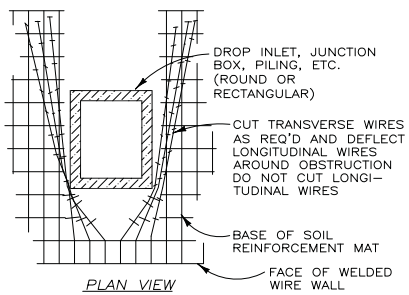
STANDARD DRAWING

WELDED WIRE RETAINING WALL
24" LIFTS

STANDARD DETAILS

PROJECT NO.

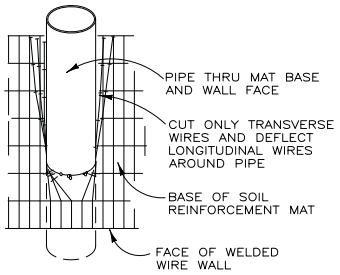
SHEET 2 OF 3



PLAN VIEW

MAT PENETRATION DETAIL

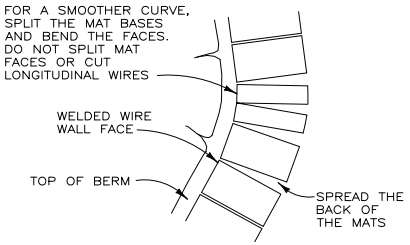
NOT TO SCALE



PLAN VIEW

ANGLED PIPE PENETRATION

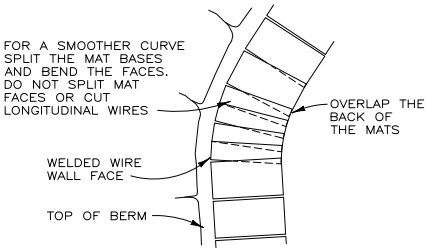
NOT TO SCALE



PLAN VIEW

CONCAVE CURVE

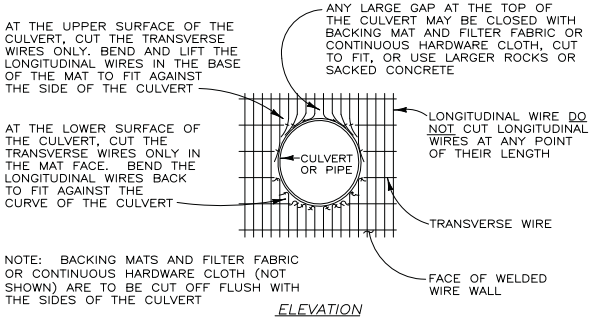
NOT TO SCALE



PLAN VIEW

CONVEX CURVE

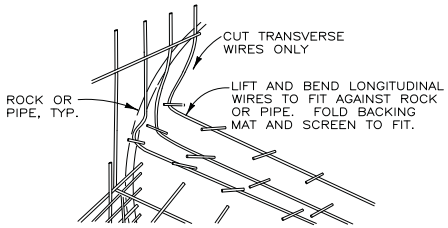
NOT TO SCALE



ELEVATION

CULVERT THRU WALL FACE

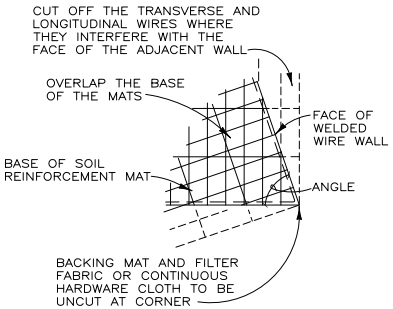
NOT TO SCALE



PICTORIAL

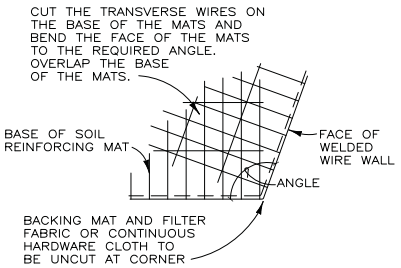
FITTING MATS TO OBSTRUCTION

NOT TO SCALE



ACUTE CONVEX ANGLE

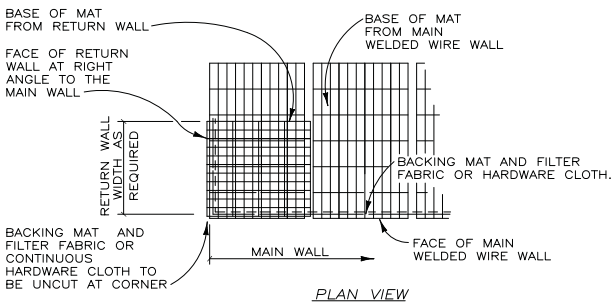
NOT TO SCALE



PLAN VIEW

OBTUSE CONVEX ANGLE

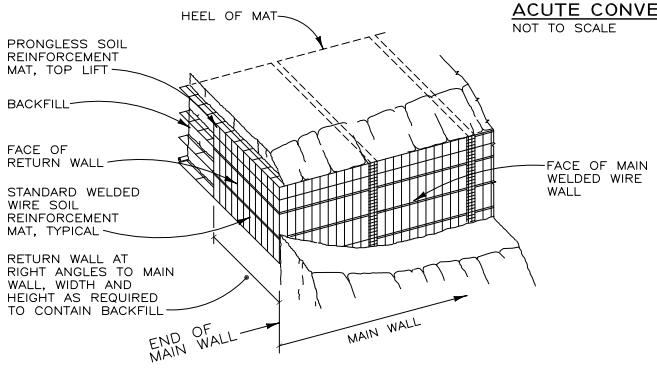
NOT TO SCALE



PLAN VIEW

RETURN WALL DETAIL

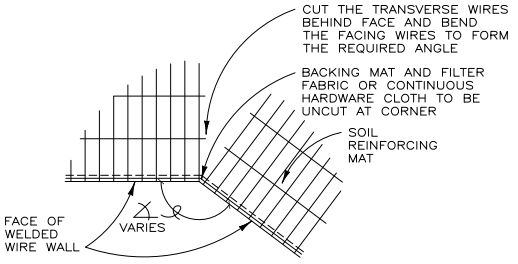
NOT TO SCALE



PICTORIAL

RETURN WALL DETAIL

NOT TO SCALE



PLAN VIEW

CONCAVE ANGLE DETAIL

NOT TO SCALE

WELDED WIRE WALL STANDARD DETAILS

REV.NO.	DATE	BY	DESCRIPTION
1	6 JAN 03	DR	MINOR REVISIONS
2	25 SEP 06	AMJ	MINOR REVISIONS
3	12 SEP 07	AMJ	MINOR REVISIONS, UPDATED BORDER
4	1 NOV 07	JTE	CHANGED LOGO, FIXED LEADERS

GRAPHIC SCALE

LINE IS 20 UNITS LONG ON ORIGINAL DRAWING

0 10 20

PROJ.MGR.

ENGINEER

CADD BY DR/AMJ

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DWG DATE NOV 98

REVISION DATE 1 NOV 07

SCALE NOTED

STANDARD DRAWING

WELDED WIRE RETAINING WALL

24" LIFTS

STANDARD DETAILS

PROJECT NO.

SHEET 3 OF 3

APPENDIX C

BEST MANAGEMENT PRACTICES (BMPs)

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BEST MANAGEMENT PRACTICES (BMPs)

Although native revegetation and removal of non-native invasive plant species will improve habitat quality, some activities may affect native habitat surrounding and within the project site. BMPs are designed to reduce the ecological footprint of non-native invasive plant removal projects and minimize deleterious impacts. Regulatory permits further necessitate the use of BMPs.

There are three categories of BMPs, which focus on 1) reducing overall project impacts, 2) reducing impacts for each activity, and 3) reducing impacts to specific biological resources. The BMP list provided below will be implemented during all phases of the project.

General BMPS

- All vehicles will observe a maximum speed limit of 15 miles per hour or lower at project sites and staging areas to avoid generation of dust.
- Emissions from construction equipment will be controlled by adherence to the recommended maintenance schedules for each individual equipment type. Repairs to malfunctioning equipment will be made as soon as possible.
- All trash items will be enclosed in sealed containers and regularly removed from the site.
- Disposal of project related waste materials such as trash, used equipment, oil, grease, and chemicals will be done in accordance with federal, state, and local regulations.
- Erosion control measures (e.g., silt fencing, mulch, matting, soil binder, seeding) will be implemented as appropriate to inhibit sediment transport into the waterways.
- If work is to occur during the rainy season, no potential erosive work will occur unless there is a three-day clear weather forecast.
- No activity will occur during a rain event or if forecasts indicate that rain is 50% likely within 24 hours. If rain does occur, erosion control measures such as sand bags and/or silt fences will be employed to reduce offsite flow of soil. If storm flow enters the project site, work will only resume once the flow has receded and soil is dry enough to accommodate equipment.
- Extraneous noise will be limited to the maximum extent possible (e.g., radios for entertainment).
- Equipment and machinery use will comply with all applicable local noise ordinances and policies.
- Hand crews and equipment will avoid any contact with open water.
- Staging areas will be used to store biomass temporarily until it is removed from the site and to store equipment and materials temporarily.
- Staging areas will serve as parking locations for work vehicles.
- All vehicles and equipment will be moved to a staging area or removed from the site overnight.
- Stockpiled biomass, loose soil, or other debris will not be left overnight within the stream channel or on its banks. If stockpiled biomass must be left overnight, it will be moved to staging areas. Seed bearing biomass will be stored on a plastic sheet and covered with a tarp to prevent soil contamination or the dispersal of seed by wind.

- If seed bearing plants are removed, they will be cut and disposed to a local landfill to avoid re-infestation of the project site.

Herbicides

- A DPR licensed PCA will prepare a written recommendation for the use of herbicides on the project.
- All herbicide usage will occur only as directed by the written recommendation from a licensed PCA.
- Only herbicides registered for use in California by the EPA and the DPR will be used.
- Only herbicides approved for aquatic use may be used within the banks of rivers and streams.
- All adjuvants will be registered by the EPA and approved for use by the resource agencies.
- Herbicide application will be conducted and/or supervised by an individual with a current California DPR QAL or QAC.
- Herbicide usage will be limited to the minimum amount required to be effective.
- Herbicides will be applied according to the manufacturer's label specifications.
- Herbicides will be colored with a biodegradable dye to facilitate visual control of application.
- Avoidance measures such as pulling back or temporarily tarping desired vegetation will be used to the extent feasible to prevent unintended herbicide impacts.
- Herbicides will be secured or removed from staging areas at night.
- Herbicide storage during application, and the fueling and lubrication of mechanical equipment will be confined to staging areas.
- Herbicide will not be left unattended, unless it is locked in a secure container, vehicle, or structure.
- Herbicide will not be applied during rain events or when rain is forecast is greater than 50 percent in the next 24 hours.

Foliar Application

- Herbicide will not be applied when conditions are windless or during winds greater than ten miles per hour.
- Herbicide will not be applied if air temperature exceeds volatilization limits of herbicide, unless adjacent native species are protected (e.g., tarped).
- Tarps will be used to cover desired vegetation (to the extent feasible) to prevent unintended herbicide impacts.

Cut-and-Paint

- Target species' canes/trunks will be cut to less than twelve inches in height and straight across to prevent sharp points from injuring project personnel or the public.

Appendix F6

Jurisdictional Memoranda

BonTerra CONSULTING
225 South Lake Avenue, Suite 1000 Pasadena, CA 91101
T: (626) 351-2000 F: (626) 351-2030 | www.BonTerraConsulting.com

October 24, 2011

Mr. Manjunath Venkat
Corporate Environment, Health & Safety
Southern California Edison
1218 South 5th Avenue
Monrovia, California 91016

VIA EMAIL AND U.S. MAIL
Manjunath.Venkat@sce.com

Subject: Assessment of Potential State and Federal Jurisdictional Resources for the Moorpark-Newbury Transmission Line Project, Ventura County, California

Dear Mr. Venkat:

This letter report summarizes the existing conditions of potential state and/or federal jurisdictional resources surrounding Pole Number 38 of the Moorpark-Newbury Electrical Transmission Alignment, located in the Conejo Canyons Open Space Park in Ventura County, California (Exhibit 1). Specifically, the purpose of this letter report is to document the construction impacts into areas containing potential resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Clean Water Act (CWA) Section 404(b)(1), Los Angeles Regional Water Quality Control Board (RWQCB) pursuant to CWA Section 401, and/or the California Department of Fish and Game (CDFG) pursuant to California Fish and Game Code Section 1600.

The Moorpark-Newbury 66-kV project consists of the installation of 46 engineered steel poles and 36 double-circuit lightweight steel poles along the existing 8.8-mile electrical transmission line corridor that stretches from the Moorpark Substation in the City of Moorpark to the Newbury Substation in the City of Newbury Park. During construction activities in September 2011 that were designed to improve the existing access road for this project and to create a flat pad next to the pole location, soil and rocks spilled over the side of the existing access road at various locations that resulted in a fill/discharge into areas that potentially contain state and/or federal jurisdictional resources.

BonTerra Consulting Regulatory Specialist David Hughes performed an assessment of the project site on October 7, 2011. The assessment area for this analysis consisted of all construction-related limits of disturbance and a depressional feature located adjacent to Pole 38 that extends approximately 250 feet from a dirt access road down to an unnamed ephemeral tributary to Arroyo Conejo, which in turn drains into Arroyo Santa Rosa. This assessment was performed to determine if the affected areas contain state and/or federal jurisdictional areas, the type and amount of jurisdictional resources that may have been impacted, and recommendations to remediate these impacts. Mr. Hughes walked the entire length of the assessment area including the adjacent depressional feature looking for evidence of CDFG jurisdictional resources through the identification of a bed, bank and stream course or impoundment and associated riparian plant species, and/or USACE jurisdictional resources through the identification of an Ordinary High Water Mark (OHWM). Mr. Hughes then determined if any construction-related

fills/discharges may have occurred within these resource areas that would provide the basis for resource agency consultation. Photographs were taken of the assessment area and are presented in Exhibits 2 and 3.

ASSESSMENT RESULTS AND RECOMMENDATIONS

The construction activities described above impacted approximately 80 linear feet of the overall assessment area through the deposition of fill materials that consist of soil, rocks, and boulders up to one foot in diameter into portions of a depressional feature that is adjacent to Pole 38. The depressional feature does not contain evidence of the presence of resources under the jurisdiction of CDFG and/or USACE. In addition, the depressional feature is dominated by upland vegetation, primarily consisting of black sage (*Salvia mellifera*), rosemary flat-topped buckwheat (*Eriogonum fasciculatum* var. *polifolium*), Our Lord's candle (*Hesperoyucca whipplei*), and bush sunflower (*Encelia californica*). No riparian or hydrophytic plant species were present. The soil at this location is characterized as rocky loam. A roadway stormwater collection device is located at the top of the depressional feature, adjacent to the dirt access road, so that water on the road is directed to the depressional feature and could ultimately flow to Conejo Creek. Based on the absence of a bed, bank or stream course and/or OHWM, and the dominance of upland plant species, it is the opinion of BonTerra Consulting that the assessment area does not include resources under the jurisdiction of the resource agencies. Please note that this assessment represents BonTerra Consulting's best professional judgment. The final determination concerning the presence or absence of CDFG and/or USACE jurisdictional resources must be made by these agencies.

Please contact David Hughes at (626) 351-2000 with any questions related to this report.

Sincerely,

BONTERRA CONSULTING

Gary A. Medeiros
Associate Principal

David T. Hughes
Regulatory Specialist

Enclosures: Attachment A – Exhibits 1-3

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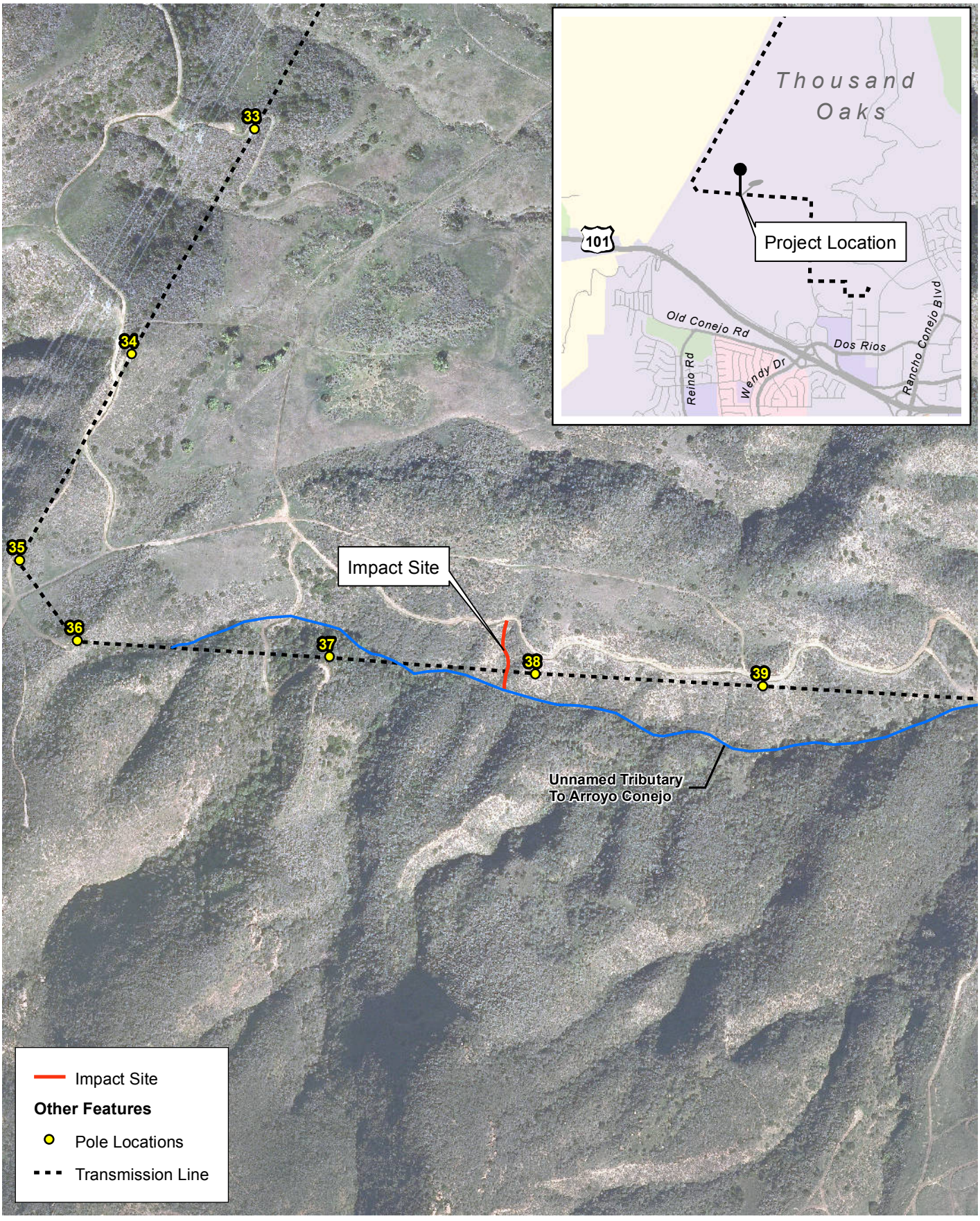
ATTACHMENT A

EXHIBITS 1–3



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Site Location

Exhibit 1

Moorpark-Newbury 66kV Project, Ventura County, California

N
W E
S

500 250 0 500

Feet

BonTerra CONSULTING

(Rev: 10-31-2011 JFG) Projects\Edison\J050\Graphics\ex1_aerial_lv.pdf

Photo A

Photo B

Photo C

Existing conditions at impact site. Photo A is at the top of the site and photo locations progressively continue downslope.

D:\Projects\Edison\J050\Graphics\ex_sp_101411.ai

Photographic Documentation

Exhibit 2

Moorpark-Newbury 66kV Project, Ventura County, California

BonTerra CONSULTING

(101411 JFG) R:\Projects\Edison\J050\Graphics\Pole_39\ex2_SP.pdf

Photo D

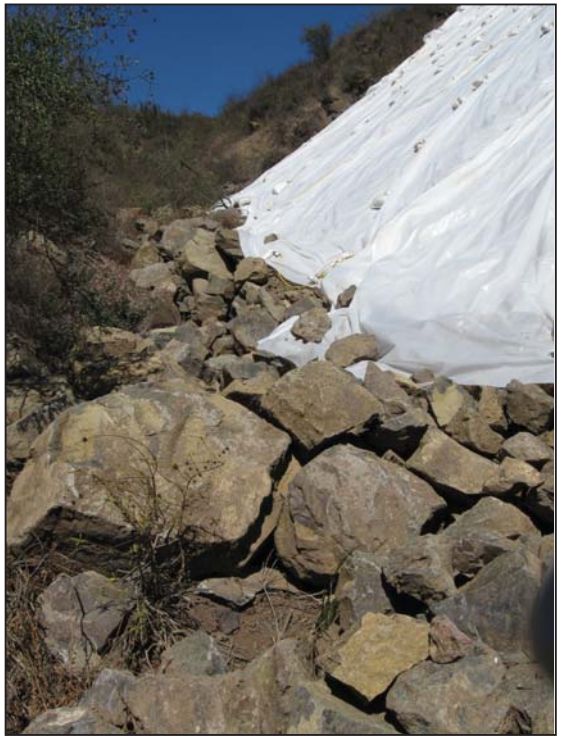

Photo E

Photo F

Existing conditions at impact site. Photo A is at the top of the site and photo locations progressively continue downslope.

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Photographic Documentation

Exhibit 3

Moorpark-Newbury 66kV Project, Ventura County, California

BonTerra CONSULTING

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BonTerra CONSULTING
225 South Lake Avenue, Suite 1000 Pasadena, CA 91101
T: (626) 351-2000 F: (626) 351-2030 | www.BonTerraConsulting.com

November 10, 2011

Mr. Manjunath Venkat
Corporate Environment, Health & Safety
Southern California Edison
1218 South 5th Avenue
Monrovia, California 91016

VIA EMAIL AND U.S. MAIL
Manjunath.Venkat@sce.com

Subject: Assessment of Potential for State and Federal Jurisdictional Resources at Pole Number 6 for the Moorpark-Newbury Transmission Line Project, Ventura County, California

Dear Mr. Venkat:

On October 26, 2011, BonTerra Consulting Biologists Lindsay Messett and Dr. Carl Demetropoulos were performing a monitoring visit to the Moorpark-Newbury project site to review overall site conditions and observe ongoing construction activities. During this site visit, they were asked to review conditions at Tower Location No. 6, located approximately 700 feet north of Los Angeles Avenue in the City of Moorpark and approximately ½ mile west of the Moorpark substation (Exhibit 1). During this site visit, it was indicated that Southern California Edison wanted to clear all vegetation within 100 feet of Tower No. 6. Ms. Messett and Dr. Demetropoulos observed that a drainage ditch (approximately 50 feet wide at the top of bank) passed directly underneath this tower. This drainage ditch appeared to be designed to carry water from agricultural land to the north of the tower site, though no water was present during the site visit. Vegetation within the ditch consisted of a mixture of native and non-native vegetation, including coyote bush (*Baccharis pilularis*), mule fat (*Baccharis salicifolia*), willow (*Salix* sp.), castor bean (*Ricinus communis*), and tree tobacco (*Nicotiana glauca*) (Exhibit 2).

Based on our recent phone conversation, you indicated that the streambed ends when it intersects with the railroad tracks that are located approximately 100 feet south of Tower No. 6. Therefore, it does not appear to have a hydrological connection to any other streambeds.

Because the streambed appears to be an upland drainage ditch associated with agricultural land, it would not be under the jurisdiction of the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). However, Section 401 of the CWA and the Porter-Cologne Act give the State Water Resources Control Board (SWRCB) wide latitude to regulate "waters of the State". As a result, this area may be under the jurisdiction of the SWRCB even if it is determined by the USACE that "waters of the U.S." do not exist. Additionally, the presence of hydrophytic vegetation in the streambed likely means that the area is within the jurisdiction of the California Department of Fish and Game (CDFG) as described in Section 1600 of the *Fish and Game Code*. However, it is important to note that a final jurisdictional determination as to the type and limits of state and federal jurisdictional resources can only be made via consultation with state and federal resource agency staff.

Permit needs associated with this proposed action are also dependent on the precise activity. It is our understanding that SCE plans to remove vegetation at ground level as part of regular vegetation maintenance. If it is determined that "waters of the U.S." do not exist, then a permit from the USACE would not be required. However, the SWRCB would likely view the loss of habitat as an impact

to the beneficial uses of the ditch. Because the vegetation provides several habitat benefits to the ditch (e.g., nesting/foraging opportunities, aquatic temperature regulation), removal or trimming of this vegetation would require a permit from the CDFG, though any impacts would only be temporary. In addition, if SCE intends to periodically perform this maintenance activity, it would be worthwhile to seek authorization under a long-term maintenance agreement.

RECOMMENDATIONS

With respect to the proposed vegetation maintenance activity, BonTerra Consulting recommends the following:

1. It should be determined if SCE already has regulatory permits or other environmental approvals authorizing routine vegetation clearing within this drainage (including riparian vegetation) in the vicinity of electrical transmission towers.

2. If no regulatory permit authorizations exist to allow these maintenance activities, SCE should have a jurisdictional assessment performed that identifies the type and limits of state and federal jurisdictional resources and consult with resource agency staff to determine if the drainage ditch is under CDFG and/or USACE jurisdiction and the type of permit that would be required to authorize the proposed vegetation maintenance activities. If the proposed maintenance activities may be required on a routine basis, SCE should consider obtaining long-term maintenance agreements/permit authorizations from CDFG, USACE and RWQCB.

3. If it is determined that removal of the vegetation constitutes an emergency (e.g., the vegetation interferes with the safe operation of the tower or the vegetation is a fire risk that threatens the tower), SCE may want to seek an emergency notification. CDFG staff must be notified within 14 days after proceeding with the activity, Regional Water Quality Control Board staff must be notified 48 hours prior to performing the action.

Please note that this assessment represents BonTerra Consulting's best professional judgment. The final determination concerning the presence or absence of CDFG and/or USACE jurisdictional resources must be made by these agencies.

Please contact David Hughes at (626) 351-2000 with any questions related to this report.

Sincerely,

BONTERRA CONSULTING

for Gary A. Medeiros
Associate Principal

David T. Hughes
Senior Project Manager

Attachment A – Exhibits 1-2

R:\PAS\Projects\Edison\J050\Pole 6 Jurisdictional Memo-111011.doc

ATTACHMENT A

EXHIBITS 1–2

D:\Projects\Edison\J050\mxd\pole6.mxd

Local Vicinity – Tower Location No. 6

Exhibit 1

Moorpark-Newbury 66-kV Transmission Line Project, Ventura County, California

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800 400 0 800

Feet

BonTerra CONSULTING

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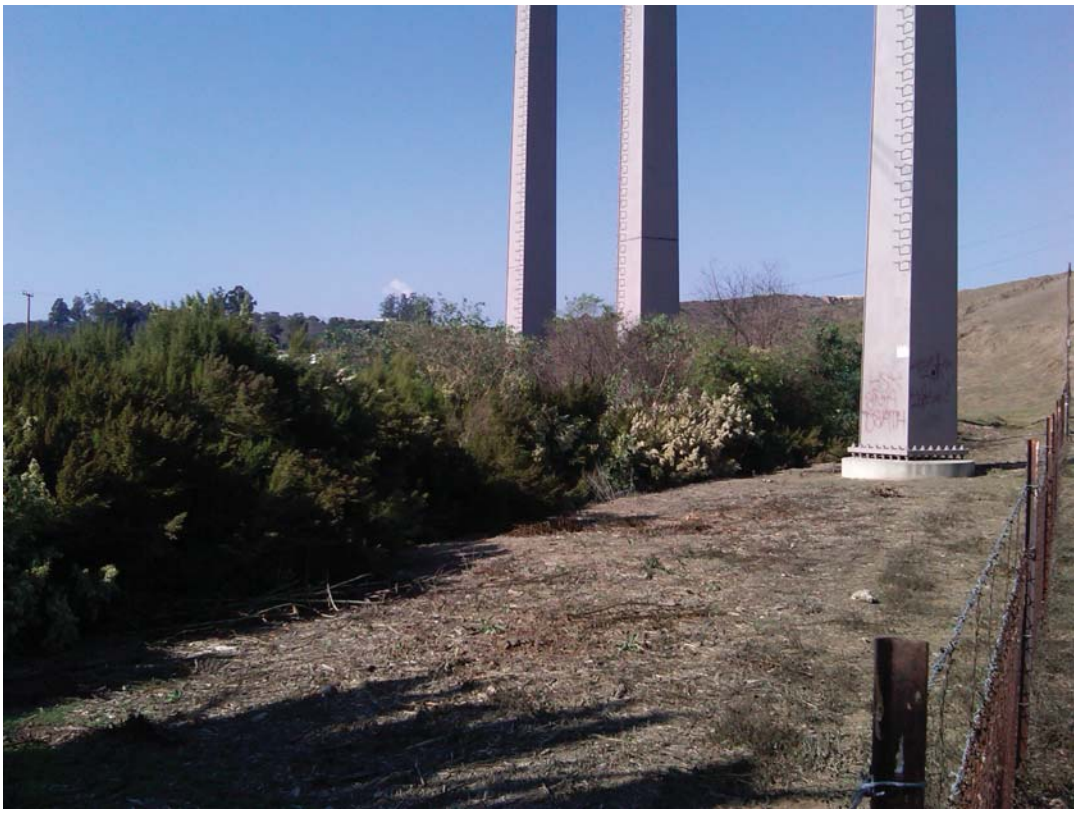
October 26, 2011. Riparian Vegetation Conditions at Tower Location 6.



October 26, 2011. Riparian Vegetation Conditions at Tower Location 6.

Photographic Documentation – Tower Location No. 6

Exhibit 2

Moorpark-Newbury 66kV Project, Ventura County, California

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SOUTHERN CALIFORNIA EDISON®
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September 27, 2013

Julie Gilbert
Environmental Coordinator
Southern California Edison
1218 South 5th Avenue
Monrovia, CA 91016

Re: Preliminary Jurisdiction Delineation
Moorpark-Newbury 66kV Subtransmission Line Project

INTRODUCTION

Southern California Edison conducted a preliminary Jurisdictional Delineation on the lands that are crossed by the approximately 9-mile long Moorpark-Newbury 66kV Subtransmission line project (the Project). The purpose of the preliminary Jurisdictional Delineation was to identify and map all jurisdictional and potentially jurisdictional drainage features and aquatic resources which occur within the Project's alignment. All features identified and mapped are presumed to be jurisdictional under all applicable State and federal regulation, however this determination was made only by SCE, no regulatory agencies have reviewed or been involved in any part of this delineation. Once mapped, each feature was overlaid onto the proposed project construction footprint to identify any potential, project related temporary and permanent impacts.

The Project alignment is generally north to south and traverses approximately 9 miles between Moorpark Substation in the City of Moorpark, across portions of unincorporated Ventura County, to the Newbury substation in the City of Thousand Oaks (See Figure 1 and Figure 2, attached).

SUMMARY OF JURISDICTION

Three key agencies regulate activities within inland streams, wetlands, and riparian areas in California. The U.S. Army Corps of Engineers (USACE) Regulatory Program regulates activities pursuant to Section 404 of the federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899 (RHA), the California Department of Fish and Wildlife (CDFW) regulates activities under the Fish and Game Code Sections 1600-1616, and the Regional Water Quality Control Board (RWQCB) regulates activities under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act.

REGULATORY OVERVIEW

U.S. Army Corps of Engineers

The USACE regulates the "discharge of dredged or fill material" into "waters of the U.S.," which includes all waters currently used, were used in the past, or may be susceptible to use in

interstate or foreign commerce; waters subject to the ebb and flow of the tide; all interstate waters; all other waters, including intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce; or any other waters that are part of a tributary system to interstate waters or to navigable "waters of the U.S.," (33 C.F.R. 328.3(a)), pursuant to provisions of Section 404 of the CWA.

The USACE generally takes jurisdiction within rivers and streams to the "ordinary high water mark" (OHWM) determined by erosion, the deposition of sediments or debris, and changes in vegetation. The USACE defines wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 C.F.R. 328.3(b)). In accordance with the USACE's Wetland Delineation Manual (Environmental Laboratory 1987) and subsequent guidance provided in the Arid West Interim Regional Supplement (Environmental Laboratory 2006) (the 2006 Supplement), a wetland ecosystem must possess wetland hydrology and support hydrophytic vegetation and hydric soils.

Over the years the USACE has modified their regulations, typically due to evolving policy or judicial decisions, through the issuance of Regulatory Guidance Letters (RGL), memorandum, or more expansive instructional guidebooks. These guidance documents help to update and define how jurisdiction is claimed, and how these "waters of the U.S." will be regulated. The most significant modification in recent years was issued to provide specific guidance for the jurisdictional determinations of potentially jurisdictional features affected by the United States Supreme Court rulings on *Rapanos v. the United States* and *Carabell v. the United States,* 126 U.S. Ct. 2208 (2006) (jointly referred to as "Rapanos").

The Rapanos case outlines the conditions and criteria utilized by the USACE to assess and claim jurisdiction over non-navigable, ephemeral tributaries. Under a plurality ruling, the Court noted that certain "not relatively permanent" (i.e. ephemeral), non-navigable tributaries must have a "significant nexus" to downstream "traditional navigable waters of the U.S." (TNW) to be jurisdictional. An ephemeral tributary has a significant nexus to a downstream "navigable water of the U.S." when it has "more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a TNW." A significant nexus is established through the consideration of a variety of hydrologic, geologic and ecological factors specific to the particular drainage feature in question.

In addition, on January 15, 2003 the USACE and EPA issued a Joint Memorandum to provide clarifying guidance regarding the United States Supreme Court ruling in the Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, No. 99-1178 (January 9, 2001) ("the SWANCC case"), (Federal Register: Vol. 68, No. 10.) This ruling held that the CWA does not give the federal government regulatory authority over non-navigable, isolated,

intrastate waters. As a result of this decision, some previously regulated depressional areas such as mudflats, sandflats, wetlands, prairie potholes, wet meadows, playa lakes, natural ponds, and vernal pools, which are not hydrologically connected to other intra- or inter-state "waters of the U.S.," are no longer regulated by the USACE.

However, these not relatively permanent or isolated features may still be regulated by CDFW under Fish and Game Code Section 1600 or the RWQCB under the Porter-Cologne Water Quality Act.

California Department of Fish and Wildlife

In accordance with Section 1600 et seq., of the California Fish and Game Code (FGC) ("Streambed Alteration"), CDFW regulates activities which "will substantially divert, obstruct, or substantially change the natural flow or bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit." The CDFW takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation when present. It should be noted that downstream connectivity is not necessarily required for CDFW to assert jurisdiction over a particular drainage feature.

Regional Water Quality Control Board

The RWQCB regulates "discharging waste, or proposing to discharge waste, within any region that could affect "waters of the State" (Water Code § 13260 (a)), pursuant to provisions of the Porter-Cologne Water Quality Control Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050 (e)). Before the USACE will issue a CWA Section 404 permit, applicants must receive a CWA Section 401 Water Quality Certification from the RWQCB. If a CWA Section 404 permit is not required for the project, the RWQCB may still require a permit (i.e., Waste Discharge Requirement) under the Porter-Cologne Water Quality Control Act.

Activities Requiring Permitting

Any activity that involves impacting jurisdictional drainages, streams, and/or wetlands through filling, stockpiling, conversion to a storm drain, channelization, bank stabilization, road or utility line crossings, or any other modifications, will require permits from the USACE, RWQCB, and the CDFG before any activity impacting such features can commence. Both permanent and temporary impacts are regulated and would trigger the need for these permits. Before the USACE will issue a CWA Section 404 permit, applicants must receive a CWA Section 401 Water Quality Certification from the RWQCB. If a CWA Section 404 permit is not required for the project (i.e., the activity does not impact a water of the U.S.), the RWQCB may still require a permit (i.e., Waste Discharge Requirement) under the Porter-Cologne Water Quality Control Act. Processing of the Section 401 and 1602 permits can occur concurrently with the USACE permit process and can utilize the same information and analysis. Applications to the CDFW

and RWQCB must include a complete, certified California Environmental Quality Act (CEQA) document.

SUMMARY

The preliminary delineation identified three (3) significant drainage features/systems crossing the Project alignment and seven (7) small features, including small ephemeral channels, erosional features and agricultural ditches (See Figure 3, and Figure 3 Maps 1 through 8, attached, for the location of each feature).

As noted above, no agency jurisdictional determination has been conducted the features mapped in this report. However, this report identifies all potentially jurisdictional features within the Project alignment to ensure all potential, Project-related impacts are identified.

The three (3) significant features include Arroyo Santa Rosa, Arroyo Simi, and an unnamed tributary to Conejo Creek, labeled as PJD-9, PJD-4, and PJD-1, from north to south respectively.

CONCLUSIONS

Based on a review of potential on-site features and the current design, no jurisdictional or potentially jurisdictional features located within the Project alignment will be impacted, either temporarily or permanently, by the construction or operation of the proposed Project.

Please feel free contact me if you have any questions about this notification or the project.

Thank you

Richard Haywood
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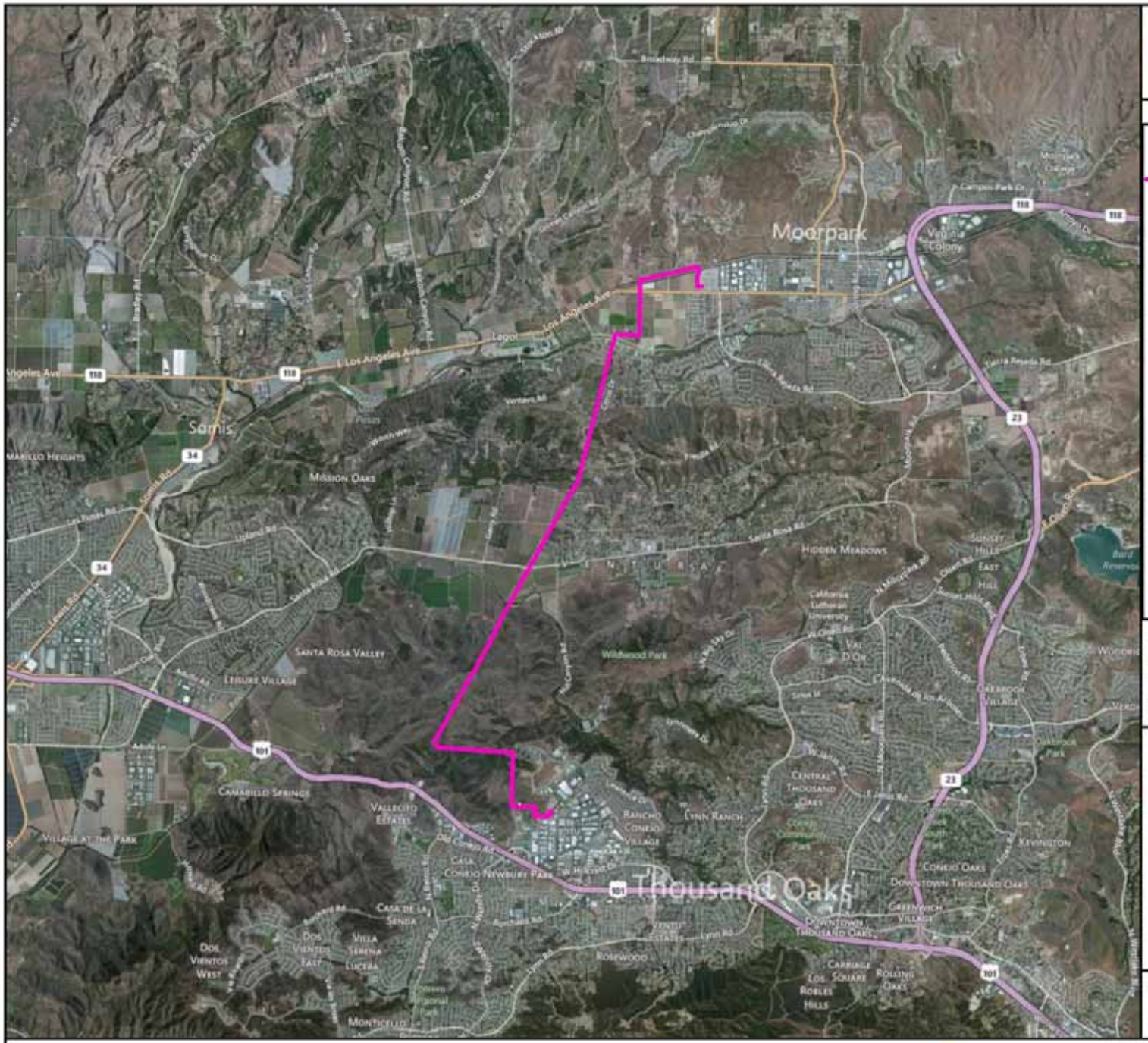
P. (626) 462-8632
C. (626) 404-4048
richard.haywood@sce.com



Southern California Edison
Moorpark-Newbury 66kV Line
Figure 1 Vicinity Map

Legend

Moorpark-Newbury 66kV

Issued For:

Date: September 27, 2013

Prepared By: RGH

Project Number:

Index Map

Projection: NAD 83 UTM Zone 11

N
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0 2 4 6 8 Miles

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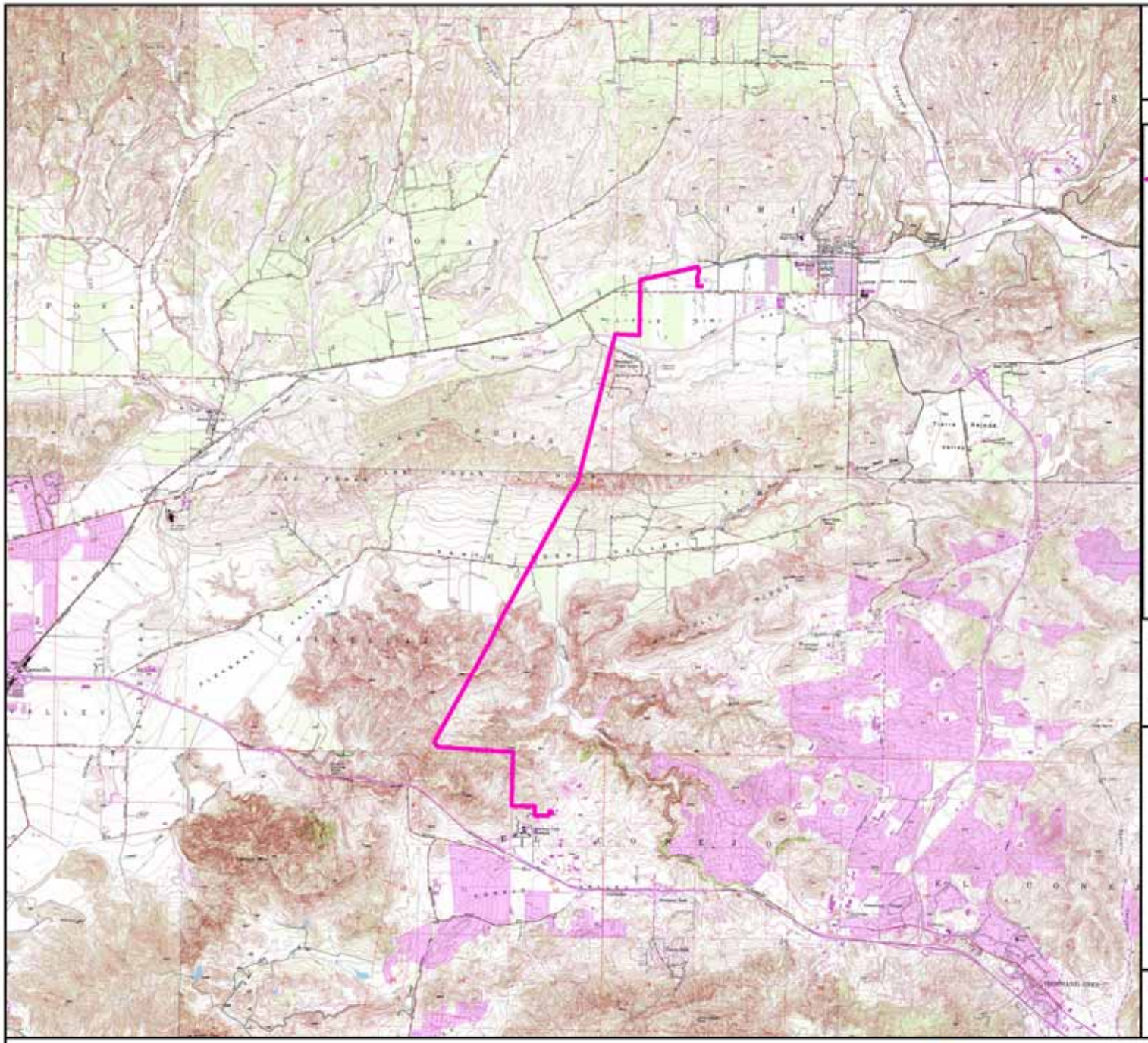

Southern California Edison
Moorpark-Newbury 66kV Line
Figure 2 USGS Vicinity Map

Legend

Moorpark-Newbury 66kV

Issued For:

Date: September 27, 2013

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Project Number:

Index Map

Projection: NAD 83 UTM Zone 11

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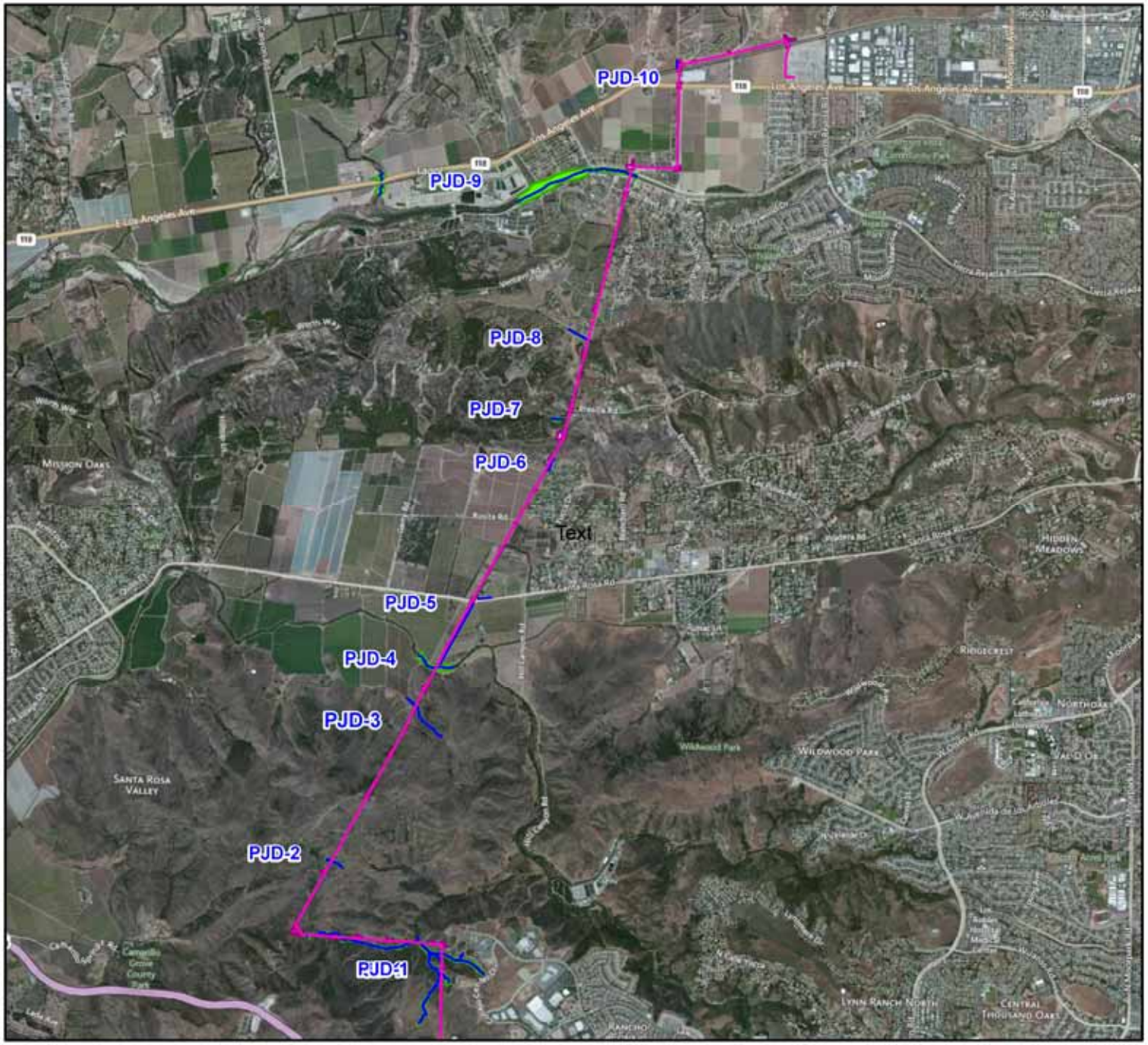

Southern California Edison
Moorpark-Newbury 66kV Line
Jurisdictional Delineation
Figure 3

Legend

- Moorpark-Newbury 66kV
- OHWM Center line
- Construction_Areas
- CDFW

Issued For:

Date: September 27, 2013

Prepared By: RGH

Project Number:

Index Map

Projection: NAD 83 UTM Zone 11

N W E S

0 0.85 1.7 2.55 3.4 Miles

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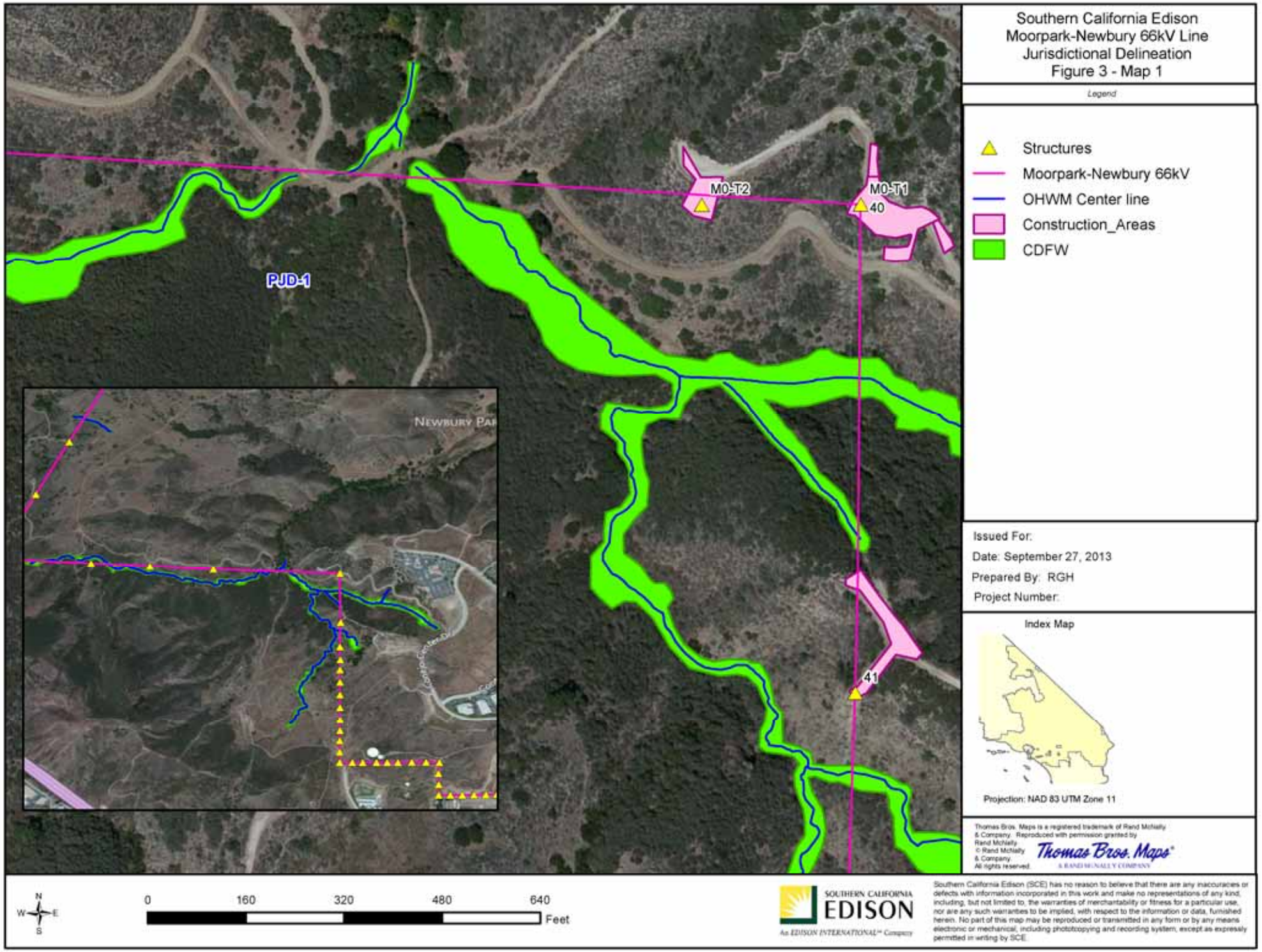
Southern California Edison
Moorpark-Newbury 66kV Line
Jurisdictional Delineation
Figure 3 - Map 1
Legend
Structures
Moorpark-Newbury 66kV
OHWM Center line
Construction_Areas
CDFW
M0-T2
M0-T1
40
41
PJD-1
Issued For:
Date: September 27, 2013
Prepared By: RGH
Project Number:
Index Map
Projection: NAD 83 UTM Zone 11
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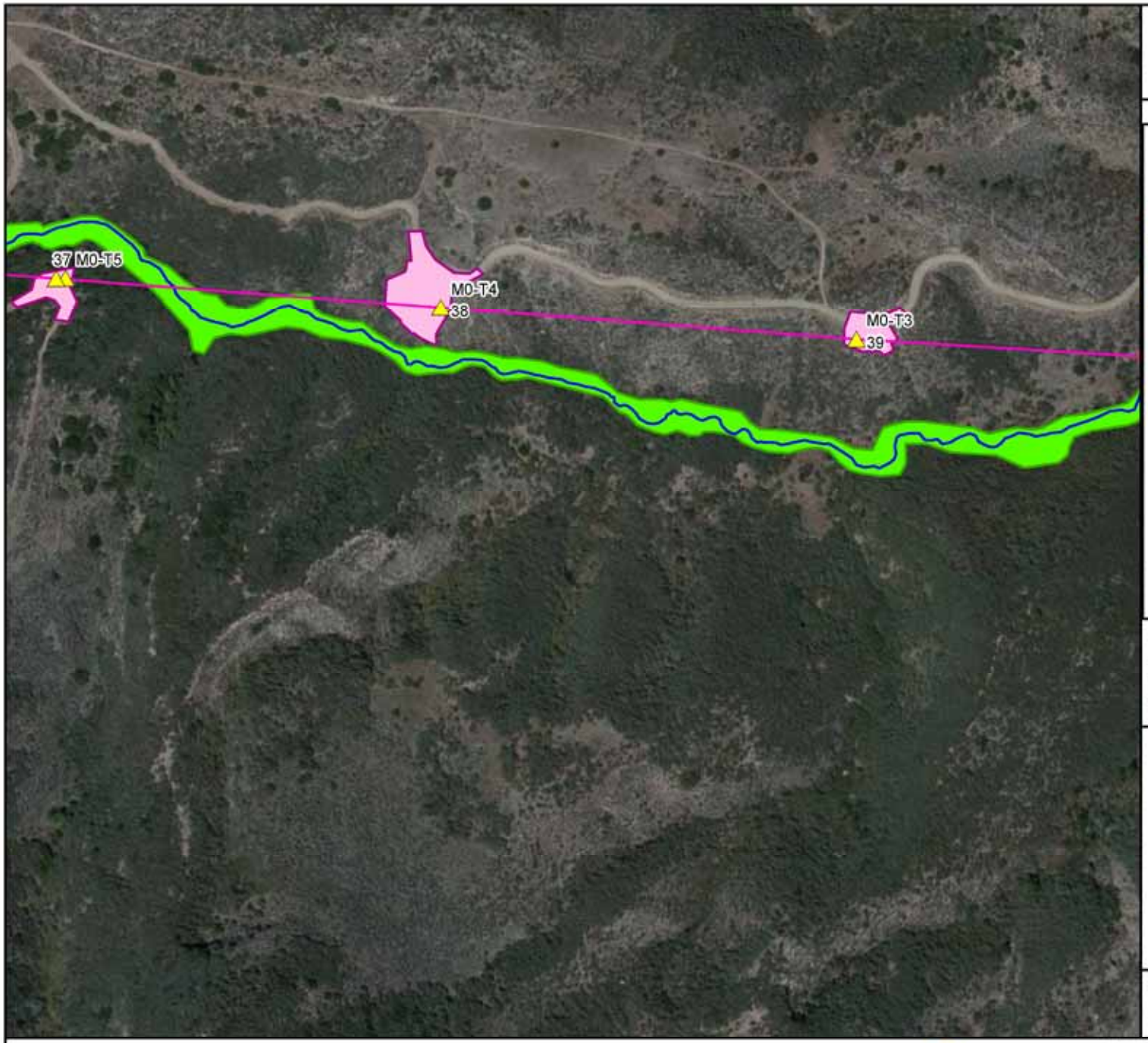

Southern California Edison
Moorpark-Newbury 66kV Line
Jurisdictional Delineation
Figure 3 Map 2

Legend

- Structures
- Moorpark-Newbury 66kV
- OHWM Center line
- Construction_Areas
- CDFW

Issued For:

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Project Number:

Index Map

Projection: NAD 83 UTM Zone 11

N W E S

0 300 600 900 1,200 Feet

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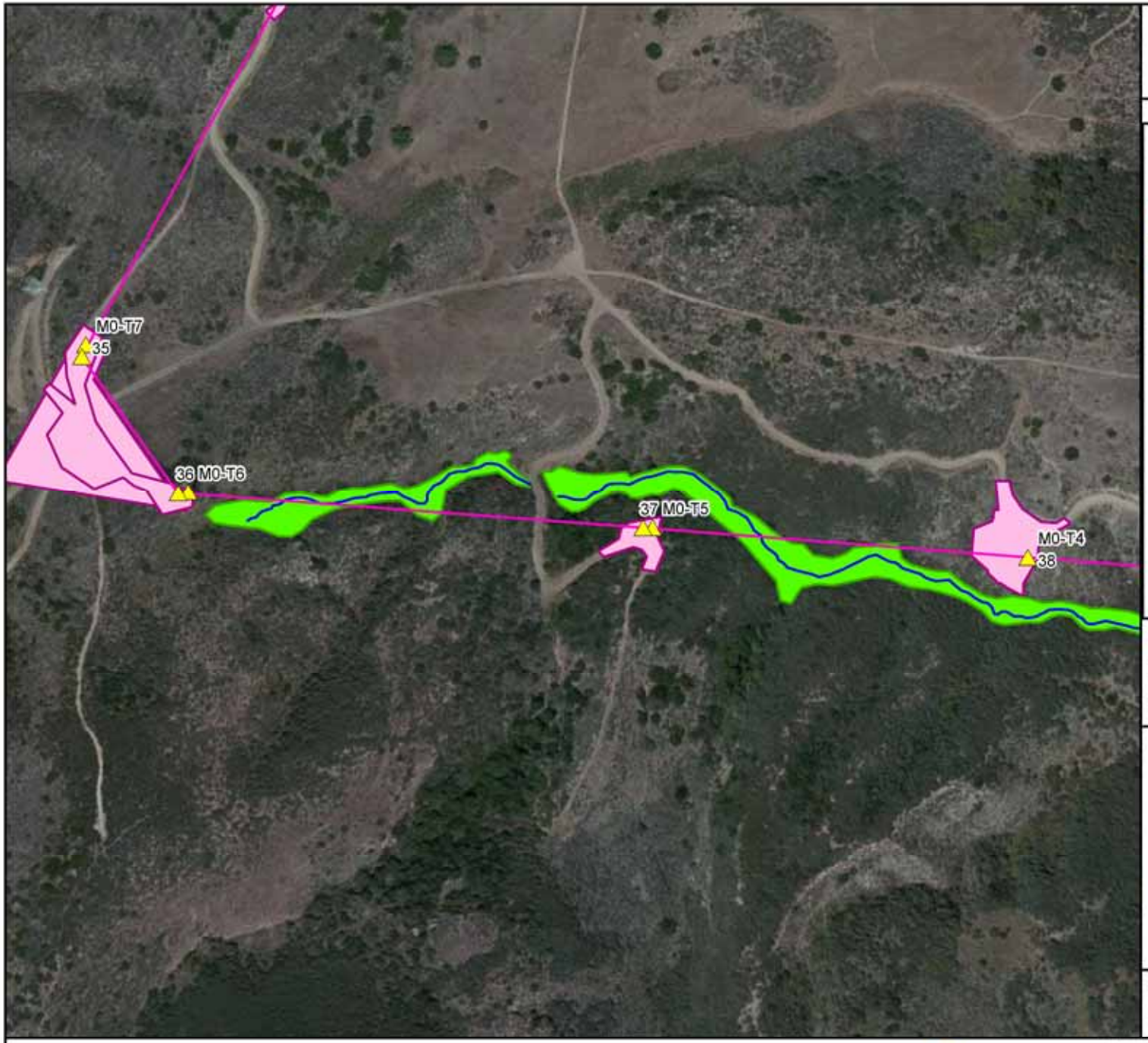

Southern California Edison
Moorpark-Newbury 66kV Line
Jurisdictional Delineation
Figure 3 Map 3

Legend

- Structures
- Moorpark-Newbury 66kV
- OHWM Center line
- Construction_Areas
- CDFW

Issued For:

Date: September 27, 2013

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Project Number:

Index Map

Projection: NAD 83 UTM Zone 11

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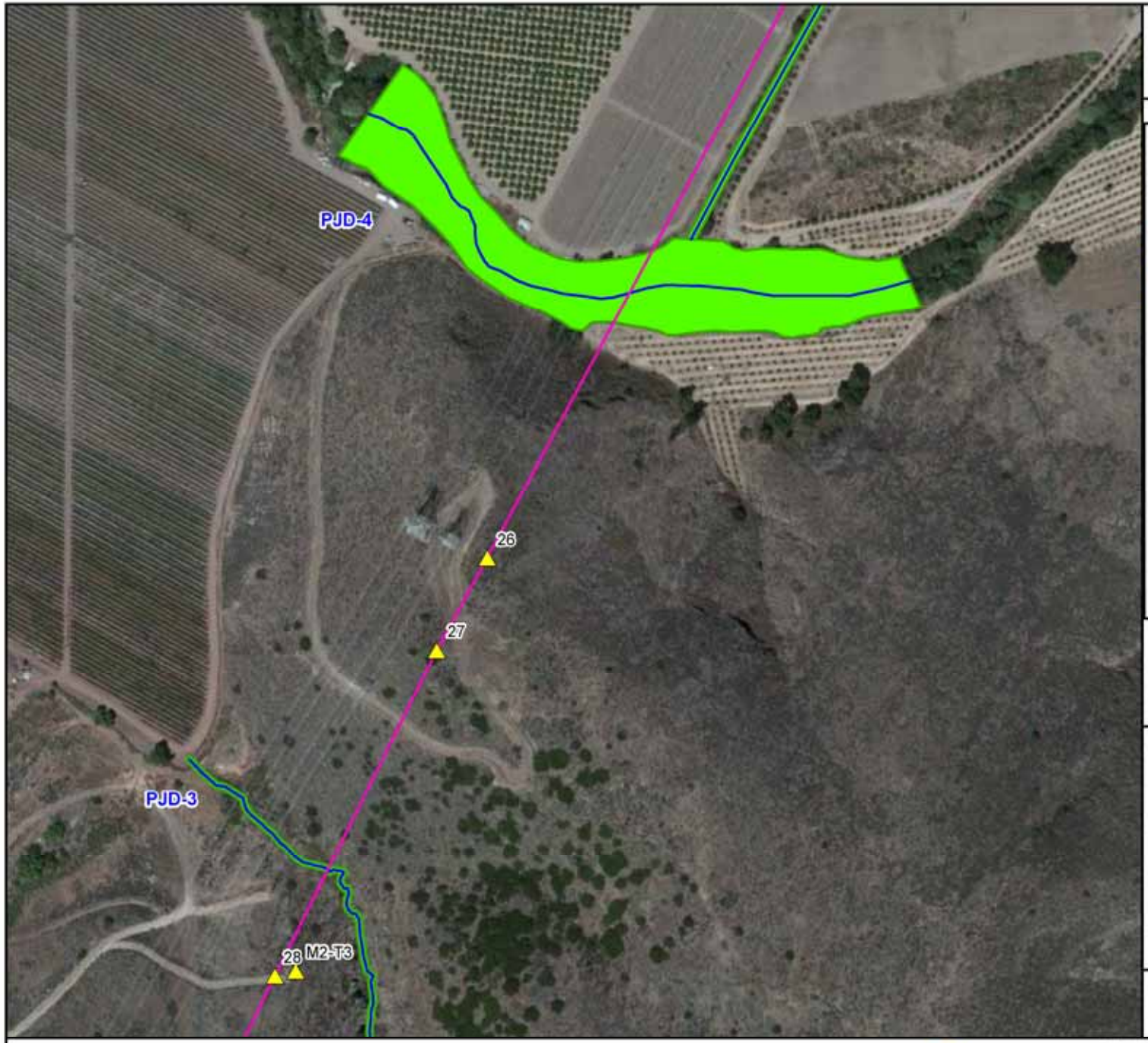

Southern California Edison
Moorpark-Newbury 66kV Line
Jurisdictional Delineation
Figure 3 Map 4

Legend

- Structures
- Moorpark-Newbury 66kV
- OHWM Center line
- CDFW

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Projection: NAD 83 UTM Zone 11

N W E S

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Southern California Edison
Moorpark-Newbury 66kV Line
Jurisdictional Delineation
Figure 3 Map 5

Legend

- Structures
- Moorpark-Newbury 66kV
- OHWM Center line
- Construction_Areas
- CDFW

Issued For:

Date: September 27, 2013

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Project Number:

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Projection: NAD 83 UTM Zone 11

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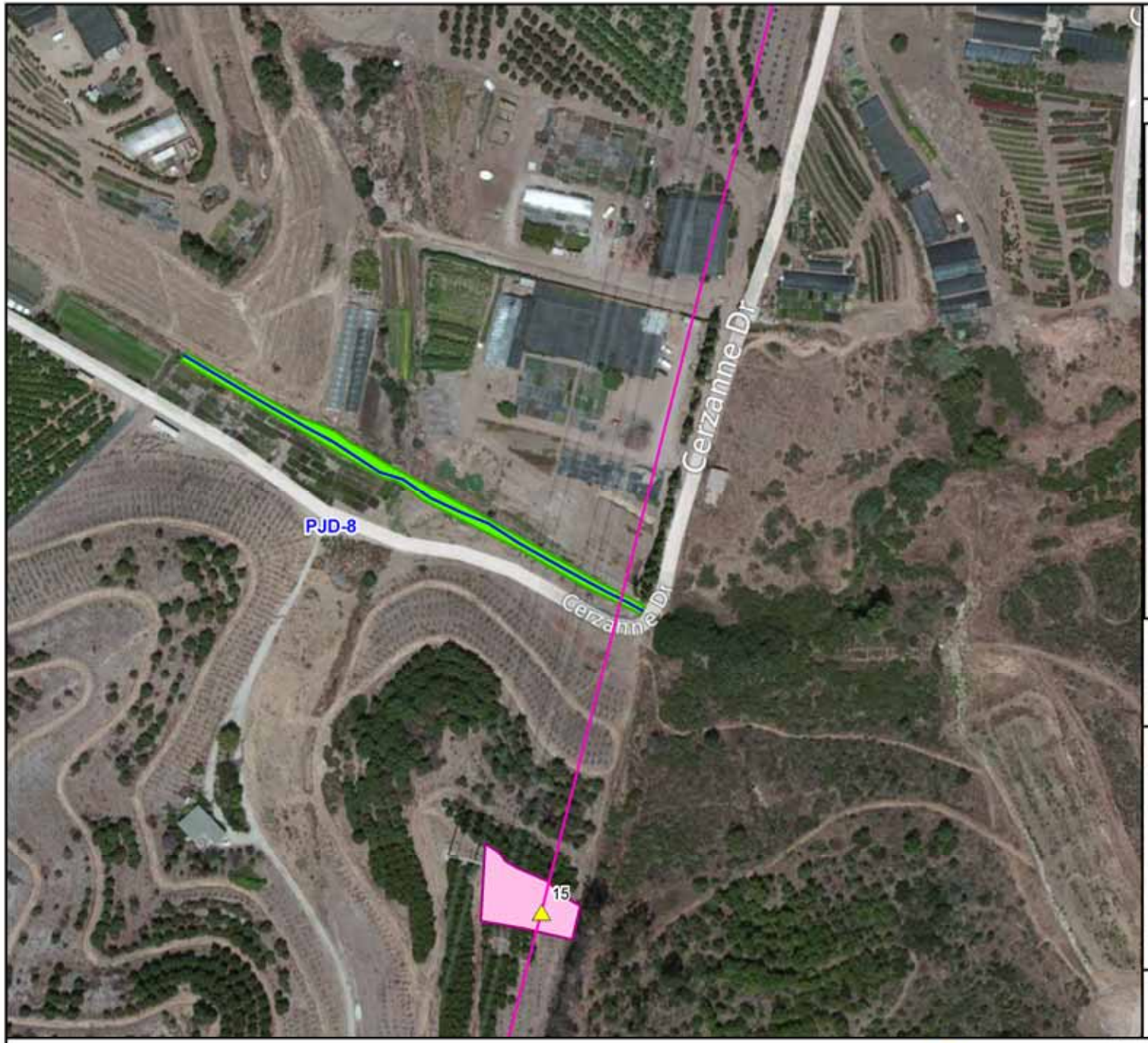

Southern California Edison
Moorpark-Newbury 66kV Line
Jurisdictional Delineation
Figure 3 Map 6

Legend

- Structures
- Moorpark-Newbury 66kV
- OHWM Center line
- Construction_Areas
- CDFW

Issued For:

Date: September 27, 2013

Prepared By: RGH

Project Number:

Index Map

Projection: NAD 83 UTM Zone 11

N W E S

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SOUTHERN CALIFORNIA EDISON
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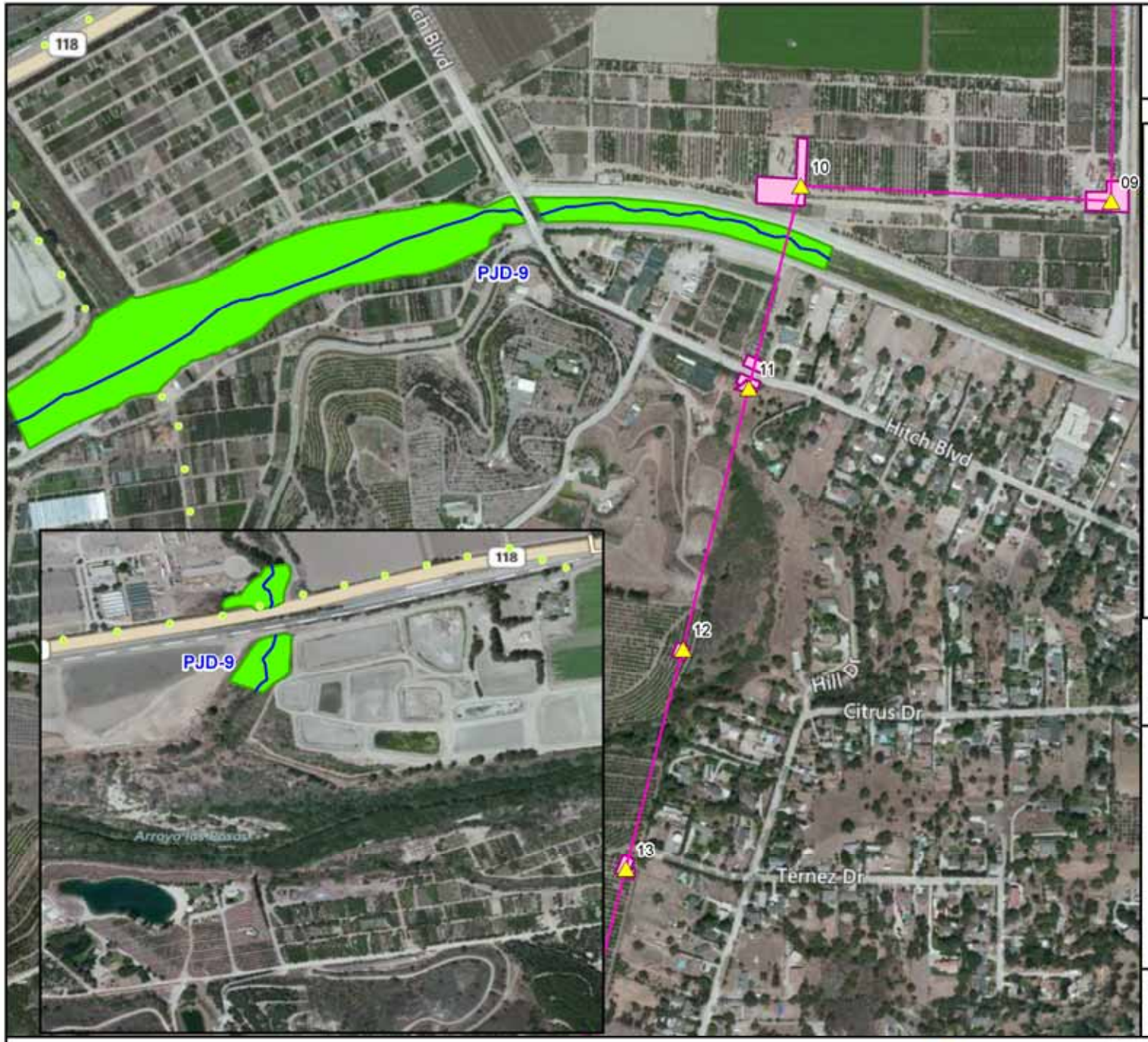

Southern California Edison
Moorpark-Newbury 66kV Line
Jurisdictional Delineation
Figure 3 Map 7

Legend

- Structures
- Moorpark-Newbury 66kV
- OHWM Center line
- Construction_Areas
- CDFW
- Existing_Poles

Issued For:

Date: September 27, 2013

Prepared By: RGH

Project Number:

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Projection: NAD 83 UTM Zone 11

N W E S

0 650 1,300 1,950 2,600 Feet

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Southern California Edison
Moorpark-Newbury 66kV Line
Jurisdictional Delineation
Figure 3 Map 8

Legend

- Structures
- Moorpark-Newbury 66kV
- OHWM Center line
- Construction_Areas
- CDFW
- Existing_Poles

Issued For:

Date: September 27, 2013

Prepared By: RGH

Project Number:

Index Map

Projection: NAD 83 UTM Zone 11

N W E S

0 200 400 600 800 Feet

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL™ Company

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E) for a Permit to Construct Electrical Facilities With Voltages Between 50 kV and 200 kV: Moorpark-Newbury 66 kV Subtransmission Line Project	)))))	Application No. _____

PROPONENT'S ENVIRONMENTAL ASSESSMENT
MOORPARK-NEWBURY 66 kV SUBTRANSMISSION LINE PROJECT
VOLUME 3 of 3

This PEA is being filed separately from the Application and is being submitted as an Archival DVD and CD-ROM.

RUSSELL C. SWARTZ
BETH GAYLORD
TAMMY JONES

Attorneys for
SOUTHERN CALIFORNIA EDISON COMPANY

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Facsimile: (626) 302-1926
E-mail: tammy.jones@sce.com

Dated: October 28, 2013

Appendix G

Cultural Resources Studies

Appendix G
Cultural Resources

In accordance with the California Public Resources Code Section 6254.10, information regarding the location of archaeological resources shall be protected from public viewing.

CULTURAL RESOURCES INFORMATION WILL BE PROVIDED UPON REQUEST.

Appendix H

Geotechnical Data Report

Converse Consultants
Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

GEOTECHNICAL DATA REPORT
Moorpark-Newbury 66kV Transmission Line Project
Ventura County, California

Converse Project No. 10-81-318-01

February 11, 2011

PREPARED FOR

Southern California Edison
TBDU Geotechnical group
1 Innovation Way, 2nd Floor
Pomona, CA 91768

222 East Huntington Drive, Suite 211, Monrovia, California 91016-3500
Telephone: (626) 930-1200 ♦ Facsimile: (626) 930-1212 ♦ e-mail: converse@converseconsultants.com

Converse Consultants
Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

February 11, 2011

Mr. Esam Abraham, P.E.
Supervising Geotechnical Engineer
TBDU Geotechnical Group
Southern California Edison
1 Innovation Way, 2nd Floor
Pomona, CA 91768

Subject: **GEOTECHNICAL DATA REPORT**
Moorpark-Newbury 66kV Transmission Line Project
Ventura County, California
Converse Project No. 10-81-318-01

Dear Mr. Abraham:

Enclosed is the geotechnical data report prepared by Converse Consultants (Converse) summarizing the results of our drilling/coring and laboratory testing services for the Moorpark-Newbury 66kV Transmission Line Project in Ventura County, California. The purpose of our work was to provide geotechnical data for pre-selected drilling/coring locations along the project alignment. This letter-report provides a comprehensive summary of all field and laboratory data collected for this project, most of which has been previously provided to the TBDU Geotechnical Group as it become available.

Our field work and laboratory testing have been conducted in general accordance with the scope of work outlined in our proposal dated October 25, 2010, to the degree of care and standard geotechnical practice in the Southern California area. No other warrantee is expressed or implied.

We appreciate the opportunity to be of continued service to Southern California Edison. If you should have any questions, please do not hesitate to contact us at either (626) 930-1200 or (909) 796-0544.

CONVERSE CONSULTANTS

Geoffrey D. Stokes, CEG
Senior Geologist

PROFESSIONAL GEOLOGIST
Geoffrey Daniel Stokes
NO. 2266
CERTIFIED ENGINEERING GEOLOGIST
Exp. 7/31/11
STATE OF CALIFORNIA

Hashmi S. E. Quazi, Ph.D., G.E.
Chairman of Board/Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
HSUEH-HSIN WILLIAM
No. 2482
Exp. 6/30/12
GEOTECHNICAL
STATE OF CALIFORNIA

Dist: 4/Addressee

GDS/SCL/WHC/HSQ/amm

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Appendices

1.0 INTRODUCTION

This letter-report contains the summarized results of our drilling/coring and laboratory testing services for the Moorpark-Newbury 66kV Transmission Line Project in Ventura County, California. The project alignment extends south/southwesterly from an area adjacent to and north of the existing SCE substation on Los Angeles Avenue in the City of Moorpark, toward the northwesterly portion of the City of Thousand Oaks (see Drawing No. 1a, *Boring Location Map- Borings B-1 through B-7* and Drawing No. 1b, *Boring Location Map – Borings/Cores B-8 through B-14*). The alignment traverses north to south across the alluvial plain of Little Simi Valley, over the Las Posas Hills, across the Santa Rosa Valley, and through the rugged Calleguas Hills.

The purpose of the work was to drill hollow-stem auger borings and rock cores at selected locations along the alignment, collect samples, and perform geotechnical laboratory testing for selected sample intervals. General boring/core locations and a generalized laboratory testing program were provided to Converse by the SCE - TBDU Geotechnical Group. This letter-report is prepared to summarize the results our drilling/coring and laboratory testing services and is intended for use solely by the SCE - TBDU Geotechnical Group.

2.0 SCOPE OF WORK

Our scope of work, as outlined in our proposal dated October 25, 2010, consisted of the following tasks:

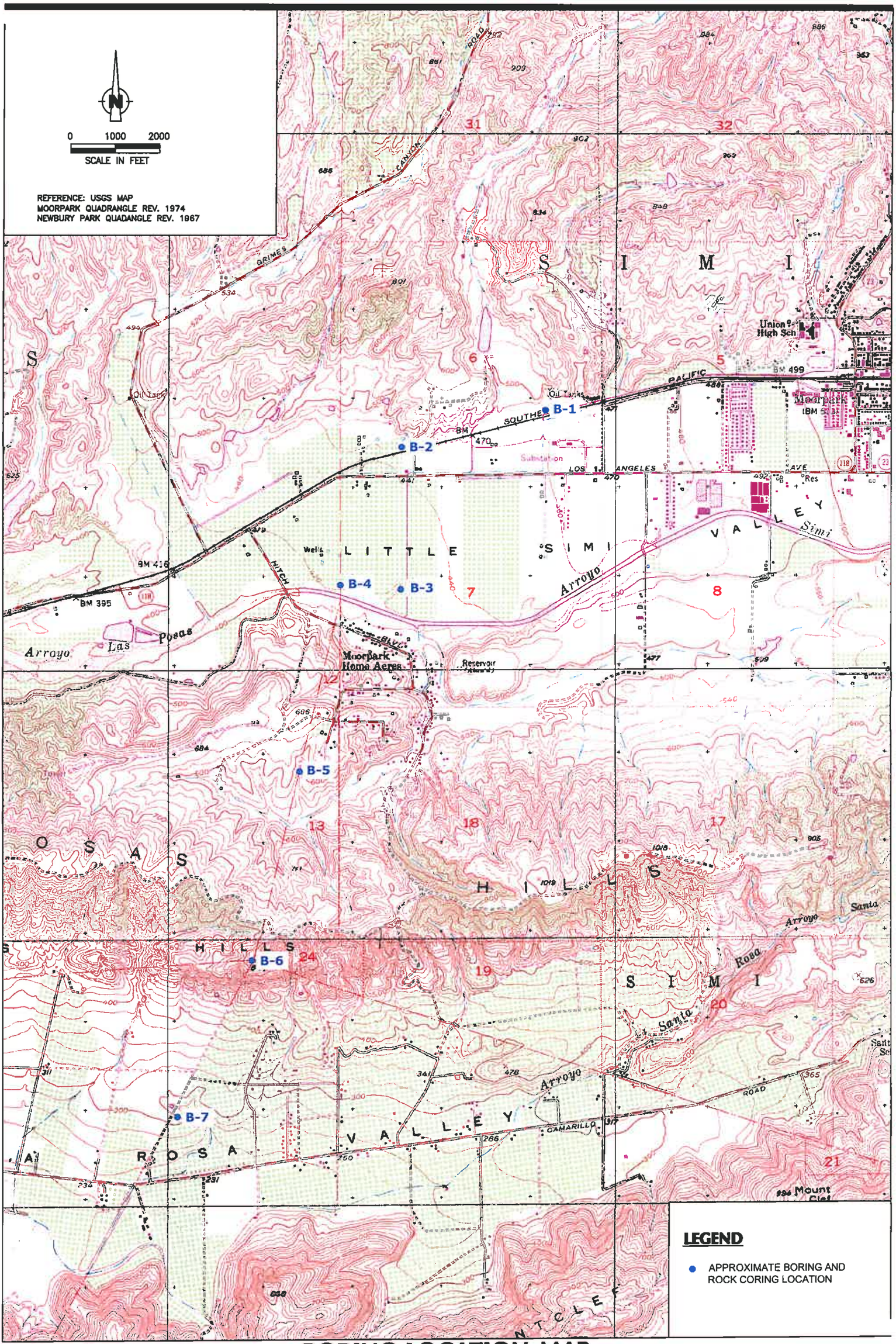
2.1 Task I: Project Set-Up and Field Reconnaissance

As part of the project set-up we conducted the following:

- Attended a biological awareness training session prior to the beginning of drilling.
- Site reconnaissance with SCE field geologists and marked the boring/coring locations.
- Notified underground Service Alert (USA) at least 48 hours prior to drilling
- Arranged for Hollow-Stem Auger (HSA) drilling equipment, Core drilling equipment, and water service to support the coring operations.

2.2 Task II: Field Exploration

Our field exploration consisted of drilling exploratory HSA borings and rock cores for the purpose of obtaining subsurface information at the selected locations, and obtaining undisturbed and bulk samples of the various soil types for geotechnical and environmental laboratory testing.



LEGEND

- APPROXIMATE BORING AND ROCK CORING LOCATION

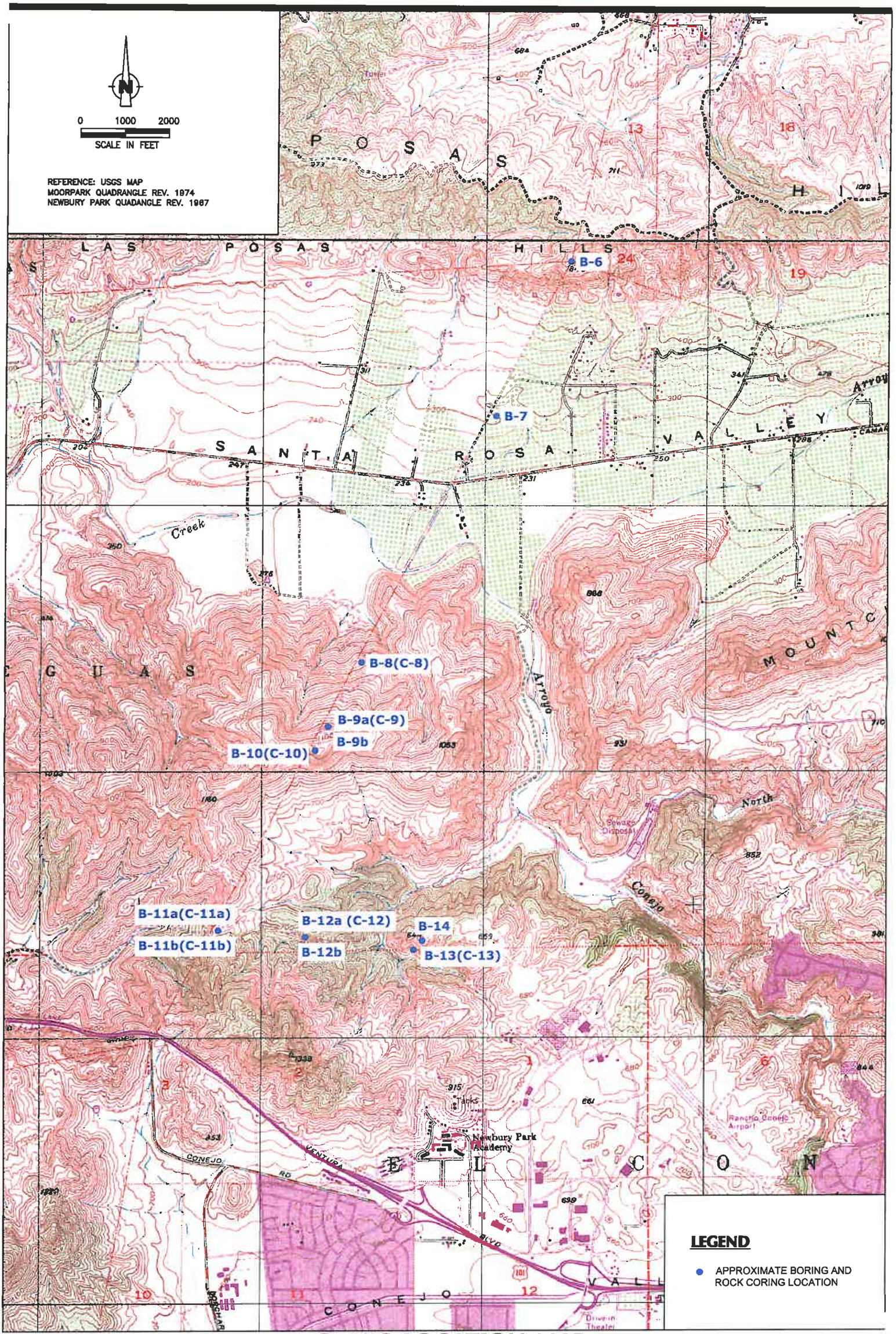
BORING LOCATION MAP

Converse Consultants

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. 1a



BORING LOCATION MAP

Converse Consultants

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. 1b

The HSA boring and rock core locations are illustrated on the Drawings, with decimal longitude and latitude coordinates representative (not exact) of the boring/core locations presented in the following table:

Table No. 1, Decimal Latitude and Longitude Coordinates

Boring (Core) Location	Latitude (North)	Longitude (West)	Approximate Surface Elevation* (in feet relative to MSL)
B-1	34.2829	118.9050	476
B-2	34.2805	118.9160	450
B-3	34.2717	118.9158	430
B-4	34.2719	118.9205	420
B-5	34.2600	118.9237	565
B-6	34.2488	118.9270	840
B-7	34.2390	118.9333	305
B-8 (C-8)	34.2236	118.9426	570
B-9a (C-9)	34.2192	118.9456	1,055
B-9b	34.2192	118.9456	1,055
B-10 (C-10)	34.2181	118.9462	1,165
B-11a (C-11a)	34.2068	118.9535	785
B-11b (C-11b)	34.2068	118.9535	785
B-12a (C-12)	34.2062	118.9469	640
B-12b	34.2062	118.9469	640
B-13 (C-13)	34.2056	118.9387	480
B-14	34.2057	118.9384	525

*Based on USGS 20-ft. Contour Topographic Mapping; margin of error +/- 5 feet

HSA borings were drilled to depths of 9 to 51.5 feet below the existing ground surface with a truck-mounted CME 75 drill rig equipped for soils sampling. The HSA borings were visually logged and classified by visual examination in accordance with the Unified Soil Classification System by a Converse geologist, and sampled at regular intervals and at changes in subsurface soils.

Relatively undisturbed ring samples of the subsurface materials were be obtained using a Modified California Sampler (2.4-inch inside diameter and 3.0-inch outside diameter) lined with thin-walled sample rings. The sampler was driven with successive drops of a 140-pound hammer falling 30 inches. The number of successive drops of the driving weight

("blows") required for each six inches of penetration will be shown on the boring log. The soil sample was retained in brass rings (2.4 inches in diameter and 1.0 inch in height) retained and carefully sealed in waterproof plastic containers for shipment to the laboratory. Bulk samples of representative soil types were collected in plastic bags.

Standard Penetration Test (SPT) sampling was also performed using a standard (1.4-inches inside diameter and 2.0-inches outside diameter) split-barrel sampler, generally at deeper sample depths and below the groundwater level. The mechanically driven hammer for the SPT sampler was 140 pounds, failing 30 inches for each blow. The recorded blow counts for every six inches for a total of 1.5 feet of sampler penetration are shown on the Logs of Borings in the "BLOWS" column. The standard penetration test was performed in accordance with the ASTM Standard D1586 test method.

In accordance with the SCE sampling program, soils samples were collected at depths of 6 inches, 2, 5, and 10 feet to perform environmental testing. These samples were retained in jars with lids and placed on ice in a cooler for transportation to an ASL laboratory under a chain of custody. The sampling, chain of custody and environmental testing program were performed/coordinated by a SCE - TBDU Geotechnical Group geologist.

Continuous rock coring with HQ size core was provided at four of the boring locations (B-8 through B-11b), to depths of 7 to 26 feet. NQ size core was attempted at boring locations B-12a and B-13 with unsuccessful results due to the highly fractured nature of the volcanic bedrock (B-13 was advanced to a depth of 49 feet with a hollow-stem auger, indicating it was too fractured/easily drilled for coring). Core barrels were in general accordance with ASTM D 2113. Physical characteristics of the rock composition and discontinuities for each core run were visually logged by a Converse geologist, including the length of core runs, core recovery, coring rate, RQD, description of lithology, fractures, weathering and other observations. Cores were collected in wax-lined card board boxes and transported to our laboratory for further testing and analyses.

2.3 Task III: Laboratory Testing

Representative samples of the site soils were tested in our laboratory and the laboratory of Environmental Geotechnology Laboratory, Inc. of Arcadia to aid in the classification and to evaluate relevant engineering properties. The tests performed included:

- *In situ* moisture contents and dry densities (ASTM Standard D2216)
- Grain Size Distribution (ASTM Standard C136)
- Atterberg Limits (ASTM D4318)
- Fines Content/Passing No. 200 Sieve (ASTM Standard D1140)
- Maximum Dry Density and Optimum-Moisture Content relationship (ASTM Standard D1557)
- Direct Shear (ASTM Standard D3080)

- Soil Corrosivity (Caltrans 643, 422, 417, and 532)
- Unconfined Compression – Rock Core Samples

For a description of the laboratory test methods and test results, see Appendix B, *Laboratory Testing Program*. For *in-situ* moisture and dry densities, see the Logs of Borings in Appendix A, *Field Exploration*.

2.4 Task IV: Geotechnical Data Report

Data obtained from the exploratory borings/cores and laboratory-testing program were compiled and presented to SCE - TBDU Geotechnical Group as it became available. This letter-report is prepared to illustrate the locations of the borings/cores, and summarize the results of our drilling/coring and laboratory testing services.

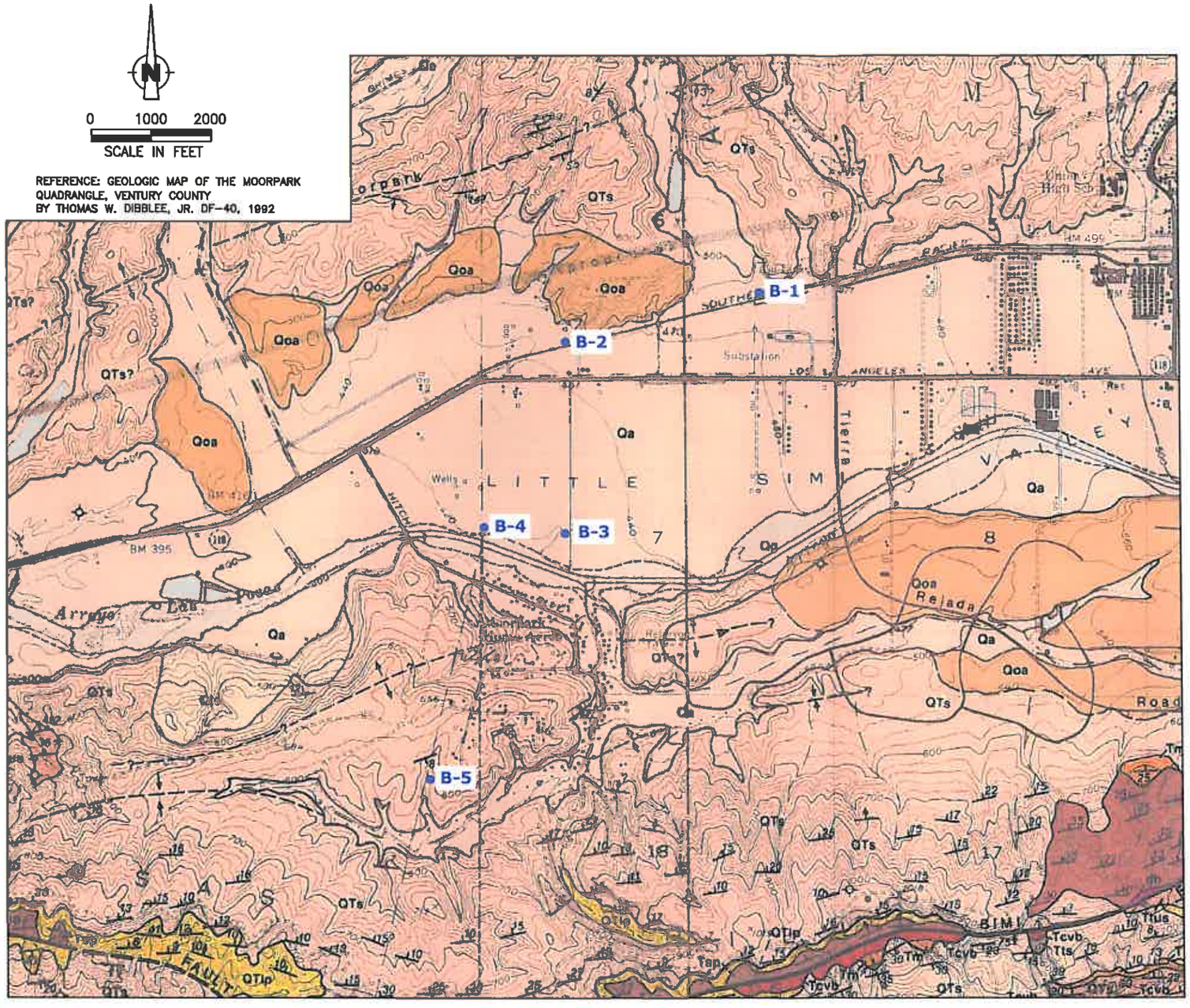
3.0 GEOLOGY AND SUBSURFACE CONDITIONS

The project site is located within the Transverse Ranges geomorphic province of California, an area generally characterized by east-west trending mountain ranges, valleys and faults. The Transverse Ranges is a tectonically active region with relatively high rates of uplift resulting in steep terrain and folding/warping/fracturing of bedrock units. Erosion of the steep slopes has created incised canyons and deep sedimentary valleys in the region.

3.1 Geologic Setting

The project alignment traverses from north to south across the alluvial plain of Little Simi Valley, over the Las Posas Hills, across the Santa Rosa Valley, and through the rugged Calleguas Hills. Younger alluvial sediments within the Little Simi Valley are primarily derived from the surrounding hills and are mapped by Dibblee (1992) as Holocene-age (map symbol **Qa**, younger than 11,000 years) unconsolidated alluvial soils consisting of primarily sandy materials with various amounts of fines (silt and clay) and some gravel (see Drawing No. 2a, *Regional Geologic Map*). Borings B-1 through B-4 were drilled within the younger alluvial sediments of the Little Simi Valley.

The Las Posas Hills trend roughly east-west, and are characterized by generally anticlinal geologic structure with Pleistocene-age weakly consolidated sediments (map symbol **QTs**, Saugus Formation) and Tertiary-age sedimentary and volcanic bedrock, as mapped by Dibblee (1990 and 1992). The Simi Fault traverse across the long axis of the Las Posas Hills (see Drawing Nos. 2a and 2b, *Regional Geologic Map*). Along the project alignment, the geologic structure generally dips gently toward the north on the north side of the Simi Fault, and moderately to steeply toward the south on the south side. Borings B-5 and B-6 were drilled within the Las Posas Hills, into Saugus Formation materials.



LEGEND

- APPROXIMATE BORING AND ROCK CORING LOCATION

MOORPARK QUADRANGLE LEGEND

af / Qg / Qa

SURFICIAL SEDIMENTS
unconsolidated alluvial deposits; generally undissected
af *artificial cut and fill*
Qg *gravel and sand of major stream channels*
Qa *alluvium: silt, sand and gravel of valley and floodplain areas*

Qls

LANDSLIDE DEBRIS
Qls *in northeastern area debris derived mostly from Monterey Shale (Tm)*

Qoa

OLDER SURFICIAL SEDIMENTS
dissected, weakly consolidated alluvial deposits
Qoa *older alluvial gravel, and and silt/clay; composed largely of detritus derived from formations within quadrangle*

—UNCONFORMITY—

QTsv / QTs / Tsc

SAUGUS FORMATION
(of Hershey 1902; Kew 1924; **Weber et al. 1973; Jakes** 1979; Yeats 1967, 1987)
nonmarine *fluviatile, weakly consolidated;* ***Pleistocene*** *and Pliocene(?) ages*
QTs *light gray to light brown gravel composed of pebbles and small cobbles mostly of white to light gray granitic rocks, and few of gneiss, metavolcanic rocks, quartzite, very few of anorthosite, gabbro, and basaltic to andesitic volcanic rocks (Tertiary) and of dark reddish sandstone in coarse sandy matrix; crudely bedded; includes minor sand and clay, locally weathers to gray to brown pebbly soil*
Tsc *similar to* **QTs**, *but gray-white, mostly pebbly sand, somewhat more consolidated, sorted and bedded, prominently cross-bedded; forms steep bluffs where eroded in Grimes Canyon; contains rare thin lenses of sandstone with shell fragments; interfingers westward into Pico Formation (Tp); grades eastward and upward into* **QTs**; *deposited as delta by westward-flowing streams*
QTsv *southeast corner of quadrangle only; crudely bedded to massive brown breccia-conglomerate composed of andesitic-basaltic, angular to subrounded detritus of Conejo Volcanics, and a few clasts of Monterey Shale locally*

Holocene ? Pleistocene

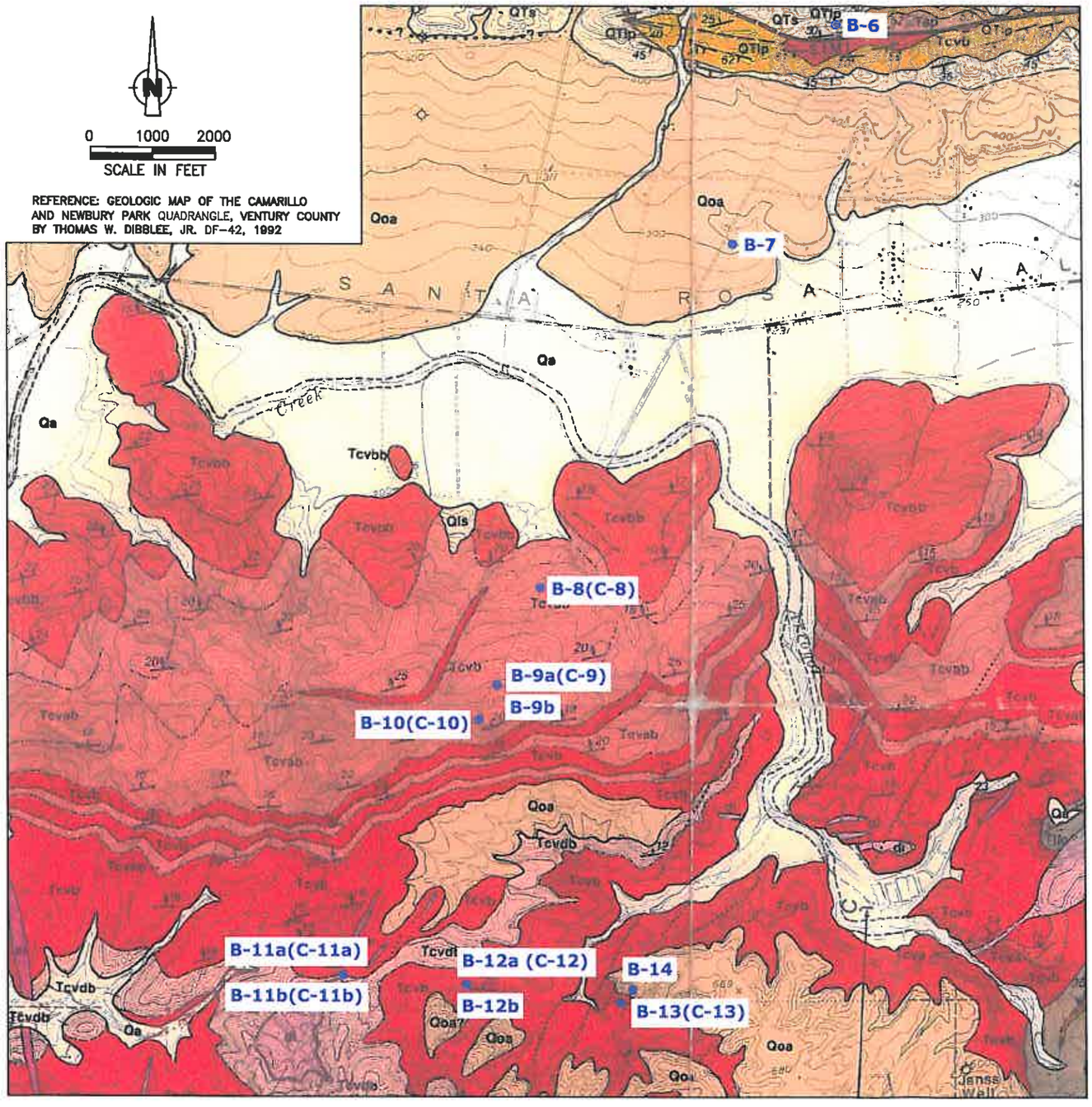
REGIONAL GEOLOGIC MAP

Converse Consultants

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. 2a



LEGEND

- APPROXIMATE BORING AND ROCK CORING LOCATION

CAMARILLO-NEWBURY PARK QUADRANGLES

LEGEND

SURFICIAL SEDIMENTS

af artificial fill
Qg stream channel sand and gravel
Qf alluvial fan gravel and sand, locally slightly indurated
Qa alluvium: gravel, sand and clay of flatlands
Qls landslide debris

OLDER SURFICIAL SEDIMENTS

Qoa dissected, weakly indurated alluvial gravel, sand and clay

—UNCONFORMITY—

SAUGUS FORMATION

(of Hershey, 1909; Kew, 1924, Weber et al, 1973; Jakes, 1979)
nonmarine fluviatile; probably Pleistocene age in this area
QTs weakly indurated, light gray to light brown pebble-cobble gravel, sand and clay; includes indurated paleo-soil layers locally; gravel contains clasts of granitic and metavolcanic rocks, quartzite and siliceous shale (Monterey Formation); in eastern Las Posas Hills contains lenses of volcanic debrius from Conejo Volcanics at and near base; grades downward and in part eastward into Las Posas Sand

LAS POSAS SAND

(of Pressler, 1929; included in Saugus Formation by Kew, 1924; Weber et al, 1973; Jakes, 1979; similar to and probably in part equivalent to Santa Barbara Formation of Santa Barbara area, and San Pedro Formation of San Pedro area)
shallow marine regressive; probably early Pliocene age in this area
QTlp weakly indurated light gray to yellow-tan, fine to medium-grained massive sand; contains layers of marine molluscan shells; grades upward and eastward through coarse, well-sorted quartz-pebble gravel into nonmarine Saugus Formation; in central Las Posas Hills contains lenses of hard, calcareous pebbly sandstone

—UNCONFORMITY—

MONTEREY SHALE

(Modelo Formation of Kew; 1924, Jakes, 1979; Monterey Shale of Weber et al, 1973)
marine biogenic; primarily middle Miocene age
Tm white-weathering, thin bedded shale; hard, platy, siliceous in upper part, grading downward into soft, fissile and chalky diatomaceous shale in lower part

DETRITAL SEDIMENTS OF LINDERO CANYON

(included in Topanga Formation by Weber, 1973; Jakes 1979; best exposed in Lindero Canyon in Thousand Oaks quadrangle)
marine clastic transgressive; middle Miocene (Luisian) age
Tls light gray to tan, semi-friable sandstone
Tvcg gray to brown cobble-boulder conglomerate of andesitic and basaltic detritus from Conejo Volcanics, in coarse sandy matrix; marine and/or nonmarine (?)

—UNCONFORMITY—

CONEJO VOLCANICS

(of Taliaferro, 1924; Weber et al, 1973; Yerkes and Campbell, 1979; Dibblee, 1982; Williams, 1983; middle Topanga Formation of Durrell, 1954; Topanga Volcanics of Truex and Hall, 1969; Truex, 1976)
submarine and subaerial extrusive and related intrusive volcanic rocks; middle Miocene (Relizian-Luisian?) age (16.1 to 13.1 m. y. old in western Santa Monica Mountains (Turner, in Williams, 1983))

EXTRUSIVE VOLCANIC ROCKS

basaltic and andesitic flows interbedded with basaltic to dacitic fragmental (volcaniclastic) rocks, and reworked volcanic (epiclastic) sedimentary rocks

Tcvdb basaltic flow breccias: dark gray to reddish-brown, porphyritic, dense to scoriaceous basalt; contains small phenocrysts of plagioclase feldspar and hypersthene (Williams, 1983); moderately coherent, erosion-resistant
Tcvab andesitic breccias: gray to brown breccias and conglomerates of angular to subrounded andesitic detritus in andesitic detrital matrix; moderately bedded, coherent and erosion-resistant; probably deposited subaerially as volcanic debris-flows (lahars) and fanglomerates (epiclastic breccias and conglomerates)
Tcvdb dacitic breccias: light pinkish gray, or gray-white to tan, unsorted angular fragments of fine grained dacite-andesite in hard volcanic detrital matrix of same rock; crudely stratified to unstratified, hard, very coherent and erosion-resistant; erupted and probably deposited subaerially as volcanic talus breccias and debris-flows (lahars)
Tcva andesitic flows and flow-breccias: locally includes mud-flow breccias and conglomerates: gray, maroon-gray, and brown aphanitic to porphyritic andesitic rocks; unstratified, moderately coherent but much fractured, locally with platy fracture; may be in part intrusive
Tcvb basaltic rocks: brown-weathering, gray-black to dark olive-brown; fine grained; composed of plagioclase feldspar and mafic minerals, including olivine; ranges from basalt to andesite(?); massive to locally vaguely bedded; mostly flows and flow-breccias; basaltic facies include vesicular, locally amygdaloidal, and reddish scoriaceous flows, submarine pillowed flows and associated hyaloclastic breccias, mostly in lower part of sequence; north of Broome Ranch, lower part includes beds of tan arkosic sandstone; incoherent, crumbly where weathered, weakly resistant to erosion

INTRUSIVE VOLCANIC ROCKS

plugs, pods, dikes and sills of volcanic rocks of inferred middle Miocene age, related to, and intrusive into Conejo Volcanics and older formations

di dacite: light gray to tan-weathering aphanitic to fine grained, microgranitic dacite to andesite, composed of feldspar and minor quartz (?), hornblende, and/or biotite; massive to vaguely flow-banded or brecciated along margins; hard, coherent where fine grained to somewhat incoherent where microgranitic; forms plugs, pods and dikes, intrusive into Conejo Volcanics, and rarely into Lower Topanga Formation; forms large plug/dome of Conejo Mountain, possibly in part extrusive
ai andesite: gray to brown, aphanitic to very fine grained andesitic rocks; locally slightly porphyritic, massive; large intrusive(?) mass near Lake Sherwood contains pyrite, disseminated and in fractures; elsewhere forms thin dikes intrusive in other volcanic rocks; may include some basaltic dikes; moderately coherent and erosion-resistant
bi basalt: dark gray to black, fine grained to locally porphyritic with phenocrysts of plagioclase feldspar and hypersthene (Williams, 1983); forms many thin dikes intrusive in other volcanic rocks near and northeast of Conejo Mountain; locally columnar-jointed; coherent and erosion-resistant
api porphyritic andesite: dark gray to brown massive andesite with small phenocrysts of feldspar; forms large pod intrusive into Lower Topanga Formation (Ttlc)
aoi porphyritic olivine andesite: dark gray with phenocrysts of plagioclase feldspar and olivine; forms small plug in basalt (Tcvb) at Long Grade Canyon
db diabase or ophitic basalt: dark to medium olive-gray, fine to locally coarse grained, massive, composed of lathy feldspar (calcic plagioclase) and ferromagnesian minerals, mostly augite and minor olivine (?); weakly coherent where weathered; intrusive as tonguelar sills in lower Topanga Formation, in places complexly injected or sheared along margins

QUATERNARY: Holocene; Pleistocene; Pliocene
TERTIARY: Miocene

REGIONAL GEOLOGIC MAP

Converse Consultants

SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. 2b

Sediments within the Santa Rosa Valley consist of older alluvial deposits (map symbol **Qoa**, late Pleistocene-age, older than 11,000 years) on the north portion of the valley, and Holocene-age unconsolidated alluvial soils (map symbol **Qa**) on the south portion. The older alluvial deposits and younger alluvial soils consist of primarily sandy materials as mapped by Dibblee (1990) (see Drawing No. 2b, *Regional Geologic Map*). Boring B-7 was drilled within the northern portion of the Santa Rosa Valley into older alluvial deposits.

The southern portion of the project alignment traverses through the Calleguas Hills, characterized by steep and rugged terrain. Geologic units within the Calleguas Hills, as mapped by Dibblee (1990), include remnant older alluvial deposits (map symbol **Qoa**) and extrusive volcanic bedrock assigned to the Conejo Volcanics (map symbols **Tcvb** and **Tcvab**) of Miocene-age (see Drawing No. 2b, *Regional Geologic Map*). The Conejo Volcanics consist primarily of basalt and andesite flows and flow breccias with intrusive dikes and sills. Along the project alignment, the geologic structure is generally massive with some flow bands that dip gently toward the north. Borings and rock cores at locations B-8 through B-14 were drilled within the Calleguas Hills, into the Conejo Volcanics.

Our review of pertinent background material included the seismic hazard zone reports for the Moorpark 7.5-minute quadrangle (CDMG, 2000a), and Newbury Park 7.5-minute quadrangle (CDMG, 2002a), and seismic hazard zones maps for the Moorpark 7.5-minute quadrangle (CDMG, 2000b) and Newbury Park 7.5-minute quadrangle (CDMG, 2002b). These resources indicate that geologic hazards including fault rupture, liquefaction, and seismically induced slope instability are present along various portions of the project alignment. Evaluation of these geologic hazards with respect to the planned transmission towers is beyond the scope of our drilling/coring and laboratory testing services.

3.2 Subsurface Conditions

Little Simi Valley: Borings B-1 through B-4

Younger alluvial soils were encountered in borings B-1 through B-4, with relatively thin layers of undocumented fill within the upper 3 to 6 feet of the borings. In general, the fill soils encountered consist of fine-grained silty sand. The alluvial soils encountered consist mainly of layered sand, sand with silt and fine-grained silty sand, with occasional clayey sand, clay and silt layers. The younger alluvial soils are generally loose to medium dense, based on blow count correlation. For additional information on the subsurface conditions at boring locations B-1 through B-4, see the Logs of Borings Data in Appendix A, *Field Exploration*.

Las Posas Hills: Borings B-5 and B-6

Weakly consolidated sedimentary bedrock assigned to the Saugus Formation by Dibblee (1990 and 1992) were encountered in borings B-5 and B-6, locally mantle with relatively thin layers of topsoil and colluvium. Saugus Formation materials encountered in boring B-5 consist of sandy clay and clay (not indurated), while in boring B-6 the earth materials are more characteristic of thinly bedded siltstone and sandstone (indurated). Saugus Formation materials encountered in the borings are generally dense, based on blow count correlation. For additional information on the subsurface conditions at boring locations B-5 and B-6, see the Logs of Borings Data in Appendix A, *Field Exploration*.

Santa Rosa Valley: Boring B-7

Older alluvial deposits were encountered in borings B-7, drilled within the northern portion of the valley. The older alluvial deposits consist mainly of fine-grained silty sand, with occasional sandy silt and gravelly sand layers. The soils are relatively dense based on blow count correlation. For additional information on the subsurface conditions at boring location B-7, see the Logs of Borings Data in Appendix A, *Field Exploration*.

Calleguas Hills: Borings/Cores B-8 through B-14

Volcanic bedrock consisting of basalt and andesite flows and flow breccias, as mapped by Dibblee (1990), were encountered in Borings/Cores B-8 (C-8) through B-13 (C-13) and B-14. The volcanic bedrock generally has a massive, fine-grained (aphanitic) texture in basalt/andesite flows and flow breccia matrix, with gravel to cobble size volcanic clasts in the breccias. Thin flow banding was observed in the basalt bedrock encountered at boring location B-13 (C-13). The volcanic bedrock is generally weathered and fractured to highly fractured within approximately 10 to 15 feet of the ground surface, and less weathered/less fractured and hard at depths below 15 feet. The highly fractured nature of the bedrock locally limited the effectiveness of rock coring operations at boring locations B-8 (C-8), B-12a (C-12) and B-13 (C-13).

Disturbed soils attributed to older landslide debris were encountered at boring locations B-9a (C-9) and B-9b to variable depths of approximately 22 to 23 feet below the ground surface. The older landslide debris encountered consists of volcanic rock fragments in a clayey sand soil matrix, underlain by in-place andesite flow breccia.

Remnant older alluvial deposits were encountered at boring location B-14, situated approximately 45 feet topographically higher than boring location B-13 (C-13). The older alluvial sediments consist primarily of layered silty sand with occasional gravel layers. Basalt bedrock was encountered below the older alluvial sediments at a depth of approximately 27 feet.

For more detailed information on the subsurface conditions at boring locations B-8 (C-8) through B-13 (C-13) and B-14, see the Logs of Borings Data in Appendix A, *Field Exploration*.

3.3 Groundwater

Groundwater was locally encountered in the Little Simi Valley at boring locations B-1 through B-4 during our recent subsurface exploration, at depths of approximately 22 to 29 feet below the ground surface. Review of the Seismic Hazard Evaluation of the Moorpark 7.5-minute Quadrangle (CDMG, 2000a) indicates historic high groundwater levels of approximately 15 to 20 feet in the areas of borings B-1 through B-4. Perched water was encountered in boring B-5 (Las Posas Hills) at a depth of approximately 39 feet, confined above a clay zone at 40 feet below the ground surface.

Regional shallow groundwater was not encountered in borings B-6, B-7 and the Calleguas Hills boring locations. In general, groundwater levels fluctuate with the seasons and local zones of perched groundwater may be present within the nearer surface soils due to local conditions or during rainy seasons. Groundwater conditions below any given site vary depending on numerous factors including seasonal rainfall, local irrigation, and groundwater pumping, among other factors.

3.4 Subsurface Variations

The project alignment traverses across alluvial valleys, rolling hillside terrain, and rugged hillside terrain with widely varying geologic conditions. Based on results of the subsurface exploration and our experience, variations in the continuity and nature of subsurface conditions within the project site should be anticipated. Because of the uncertainties involved in the nature and depositional characteristics of the earth materials along the project alignment, care should be exercised in interpolating or extrapolating subsurface conditions between or beyond the boring locations.

4.0 LABORATORY TESTING

Representative samples of the site soils were tested in our laboratory and the laboratory of Environmental Geotechnology Laboratory, Inc. of Arcadia to aid in the classification and to evaluate relevant engineering properties. Results of the various laboratory tests are summarized discussed below. For a more detailed description of the laboratory test methods and test results, see Appendix B, *Laboratory Testing Program*.

- *In-situ* Moisture and Dry Density – Results of *in-situ* moisture and dry density tests are presented on the Log of Borings in Appendix A, *Field Exploration.*
- Grain Size Analysis – Seven (7) representative bulk samples were tested to evaluate the relative grain size distribution of the soils encountered along the proposed alignment. Results are presented in Appendix B, *Laboratory Testing Program.*

- Passing No. 200 – Nine (9) representative samples were tested to determine the percent finer than sieve No. 200, to aid in the classification of alluvial soils at boring locations B-1 through B-4. Results are presented in Appendix B, *Laboratory Testing Program*, and indicate the soil samples tested are primarily sand with various amounts of silt.
- Atterberg Limits – One (1) representative soil sample was tested to evaluate Atterberg Limits of the deeper soils encountered in Boring B-5, in accordance with ASTM Standard D4318. The testing indicates the soil samples tested are classified as clay (CL).
- Maximum Dry Density and Optimum Moisture Content – The moisture-density relationship of selected soil samples is presented in Appendix B, *Laboratory Testing Program*.
- Direct Shear – Fifteen (15) direct shear tests were performed on representative in-situ samples. Results of the direct shear testing are presented in Appendix B, *Laboratory Testing Program*.
- Soil Corrosivity – Nine (9) representative samples of the soils encountered in the borings along the project alignment were tested to evaluate soil corrosivity with respect to common construction materials such as concrete and steel. The test results are presented in Appendix B, *Laboratory Testing Program.*

For additional information on the subsurface conditions, see the Logs of Borings in Appendix A, *Field Exploration*.

5.0 CLOSURE

The summarized data presented in this letter-report were prepared in accordance with generally accepted professional engineering and engineering geologic principles and practice in Southern California. We make no other warranty, either expressed or implied.

This letter-report was prepared to summarize drilling/coring and laboratory testing services for the Moorpark-Newbury 66kV Transmission Line Project in Ventura County, California. Converse is not responsible for technical interpretations made by others of our exploratory information. Specific questions or interpretations concerning the data presented herein may require a written clarification to avoid any misunderstandings.

6.0 REFERENCES

CALIFORNIA DIVISION OF MINES AND GEOLOGY, Fault-Rupture Hazard Zones in California, Alquist-Priolo Earthquake Faulting Zoning Act with Index to Earthquake Fault Zone Maps, Special Publication 42, Revised 1997, Supplements 1 and 2 added 1999, Supplement 3 added in 2003.

CALIFORNIA DIVISION OF MINES AND GEOLOGY, 2000a, Seismic Hazard Evaluation of the Moorpark 7.5-Minute Quadrangle, Ventura County, California, Open File Report 2000-007.

CALIFORNIA DIVISION OF MINES AND GEOLOGY, 2000b, Seismic Hazard Zones, Moorpark 7.5-Minute Quadrangle, Ventura County, California, Official Map dated November 17, 2000.

CALIFORNIA DIVISION OF MINES AND GEOLOGY, 2002a, Seismic Hazard Zone Report for the Newbury Park 7.5-Minute Quadrangle, Ventura County, California, Seismic Hazard Zone Report 055.

CALIFORNIA DIVISION OF MINES AND GEOLOGY, 2002b, Seismic Hazard Zones, Newbury Park 7.5-Minute Quadrangle, Ventura County, California, Official Map dated February 7, 2002.

DIBBLEE, Thomas W., Jr., 1990, Geologic Map of the Camarillo and Newbury Park Quadrangles, Ventura County, California, Dibblee Geological Foundation Map #DF-28.

DIBBLEE, Thomas W., Jr., 1992, Geologic Map of the Moorpark Quadrangle, Ventura County, California, Dibblee Geological Foundation Map #DF-40.

UNITED STATES GEOLOGICAL SURVEY (USGS), Moorpark Quadrangle, California-Ventura Co., 7.5 Minute Series (Topographic) map, dated 1974.

UNITED STATES GEOLOGICAL SURVEY (USGS), Newbury Park Quadrangle, California-Ventura Co., 7.5 Minute Series (Topographic) map, dated 1967.

APPENDIX A

FIELD EXPLORATION

APPENDIX A

FIELD EXPLORATION

Field exploration included a site reconnaissance and subsurface exploration program. During the site reconnaissance, the surface conditions were noted, and the approximate locations of the borings were marked for utility clearance. The exploratory borings were approximately located using existing boundary and other features as a guide and should be considered accurate only to the degree implied by the method used. The various field study methods performed are discussed below.

Ten (10) hollow-stem auger (HSA) borings (B-1 through B-7, B-9b, B-12b, B-14) were drilled along the project alignment on various days between December 13, 2010 and January 18, 2011. The borings were advanced using a truck mounted drill rig with eight-inch diameter hollow-stem augers. The depths drilled were approximately 9 feet to 51.5 feet below ground surface (bgs). Encountered earth materials were continuously logged by a Converse geologist and classified in the field by visual examination in accordance with the Unified Soil Classification System (USCS). Where appropriate, field descriptions and classifications have been modified to reflect laboratory test results.

Ring samples of the subsurface materials were obtained at frequent intervals in the exploratory borings using a drive sampler (2.4-inches inside diameter and 3.0-inches outside diameter) lined with sample rings. The steel ring sampler was driven into the bottom of the borehole with successive drops of a 140-pound driving weight falling 30 inches, using an automatic hammer. Samples are retained in brass rings (2.4-inches inside diameter and 1.0-inch in height). The central portion of the sample was retained and carefully sealed in waterproof plastic containers for shipment to the Converse laboratory. Blow counts for each sample interval are presented on the logs of borings. Bulk samples of typical soil types were also obtained.

Standard Penetration Test (SPT) was also performed using a standard (1.4-inches inside diameter and 2.0-inches outside diameter) split-barrel sampler. The mechanically driven hammer for the SPT sampler was 140 pounds, failing 30 inches for each blow. The recorded blow counts for every six inches for a total of 1.5 feet of sampler penetration are shown on the Logs of Borings in the “BLOWS" column. The standard penetration test was performed in accordance with the ASTM Standard D1586 test method.

Continuous rock coring with HQ size core was provided at four of the boring locations (B-8 through B-11b), to depths of 7 to 26 feet. NQ size core was attempted at boring locations B-12a and B-13 with unsuccessful results due to the highly fractured nature of the volcanic bedrock. Core barrels were in general accordance with ASTM D 2113. Physical characteristics of the rock composition and discontinuities for each core run were visually

logged by a Converse geologist, including the length of core runs, core recovery, coring rate, RQD, description of lithology, fractures, weathering and other observations. Cores were collected in wax-lined card board boxes and transported to our laboratory for further testing and analyses.

It should be noted that the exact depths at which material changes occur cannot always be established accurately. Unless a more precise depth can be established by other means, changes in material conditions that occur between driven samples are indicated in the logs at the top of the next drive sample. A key to soil symbols and terms is presented as Drawing No. A-1. The log of the exploratory boring is presented in Drawing Nos. A-2a through A-18, *Log of Borings*.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS — MORE THAN 50% OF COARSE FRACTION RETAINED ON NO 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS — MORE THAN 50% OF COARSE FRACTION PASSING ON NO 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

BORING LOG SYMBOLS

SAMPLE TYPE

- STANDARD PENETRATION TEST — Split barrel sampler in accordance with ASTM D-1586-84 Standard Test Method
- DRIVE SAMPLE 2.42" I.D. sampler.
- DRIVE SAMPLE No recovery
- BULK SAMPLE
- GROUNDWATER WHILE DRILLING
- GROUNDWATER AFTER DRILLING

LABORATORY TESTING ABBREVIATIONS

TEST TYPE (Results shown in Appendix B)		STRENGTH	
		Pocket Penetrometer	p
		Direct Shear	ds
		Direct Shear (single point)	ds*
		Unconfined Compression	uc
		Triaxial Compression	tx
		Vane Shear	vs
CLASSIFICATION			
Plasticity	pl	Consolidation	c
Grain Size Analysis	ma	Collapse Test	col
Passing No. 200 Sieve	wa	Resistance (R) Value	r
Sand Equivalent	se	Chemical Analysis	ca
Expansion Index	ei	Electrical Resistivity	er
Compaction Curve	max		
Hydrometer	h		

UNIFIED SOIL CLASSIFICATION AND KEY TO BORING LOG SYMBOLS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-1

Log of Boring No. B-1

Dates Drilled: 12/13/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 476 Depth to Water (ft): 29

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES: DRIVE	SAMPLES: BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.						
		ALLUVIUM (Qa): **SILTY SAND (SM):** fine to medium-grained, brown.	■		4/5/6	10	108	
5		**SAND WITH SILT (SP-SM):** fine to medium-grained, light brown.	■		3/4/5	7	107	ds
			■	▨	3/4/4	4	108	ca,er
10		**SAND WITH SILT (SP-SM):** fine-grained, trace clay, brown.	■	▨	2/3/4	14	108	ds
15			☒		1/2/2			
20		**SAND (SP):** fine-grained, light brown.	■		4/9/15	3	103	
25		**SAND AND SILTY SAND (SP+SM):** fine-grained, inter-layered, brown.	☒		1/2/2			
		▽						
30		**SAND (SP):** medium-grained, light brown.	■		5/13/17	12	113	

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-2a

Log of Boring No. B-1

Dates Drilled: 12/13/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 476 Depth to Water (ft): 29

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES: DRIVE	SAMPLES: BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.						
		CLAYEY SAND (SC): fine-grained, brown.	X		push/1/1			wa (fc=41%)
40		**SANDY SILT AND CLAYEY SAND (ML+SC):** fine-grained sand, inter-layered, brown.	X		1/4/5			wa (fc=60%)
45			X		2/6/9			
50		**SILTY SAND (SM):** fine to medium-grained, light brown.	X		6/10/8			wa (fc=16%)
		End of boring at 51.5 feet. Groundwater encountered at 29 feet. Borehole backfilled with soil cuttings on 12-13-10.						

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-2b

Log of Boring No. B -2

Dates Drilled: 12/13/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 450 Depth to Water (ft): 24

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.						
		FILL (Af): **SILTY SAND (SM):** fine-grained, light brown to brown.	■		10/11/14	3	112	
5			■		7/9/9	7	97	ds
		ALLUVIUM (Qa): **SILTY SAND (SM):** fine-grained, slightly porous, brown.	■	▨	2/4/6	6	97	ca,er
10			■	▨	2/3/4	14	95	
15		**SANDY CLAY TO CLAYEY SAND (CL/SC):** fine-grained sand, brown.	☒		push/1/1			
20		**CLAYEY SAND (SC):** fine to medium-grained, brown.	■		1/2/1	15	115	ds
25					4/6/6			
30		**CLAYEY SILT (ML):** light brown.	☒		3/2/3			wa (fc=86%)

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-3a

Log of Boring No. B-2

Dates Drilled: 12/13/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 450 Depth to Water (ft): 24

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		SAND WITH SILT (SP-SM): fine to medium-grained, light brown.	X		2/3/6			wa (fc=8%)
40			X		3/2/3			
45			X		2/2/2			
		End of boring at 46.5 feet. Groundwater encountered at 24 feet. Borehole backfilled with soil mixed concrete 12-13-10.						

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-3b

Log of Boring No. B- 3

Dates Drilled: 12/14/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 430 Depth to Water (ft): 22

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		FILL (Af): **SILTY SAND (SM):** fine-grained, light brown and brown.	■		11/18/27	8	120	
5		**ALLUVIUM (Qa):** **SILTY SAND (SM):** fine-grained, brown.	■		4/4/10	18	86	ds
		light brown	■	▨	2/3/4	11	95	ca,er
10		**SAND (SP):** fine-grained, light brown.	■	▨	3/6/7	9	83	ds
15			☒		2/5/6			
20		**CLAYEY SILT (ML):** olive brown.	■		3/7/9	21	103	
		SAND WITH SILT (SP-SM): fine-grained, light brown.						
25		**SAND (SP):** medium-grained, light gray brown.	☒		4/12/14			
30		-fine to medium-grained, trace gravels up to 1/2" in maximum dimension	☒		9/9/17			

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-4a

Log of Boring No. B- 3

Dates Drilled: 12/14/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 430 Depth to Water (ft): 22

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES: DRIVE	SAMPLES: BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		SAND (SP): medium-grained, light gray brown.	X		2/12/17			
40		**SAND WITH SILT (SP-SM):** medium to coarse-grained, trace gravels up to 1/2" in maximum dimension, brown.	X		8/14/17			wa (fc=12%)
45		**SANDY SILT (ML):** fine-grained sand, trace clay, olive brown.	X		1/6/8			
		SANDY SILT AND SILTY SAND (SM+ML): fine-grained, trace clay, thinly layered to laminated, olive and brown-reddish brown.	X		5/9/10			
50		**SILT (ML):** trace clay, olive brown.	X		2/6/6			
		End of boring at 51.5 feet. Groundwater encountered at 22 feet. Borehole backfilled with soil mixed concrete 12-14-10.						

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-4b

Log of Boring No. B- 4

Dates Drilled: 12/14/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 420 Depth to Water (ft): 21.8

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		FILL (Af): **SILTY SAND (SM):** fine to medium-grained, brown.	■		3/4/6	8	112	
		ALLUVIUM (Qa):						
5		**SAND WITH SILT (SP-SM):** medium-grained, light brown.	■		6/6/7	6	111	ds
			■	▨	3/6/9	4	108	ma,ca,er
10			■	▨	5/9/6	9	103	ds
15		**CLAYEY SILT (ML):** olive brown.	☒		2/2/2			
20		**SANDY SILT (ML):** fine-grained sand, olive brown.	■		4/7/10	15	106	
25		**SAND WITH SILT (SP-SM):** medium-grained, light brown.	☒		6/10/12			wa (fc=7%)
30		-fine to medium-grained, light brown	☒		5/11/12			wa (fc=10%)

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-5a

Log of Boring No. B-4

Dates Drilled: 12/14/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 420 Depth to Water (ft): 21.8

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		SAND WITH SILT (SP-SM): medium-grained, light brown.	X		7/9/11			wa (fc=8%)
40		-medium-grained, light brown	X		7/11/14			
45		-fine to medium-grained	X		10/10/11			
50		-medium to coarse-grained, trace gravel up to 1/2" in maximum dimension	X		14/16/13			
		End of boring at 51.5 feet. Groundwater encountered at 21.8 feet. Borehole backfilled with soil mixed concrete 12-14-10.						

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-5b

Log of Boring No. B- 5

Dates Drilled: 12/14/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 565 Depth to Water (ft): 39

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		COLLUVIUM (Qcol):						
		SANDY CLAY (CL): fine-grained sand, dark brown.	■		2/5/8	15	110	
5		**CLAYEY SAND (SC):** fine-grained, trace coarse-grained sand, brown.	■		4/7/10	18	107	ds
		SAUGUS FORMATION (QTs not indurated):	■	▨	4/5/8	13	113	ca,er,pi
		SANDY CLAY (CL): fine-grained sand, brown.						
10		-trace gravels up to 1/2" in maximum dimension, slightly porous, reddish brown	■	▨	4/6/8	18	106	ds
15		**SILTY SAND (SM):** fine to medium-grained, trace gravels up to 1/2" in maximum dimension, trace clay, reddish brown.	⊠		5/15/11			
20		**CLAY (CL):** reddish brown.	■		7/14/23	19	107	
25			⊠		3/8/13			
30		**SILTY CLAY (CL):** trace fine-grained sand, reddish brown.	■		7/15/27	17	111	

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-6a

Log of Boring No. B-5

Dates Drilled: 12/14/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 565 Depth to Water (ft): 39

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		CLAYEY AND SANDY SILT (ML): fine-grained sand, reddish brown.	X		5/11/15			
40		**CLAY (CL):** trace fine-grained sand, reddish brown.	X		12/16/22			
45			X		10/18/26			
50			X		18/50(6")			
		End of boring at 51 feet. Perched groundwater at 39 feet. Borehole backfilled with soil cuttings 12-14-10.						

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-6b

Log of Boring No. B- 6

Dates Drilled: 12/13/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 840 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		TOPSOIL: **SILTY SAND (SM):** fine-grained, brown.						
		SAUGUS FORMATION (QTs, indurated): **SANDSTONE WITH SILTSTONE:** fine-grained, slightly hard, moderately weathered, yellow, light brown, and gray brown.	■		23/30/39	8	117	
5			■		20/35/43	8	111	
		-predominantly siltstone, thinnly bedded, fractured, brown and gray	■	▨		7	109	ca,er
10			■	▨	9/19/32			
15		-predominantly sandstone, fine-grained, yellowish light brown	☒		7/20/43			
20		-fine to medium-grained, massive gray	■		7/31/48	8	92	ds
25		-fine-grained, trace clay, yellow brown	☒		7/17/16			
30		-brown	■		11/13/50	29	90	

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-7a

Log of Boring No. B-6

Dates Drilled: 12/13/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 840 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		SANDSTONE: fine-grained, trace clay, massive, reddish brown	X		13/32/36			
40		-brown	■		21/50(5.5")	17	98	
45			X		15/26/33			
50			■		27/50(4")	17	101	
		End of boring at 51 feet. Groundwater not encountered during drilling. Borehole backfilled with soil cuttings 12-13-10.						

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-7b

Log of Boring No. B- 7

Dates Drilled: 12/14/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 305 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		OLDER ALLUVIUM (Qoa):						
		CLAYEY SAND (SC): fine-grained, trace gravels up to 2" in maximum dimension, reddish brown and brown.	■		12/22/18	18		dist.
		-disturbance from plowing (agriculture)						
5		**SANDY SILT (ML):** fine-grained sand, trace gravels up to 1/2" in maximum dimension, light brown.	■		10/13/20	25	86	ds
			■	▨	23/26/37	19	98	ca,er
10		**SILTY SAND TO SANDY SILT (SM/ML):** fine-grained, trace gravels up to 1/2 in maximum dimension, light brown.	■	▨	12/18/26	11	98	
15		**SILTY SAND (SM):** fine to medium-grained, trace gravels up to 1" in maximum dimension, gray brown.	☒		9/16/15			
20		-little to few gravels up to 1" in maximum dimension	■		17/30/37	11	101	ds
25		-trace gravels up to 1" in maximum dimension	☒		19/17/14			
30		**GRAVELLY SAND (SW):** medium to coarse-grained, gravels up to 1" in maximum dimension, gray brown.	■		24/38/32			

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-8a

Log of Boring No. B-7

Dates Drilled: 12/14/2010 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 305 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		SILTY SAND (SM): fine-grained, brown.	X		11/18/26			
40		-remnant insect burrow, slightly porous, infilled with calcerous mineral	■		19/50(6")	15	110	
45		-remnant caliche stringers	X		10/18/25			
50		-remnant caliche stringers	■		13/29/50	14	108	
		End of boring at 51.5 feet. Groundwater not encountered during drilling. Borehole backfilled with soil cuttings 12-14-10.						

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-8b

Log of Coring No. B-8 (C-8)

Dates Drilled: 12/15/2010 Logged by: GDS Checked By: SCL

Equipment: CME 95 Driving Weight and Drop: HQ CORE

Ground Surface Elevation (ft): 570 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES RUN (ft)	SAMPLES RECOVERY (ft)	COMMENTS	OTHER
		This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.				
		CONEJO VOLCANICS (Tcvab):				
		VOLCANIC BRECCIA fine-grained (aphanitic) matrix, andesitic and basaltic clasts, slightly vascular, hard, slightly fractured, slightly weathered, gray and pinkish-gray matrix; gray, dark gray and red clasts				
5			3'	2'	37 minutes RQD=20	
			2'	2'	39 minutes RQD=29	uc (6,650psi)
10		-open fractures up to 1/2" wide	2'	2'	14 minutes RQD=17	
		End of boring at 12 feet due to loss of drilling fluid through open fractures. Groundwater not encountered during drilling. Borehole backfilled with bentonite and cuttings on 12-15-10.				

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Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-9

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Log of Coring No. B-9a (C-9)

Dates Drilled: 12/16/2010 Logged by: GDS Checked By: SCL

Equipment: CME 95 Driving Weight and Drop: HQ CORE

Ground Surface Elevation (ft): 1055 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES RUN (ft)	SAMPLES RECOVERY (ft)	COMMENTS	OTHER
		This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.				
		COLLUVIUM (Qcol):				
		SANDY CLAY (CL): fine-grained sand, little few gravel up to 2" in maximum dimension, dark brown.	3'	2'	RQD=0	
		OLDER LANDSLIDE DEBRIS? (Qls):				
5		**CLAYEY SAND (SC):** fine to medium-grained, gravel size volcanic bedrock fragments up to 3" in maximum dimension, weathered, gray and brown.	3'	1.5'	RQD=0	
		-highly fractured, moderately weathered, pinkish gray (remnant andesite)				
		-gravel size volcanic bedrock fragments in clayed sand matrix, gray and orange-brown	5'	1'	RQD=0	
10						
			5'	3.5'	RQD=0	
15						
			5'	3.5'	RQD=0	
20						
		End of boring at 23 feet materials not suitable for core recovery. Groundwater not encountered during drilling. Borehole backfilled with bentonite and cuttings on 12-15-10.				

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-10

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Log of Boring No. B- 9b

Dates Drilled: 1/18/2011 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1055 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		COLLUVIUM (Qcol): **SANDY CLAY (CL):** fine-grained sand, few gravel size, volcanic bedrock fragments up to 2" in maximum dimension, dark brown.						
		OLDER LANDSLIDE DEBRIS?(Qls): **CLAYEY SAND (SC):** fine to medium-grained, volcanic bedrock fragments up to 3" in maximum dimension, gray brown and dark brown.						
5			■		50(6")			dist.
		-with gravels		▨				ca,er max,ma
10		-bedrock fragments in clayey sand matrix, orange brown	■		27/26/26	18	87	ds
15			■		16/27/29	13	97	
20			■		21/50(3")	9		dist.
		CONEJO VOLCANICS (Tcvab): **ANDESITE FLOW BRECCIA:** fine-grained (aphanitic), slightly weathered, hard, gray						
25			■		50(6")			dist.
30			■		50(3")			dist.

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-11a

Log of Boring No. B- 9b

Dates Drilled: 1/18/2011 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1055 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES: DRIVE	SAMPLES: BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.						
		CONEJO VOLCANICS (Tcvab): **ANDESITE FLOW BRECCIA:** fine-grained (aphanitic), slightly weathered, hard, gray	■		50(3")			
		End of boring at 36.5 feet due to refusal. Groundwater not encountered during drilling. Borehole backfilled with soil cuttings on 1-18-2011.						

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-11b

Log of Coring No. B-10 (C-10)

Dates Drilled: 12/16/2010 Logged by: GDS Checked By: SCL

Equipment: CME 95 Driving Weight and Drop: HQ CORE

Ground Surface Elevation (ft): 1165 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES RUN (ft)	SAMPLES RECOVERY (ft)	COMMENTS	OTHER
		CONEJO VOLCANICS (Tcvab): **VOLCANIC BRECCIA:** fine-grained (aphanitic) matrix, andesitic clasts gravel to cobble size, slightly hard, fractured, highy weathered, brown matrix and light pinkish gray clasts				
5		-slightly hard, moderately weathered, slightly fractured	4.5'	4.5'	10 minutes RQD=20	
		-gray matrix and clasts	5'	5'	10 minutes RQD=0	
10						
		-hard, slightly weathered, fractures at 40 to 70° JRC= 2 to 4	3'	2.5'	10 minutes RQD=20	
15		-fractures at 0, 20, 40, 50 and 70°, JRC= 4-6; gray matrix and dark gray to greenish gray clasts	4.5'	4.5'	18 minutes RQD=20	uc (5,220psi)
20		-highly fractured,	1'	1'	18 minutes RQD=20	
		-less fractured, fractures at 20, 30, 50 and 70°, JRC= 4-8	4'	4'	16 minutes RQD=44	
25						uc (4,070psi)
		End of boring at 26 feet. Groundwater not encountered during drilling. Borehole backfilled with bentonite and cuttings on 12-16-10.				

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Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-12

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Log of Coring No. B-11a (C-11a)

Dates Drilled: 12/9/2010 Logged by: GDS Checked By: SCL

Equipment: CME 95 Driving Weight and Drop: HQ CORE

Ground Surface Elevation (ft): 785 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES RUN (ft)	SAMPLES RECOVERY (ft)	COMMENTS	OTHER
		This log is part of the report prepared by Converse for this project and should be read together with the report. The summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.				
		COLLUVIUM (Qcol):				
		SILTY SAND (SM): fine-grained, brown.	2'	0'	23 minutes RQD=0	
		CONEJO VOLCANICS (Tcvb):				
		BASALT: fine-grained (aphanitic), hard, highly fractured, slightly weathered, pinkish gray, olive and black	3.5'	3'	48 minutes RQD=33	uc (4,600psi)
5		-fractures at 20 to 45°, JRC=4				
		-highly fractured, soft rock	0.5'	0.5'	10 minutes RQD=0	
		End of boring at 7 feet due to soft/fractured rock. Groundwater not encountered during drilling. Borehole backfilled with bentonite and cuttings on 12-9-10.				

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-13

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Log of Coring No. B-11b (C-11b)

Dates Drilled: 12/10/2010 Logged by: GDS Checked By: SCL

Equipment: CME 95 Driving Weight and Drop: HQ CORE

Ground Surface Elevation (ft): 785 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES RUN (ft)	SAMPLES RECOVERY (ft)	COMMENTS	OTHER
		COLLUVIUM (Qcol): SILTY SAND (SM): fine-grained, brown.	3'	3'	RQD=0	
		CONEJO VOLCANICS (Tcvab): **BASALT:** fine-grained (aphanitic), soft, highly weathered, olive and gray				
5		-slightly hard, highly fractured, slightly weathered	2.5'	2.5'	RQD=0	
		-hard	2.5'	2.5'	RQD=0	
10			3.5'	2'	RQD=0	
			1.25'	0	RQD=0	
15		-fine to medium-grained, fractured, slightly weathered, blue gray and dark gray	5	2	RQD=0	
20		-no discernable fractures, green-gray and dark gray	4.25'	4.25'	switch to core 47 minutes RQD=96	uc (3,320psi)
		-slightly fractured	1'	1'	28 minutes RQD=33	
		End of boring at 24 feet. Groundwater not encountered during drilling. Borehole backfilled with bentonite and cuttings on 12-11-10.				

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Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-14

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Log of Coring No. B-12a (C-12)

Dates Drilled: 11/29/2010 Logged by: GDS Checked By: SCL

Equipment: CME 95 Driving Weight and Drop: NQ CORE

Ground Surface Elevation (ft): 640 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES RUN (ft)	SAMPLES RECOVERY (ft)	COMMENTS	OTHER
		FILL (Af): **SILTY SAND (SM):** fine-grained some gravel size volcanic bedrock, fragments up to 1" in maximum dimension.				
		CONEJO VOLCANICS (Tcvab):			RQD=0	
5		**BASALT FLOW BRECCIA AND BASALT:** slightly hard, highly fractured, weathered brown, yellow brown, reddish brown and black				
		-less weathered			RQD=0	
		-intesely fractured, gray and dark gray			RQD=0	
10						
		-olive-gray, gray and dark gray			RQD=0	
15					RQD=0	
		-hard, fractured, JRC=4	2.85'	2.85'	switch to core 105 minutes RQD=0	
20						
		End of boring at 21.75 feet. (equipment breakdown) Groundwater not encountered during drilling. Borehole backfilled with bentonite and cuttings on 12-9-10.				

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-15

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Log of Boring No. B-12b

Dates Drilled: 1/18/2011 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 640 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		FILL (Af): **SILTY SAND** (SM): fine to medium-grained, some bedrock fragments up to 2", brown.						
5		**CONEJO VOLCANICS (Tcvb):** **BASALT FLOW BRECCIA:** fine grained (aphanitic) matrix, massive, weathered, moderately hard, fractured, brown and yellow brown	■		23/50(3")			
		End of boring at 9 feet due to refusal. Groundwater not encountered during drilling. Borehole backfilled with soil cuttings on 1-18-2011.						

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-16

Log of Coring No. B-13 (C-13)

Dates Drilled: 11/22/2010 Logged by: GDS Checked By: SCL

Equipment: CME 95 Driving Weight and Drop: NQ CORE

Ground Surface Elevation (ft): 480 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES RUN (ft)	SAMPLES RECOVERY (ft)	COMMENTS	OTHER
		FILL (Af): **CLAYEY SAND (SC):** trace gravel size, volcanic bedrock fragments up to 1" in maximum dimension, brown and yellow brown.				
5		CONEJO VOLCANICS (Tcvab): **BASALT:** fine-grained (aphanitic), soft to slightly hard, highly fractured, highly weathered, thin flow banding, brown and yellow brown			RQD=0	
		-fractures at 0, 20 and 40°, JRC=4			RQD=0	
10						
		-slightly hard, fractures at 20, 40 and 70°, JRC=4, moderately weathered			RQD=0	
15						
		-fractures at 70 to vertical, JRC=8, flow bands at horizontal to 20°, reddish brown and black			RQD=0	
20						
		-hard, fractured, slightly weathered			RQD=0	
25					RQD=0	
30					RQD=0	

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-17a

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Log of Coring No. B-13 (C-13)

Dates Drilled: 11/22/2010 Logged by: GDS Checked By: SCL

Equipment: CME 95 Driving Weight and Drop: NQ CORE

Ground Surface Elevation (ft): 480 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES		COMMENTS	OTHER
		This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	RUN (ft)	RECOVERY (ft)		
		BASALT: fine-grained (aphanitic), hard, fractured, fractures at 70° to vertical, JRC=4-8, slightly weathered, thinly flow banded, black and yellow brown			RQD=0	
40		-calcite infill along fractures			RQD=0	
45		-fractures infilled with chalky white mineral, black and blue-gray			RQD=0	
		End of boring at 49 feet. Groundwater not encountered during drilling. Borehole backfilled with soil cuttings on 12-9-10.				

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-17b

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Log of Boring No. B-14

Dates Drilled: 1/18/2011 Logged by: GDS Checked By: SCL

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 525 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES DRIVE	SAMPLES BULK	BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.						
		OLDER ALLUVIUM SEDIMENTS (Qoa): **SILTY SAND (SM):** fine to medium-grained, trace clay, few gravels up to 2" in maximum dimension, gray brown.						
5			■	▨	17/25/29	10	85	ds ca,er,max,ma
10		-gravels up to 2 1/2" in maximum dimension	■	▨	24/36/27	10	90	
15		-cobble layer	■		50(5")			
20		**GRAVELLY SAND (SP):** fine to medium-grained, few silt, gravels up to 2" in maximum dimension, gray brown.	■		35/50(5")	12	103	
25		**SILTY SAND (SM):** fine grained, few gravels up to 2 1/2" in maximum dimension, gray brown.	■		39/50(3")			dist.
		CONEJO VOLCANICS (Tcvb): **BASALT:** fine-grained (aphanitic), slighlty weathered, hard, gray	■		50(5")			dist.
30		End of boring at 30.5 feet. Groundwater not encountered during drilling. Borehole backfilled with soil cuttings on 1-18-2011.						

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. A-18

APPENDIX B

LABORATORY TESTING PROGRAM

APPENDIX B

LABORATORY TESTING PROGRAM

Tests were conducted in our laboratory on representative soil samples for the purpose of classification and evaluation of their relevant physical characteristics and engineering properties. The amount and selection of tests were based on the generalized laboratory testing program were provided to Converse by the SCE - TBDU Geotechnical Group, and the available samples collected. Test results are presented herein and on the Logs of Borings in Appendix A, *Field Exploration*. The following is a summary of the laboratory tests conducted for this project.

Moisture Content and Dry Density

Results of moisture content and dry density tests, performed on relatively undisturbed ring samples were used to aid in the classification of the soils and to provide quantitative measure of the *in situ* dry density. Data obtained from this test provides qualitative information on strength and compressibility characteristics of site soils. For test results, see the Logs of Borings in Appendix A, *Field Exploration*.

Grain-Size Analysis

To assist in classification of soils, mechanical grain-size analyses were performed on seven (7) selected samples. Testing was performed in general accordance with the ASTM Standard C136 test method. Grain-size curve is shown in Drawing No. B-1a and B-1b, *Grain Size Distribution Results.*

Percent Finer Than Sieve No. 200

The percent finer than sieve No. 200 test was performed on nine (9) representative soil samples to aid in the classification of the younger alluvial soils encountered at boring locations B-1 through B-4. Testing was performed in general accordance with the ASTM Standard D1140 test method. The test results are presented in the following table and boring logs.

Table No. B-1, Summary of Percent Passing Sieve #200 Test Results

Boring No.	Depth (feet)	Soil Classification	Percent Passing Sieve No. 200
B-1	35	Clayey Sand (SC)	41.0
B-1	40	Sandy Silt (ML)	60.0
B-1	50	Silty Sand (SM)	16.0
B-2	30	Clayey Silt (ML)	86.0
B-2	35	Sand with Silt (SP-SM)	8.0
B-3	40	Sand with Silt (SP-SM)	12.0
B-4	25	Sand with Silt (SP-SM)	7.0
B-4	30	Sand with Silt (SP-SM)	10.0
B-4	35	Sand with Silt (SP-SM)	8.0

Atterberg Limits

Atterberg limits test was performed on one (1) representative fine-grained sample to assist the classification of the soils according to ASTM Standard D4318 test method. The test results are presented in the following table.

Table No. B-2, Atterberg Limits Test Results

Boring No.	Depth (feet)	Soil Classification	Liquid Limit (%)	Plastic Limit (%)	Plastic Index (%)
B-5	7	Sandy Clay (CL)	35	14	21

Direct Shear

Direct shear test was performed on fifteen (15) relatively undisturbed in-situ samples at soaked moisture conditions. For each test, three brass sampler rings were placed, one at a time, directly into the test apparatus and subjected to a range of normal loads appropriate for the anticipated conditions. The sample was then sheared at a constant strain rate of 0.005 inch/minute. Shear deformation was recorded until a maximum of about 0.25-inch shear displacement was achieved. Ultimate strength was selected from the shear-stress deformation data and plotted to determine the shear strength parameters. For test data, including sample density and moisture content, see Drawing Nos. B-2a through B-2o, *Direct Shear Test Results.*

Maximum Dry Density Test

Two (2) laboratory maximum dry density-moisture content relationship tests were performed on representative bulk samples of the soil materials at boring locations B-9b and B-14. The testing was conducted in accordance with ASTM Standard D1557 laboratory procedure. The test result is presented on Drawing No. B-3. *Moisture-Density Relationship Results.*

Soil Corrosivity

Nine (9) representative soil samples were tested to evaluate minimum electrical resistivity, pH, and chemical content, including soluble sulfate and chloride concentrations. The purpose of these tests is to determine the corrosion potential of site soils when placed in contact with common construction materials. These tests were performed by Environmental Geotechnical Laboratory, Inc. (EGL), located in Arcadia, California. The test results received from EGL are included in the following table.

Table No. B-3, Corrosivity Test Results

Sample Location (Boring/Depth)	pH (CALTRANS 643)	Soluble Chlorides (CALTRANS 422) (ppm)	Soluble Sulfate (CALTRANS 417) (ppm)	Saturated Resistivity (CALTRANS 532) Ohm-cm
B-1	7.65	145	340	8,800
B-2	8.36	90	20	3,200
B-3	8.28	295	150	1,020
B-4	8.60	120	80	1,900
B-5	8.09	100	30	1,080
B-6	8.66	355	210	570
B-7	8.71	135	70	630
B-9b	8.18	310	470	790
B-14	7.32	145	40	1,100

Unconfined Compression

Five (5) representative rock samples (void of fractures) were tested to evaluate unconfined compressive strength. These tests were performed in general accordance with ASTM D2664. The test results are summarized on the following table:

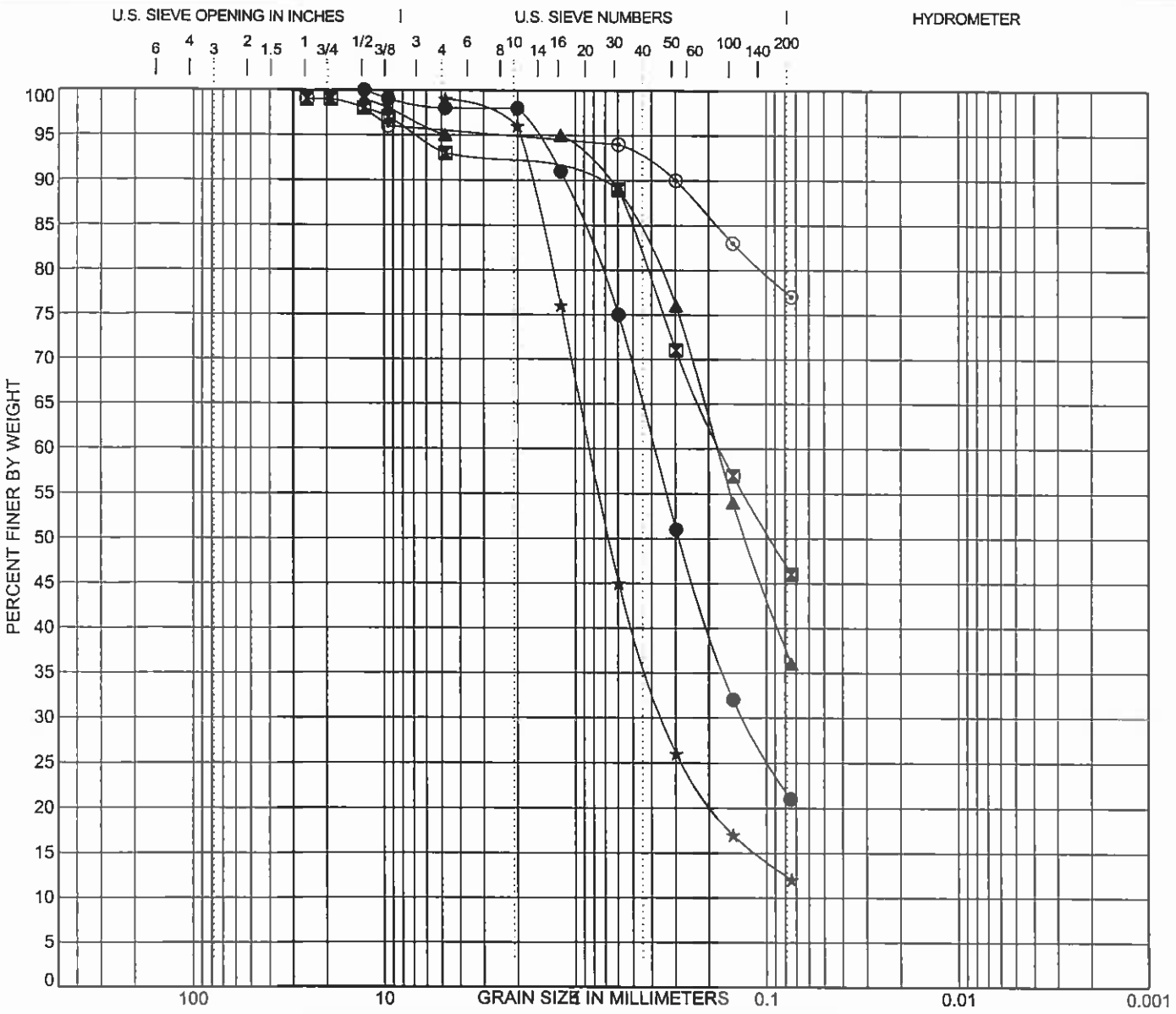
.

Table No. B-4, Unconfined Compression Test Results

Sample Location (Boring/Depth)	Prepared Sample Diameter (inches)	Prepared Sample Length (inches)	Load to Breaking Point (pounds)	Compressive Strength (pounds per square inch, psi)
B-8 (C-8) / 8-10 ft.	2.00	4.04	20,870	6,650
B-10 (C-10) / 19-21ft.	2.00	4.04	16,400	5,200
B-10 (C-10) / 24-26 ft.	2.00	3.71	12,790	4,070
B-11a (C-11a) / 4-6 ft.	2.00	2.76	15,290	4,600
B-11b (C-11b) 22-23 ft.	2.00	4.01	10,430	3,320

Sample Storage

Soil samples presently stored in our laboratory will be discarded 30 days after the date of this report, unless this office receives a specific request to retain the samples for a longer period.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Boring No.	Depth (ft)	Description	LL	PL	PI	Cc	Cu
●	B-1	7-11	**SILTY SAND** (SM)					
⊠	B-2	7-11	**SILTY SAND** (SM)					
▲	B-3	7-11	**SILTY SAND** (SM)					
★	B-4	7-11	**SAND WITH SILT** (SP-SM)				2.54	14.88
⊙	B-7	7-11	**SANDY SILT** (ML)					

	Boring No.	Depth (ft)	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	B-1	7-11	12.7	0.385	0.132		2.0	77.0	21.0	
⊠	B-2	7-11	25.4	0.173			6.0	52.0	46.0	
▲	B-3	7-11	12.7	0.18			4.0	60.0	36.0	
★	B-4	7-11	4.76	0.832	0.344		0.0	88.0	12.0	
⊙	B-7	7-11	12.7				4.0	20.0	76.0	

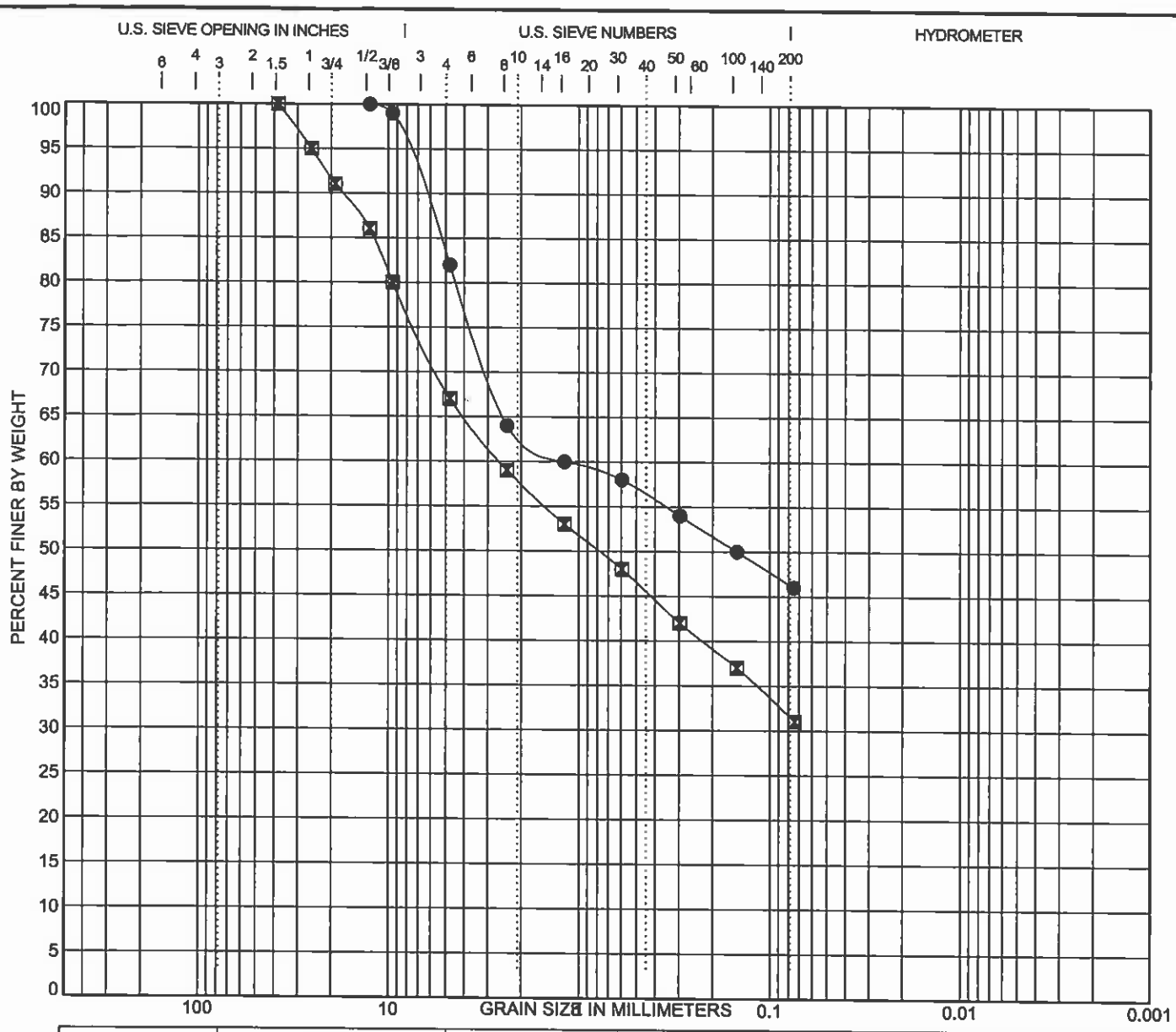
GRAIN SIZE DISTRIBUTION RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No.
10-81-316-01

Drawing No.
B-1a



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Boring No.	Depth (ft)	Description	LL	PL	PI	Cc	Cu
●	B- 9b	7-10	CLAYEY SAND WITH GRAVEL (SC)					
⊠	B-14	5-11	GRAVELLY SAND WITH SILT (SM)					

	Boring No.	Depth (ft)	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	B- 9b	7-10	12.5	1.19			18.0	36.0	46.0	
⊠	B-14	5-11	38.1	2.595			33.0	36.0	31.0	

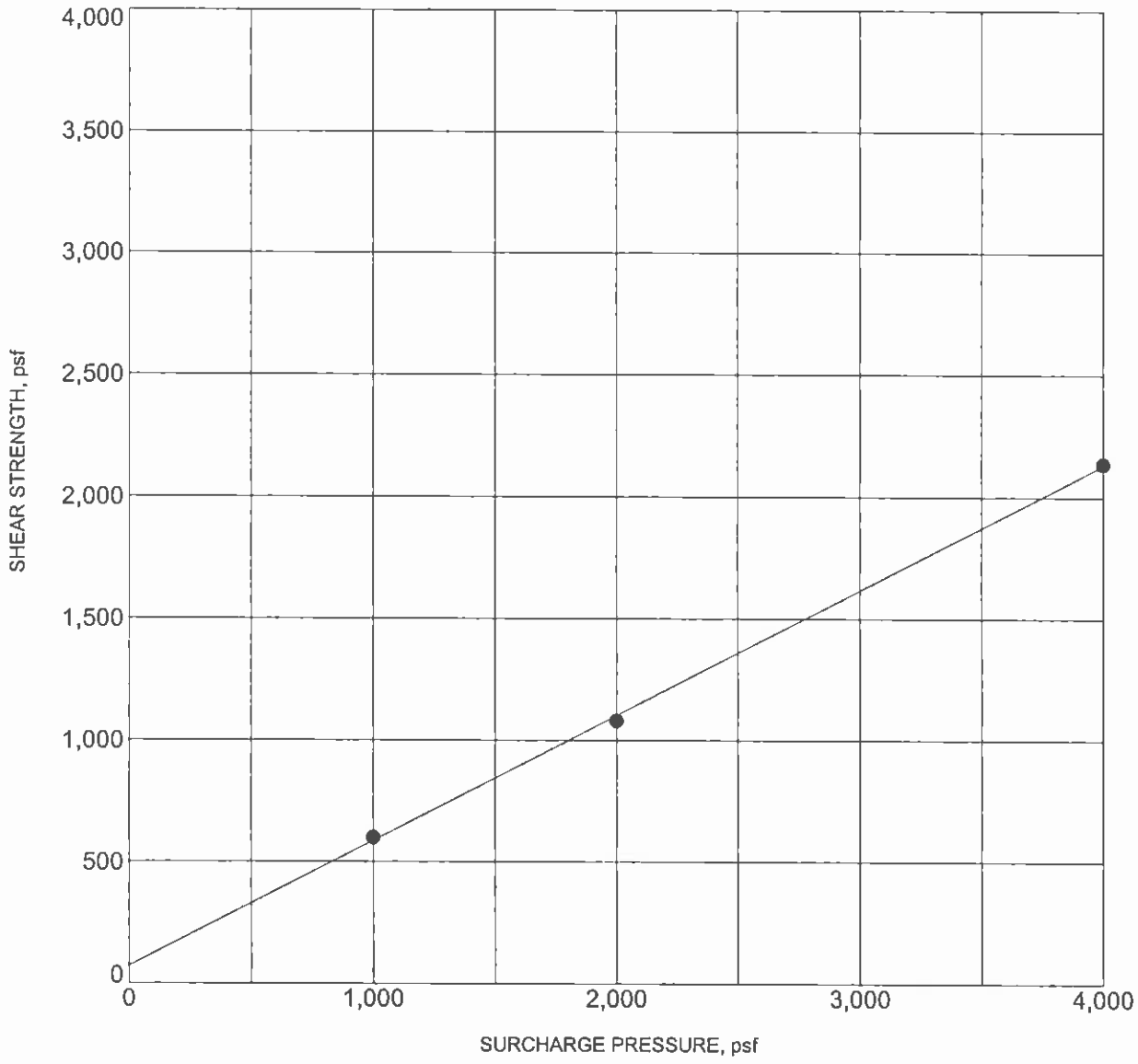
GRAIN SIZE DISTRIBUTION RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No.
10-81-318-01

Drawing No.
B-1b



BORING NO.	:	B-1	DEPTH (ft)	:	5
DESCRIPTION	:	SAND WITH SILT (SP-SM)			
COHESION (psf)	:	50	FRICTION ANGLE (degrees):		27
MOISTURE CONTENT (%)	:	6.5	DRY DENSITY (pcf)	:	107.4

NOTE: Ultimate Strength.

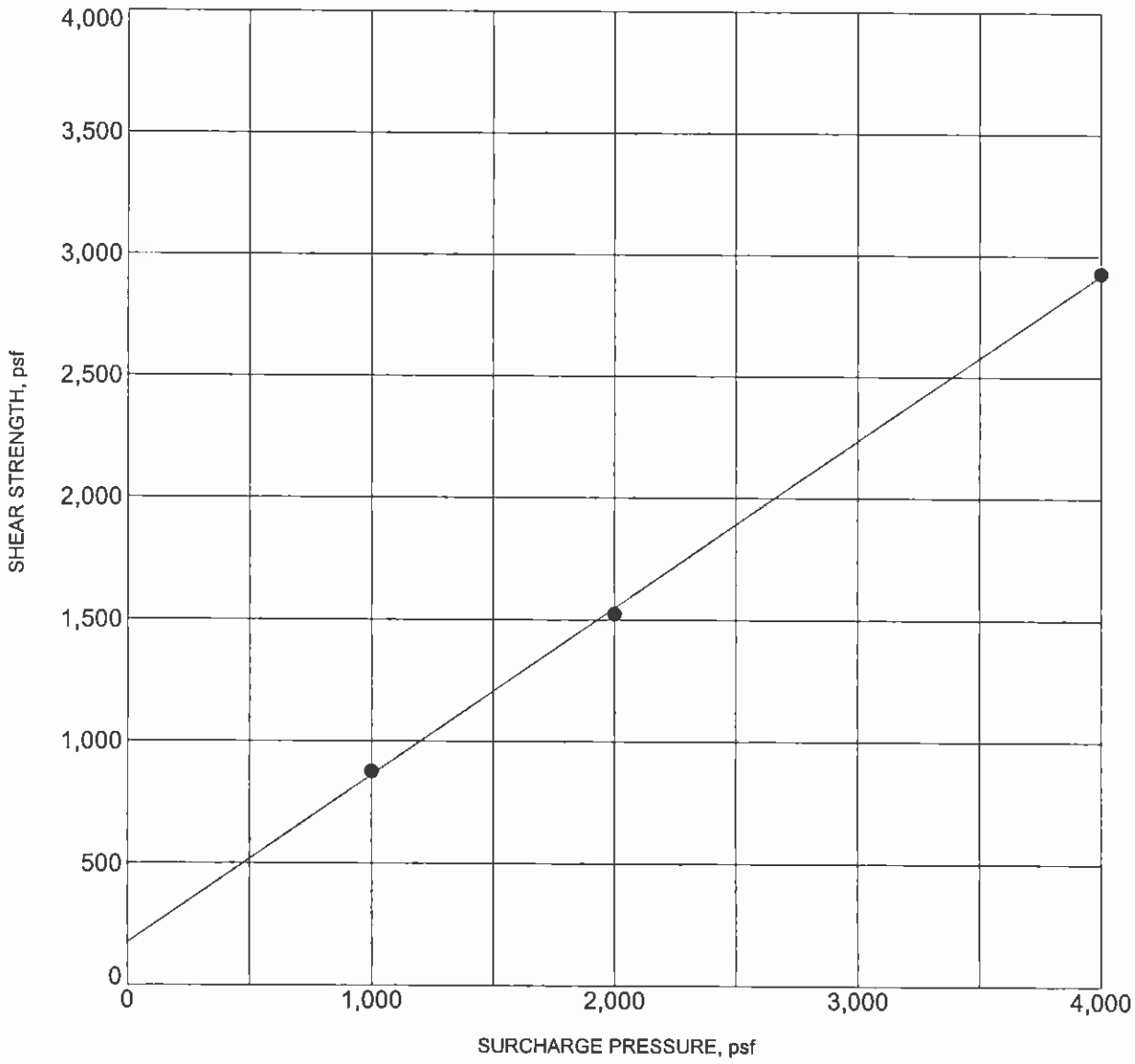
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2a



BORING NO.	:	B-1	DEPTH (ft)	:	10
DESCRIPTION	:	SAND WITH SILT (SM)			
COHESION (psf)	:	150	FRICTION ANGLE (degrees):		34
MOISTURE CONTENT (%)	:	13.6	DRY DENSITY (pcf)	:	107.8

NOTE: Ultimate Strength.

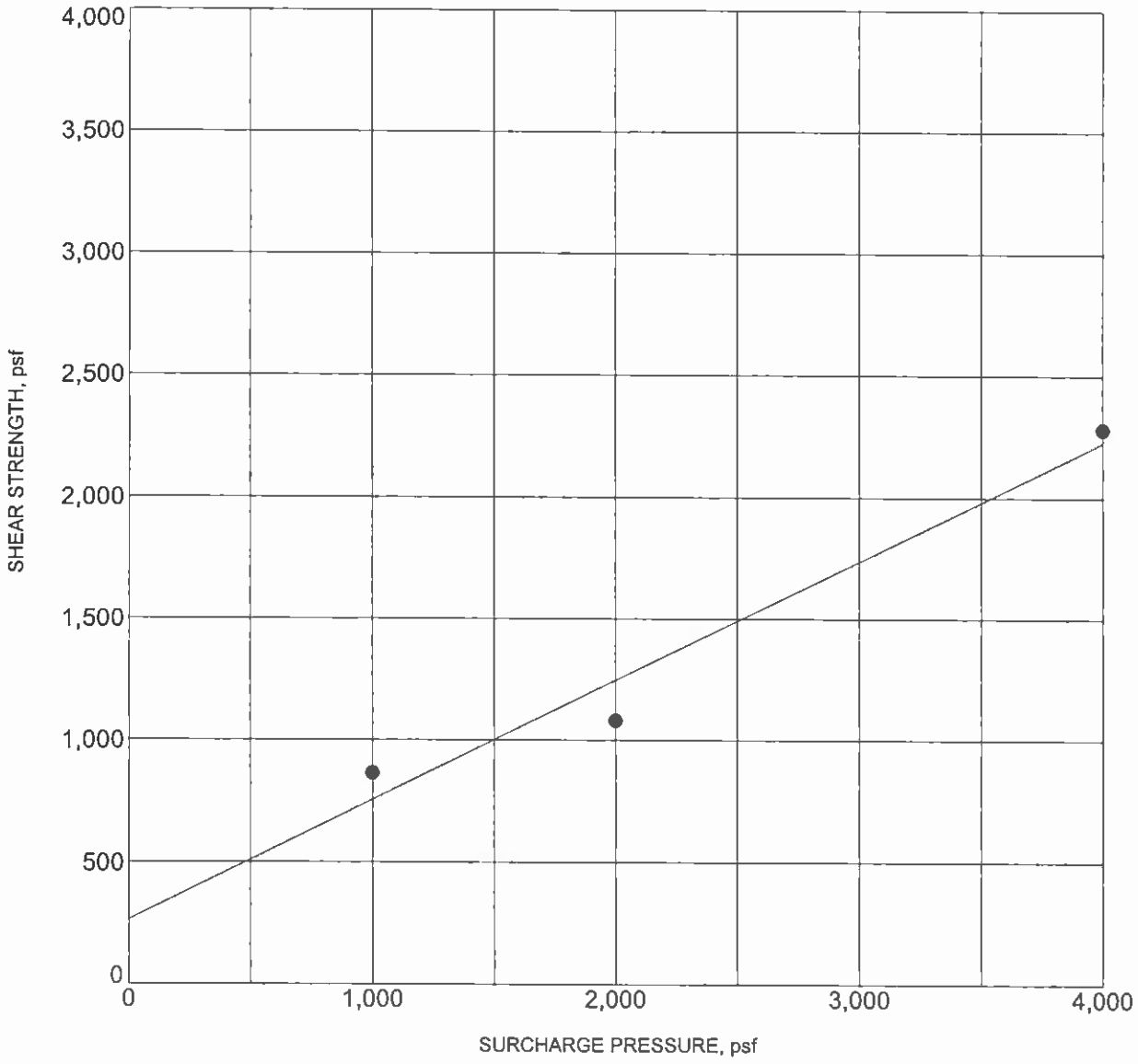
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2b



BORING NO.	:	B-2	DEPTH (ft)	:	5
DESCRIPTION	:	SILTY SAND (SM)			
COHESION (psf)	:	250	FRICTION ANGLE (degrees):		26
MOISTURE CONTENT (%)	:	7.3	DRY DENSITY (pcf)	:	96.7

NOTE: Ultimate Strength.

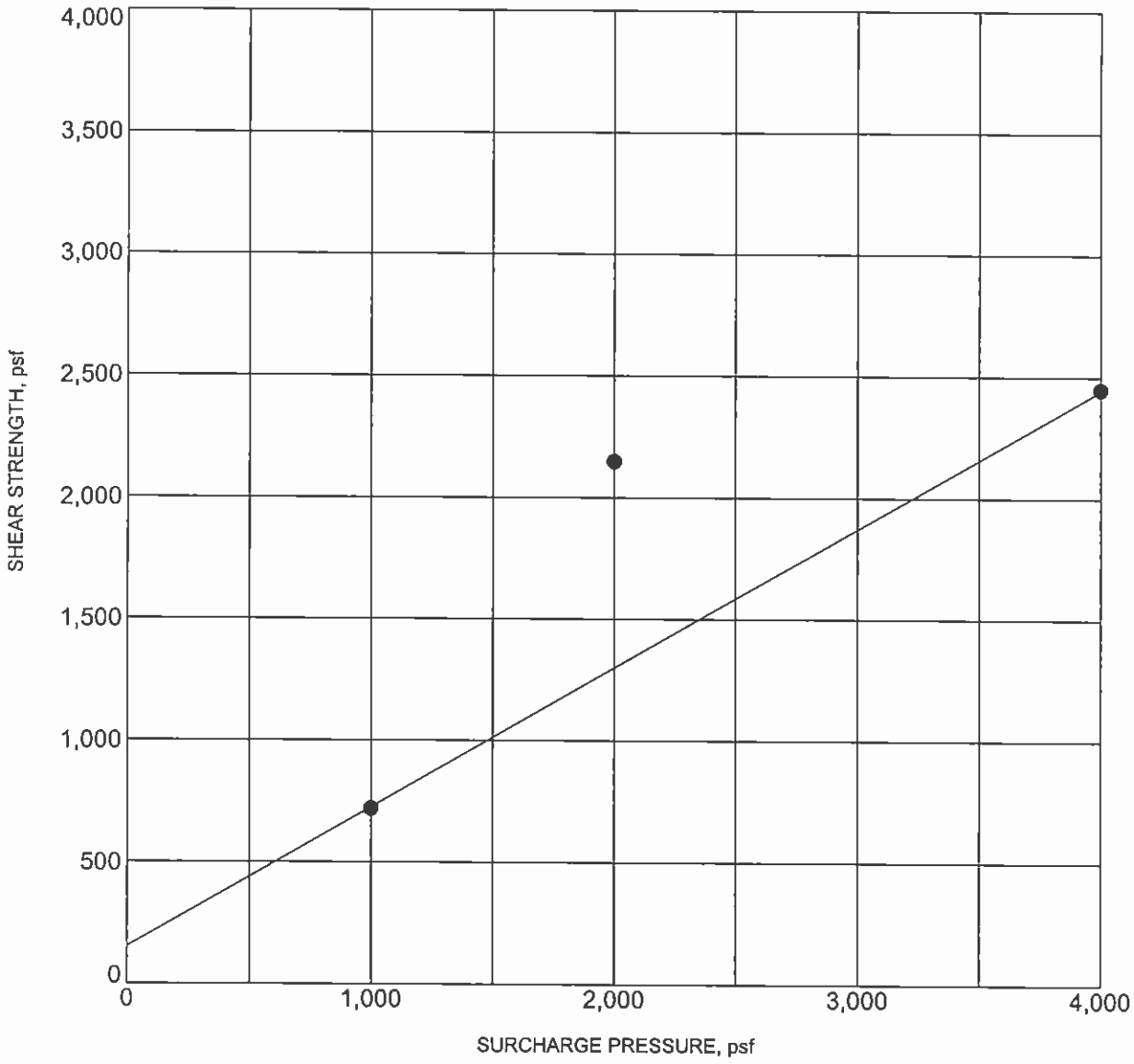
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No.
10-81-318-01

Drawing No.
B-2c



BORING NO.	:	B-2	DEPTH (ft)	:	20
DESCRIPTION	:	CLAYEY SAND (SC)			
COHESION (psf)	:	150	FRICTION ANGLE (degrees):		30
MOISTURE CONTENT (%)	:	14.6	DRY DENSITY (pcf)	:	115

NOTE: Ultimate Strength.

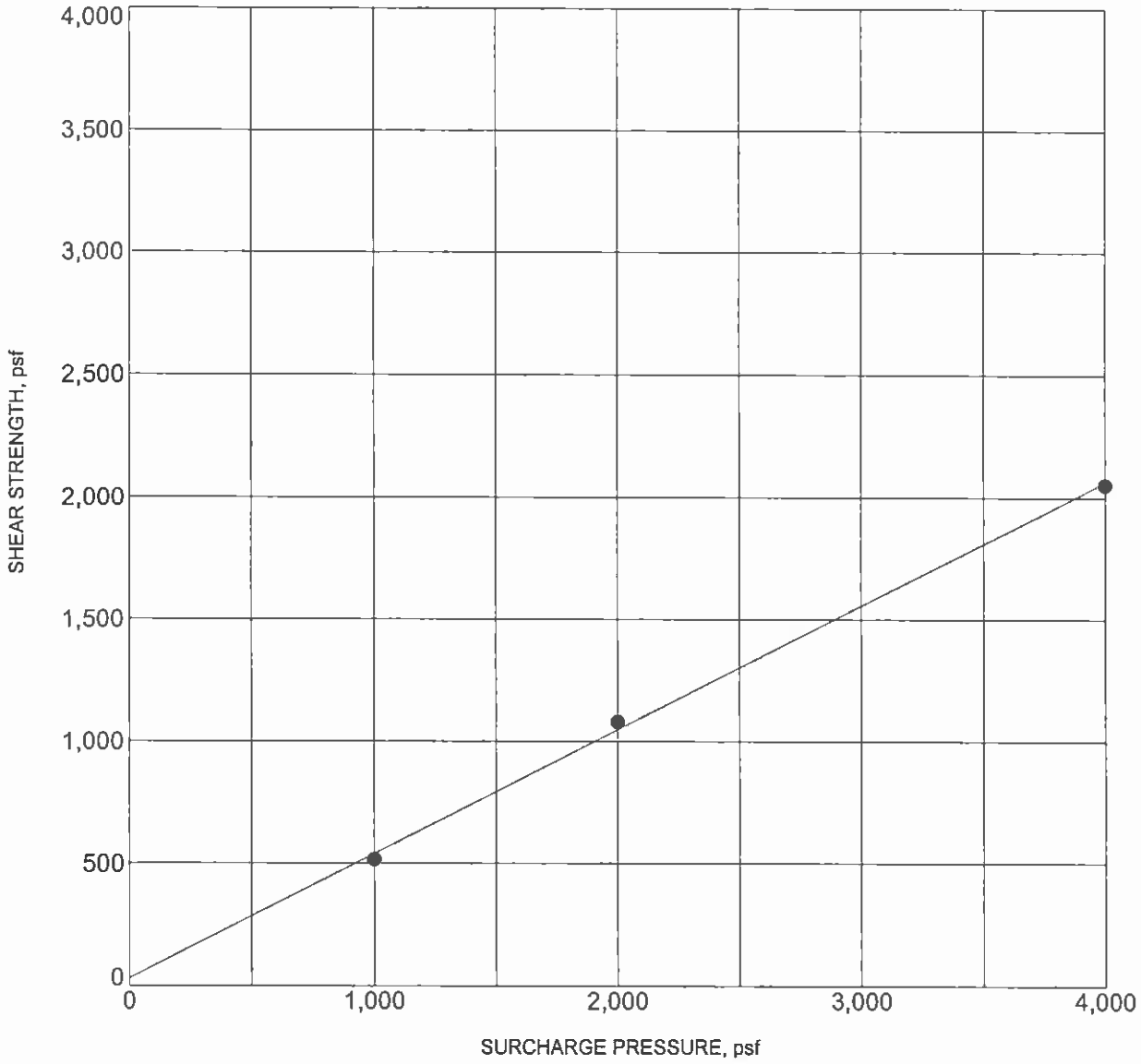
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2d



BORING NO.	:	B-3	DEPTH (ft)	:	5
DESCRIPTION	:	SILTY SAND (SM)			
COHESION (psf)	:	50	FRICTION ANGLE (degrees):		27
MOISTURE CONTENT (%)	:	18.3	DRY DENSITY (pcf)	:	86.4

NOTE: Ultimate Strength.

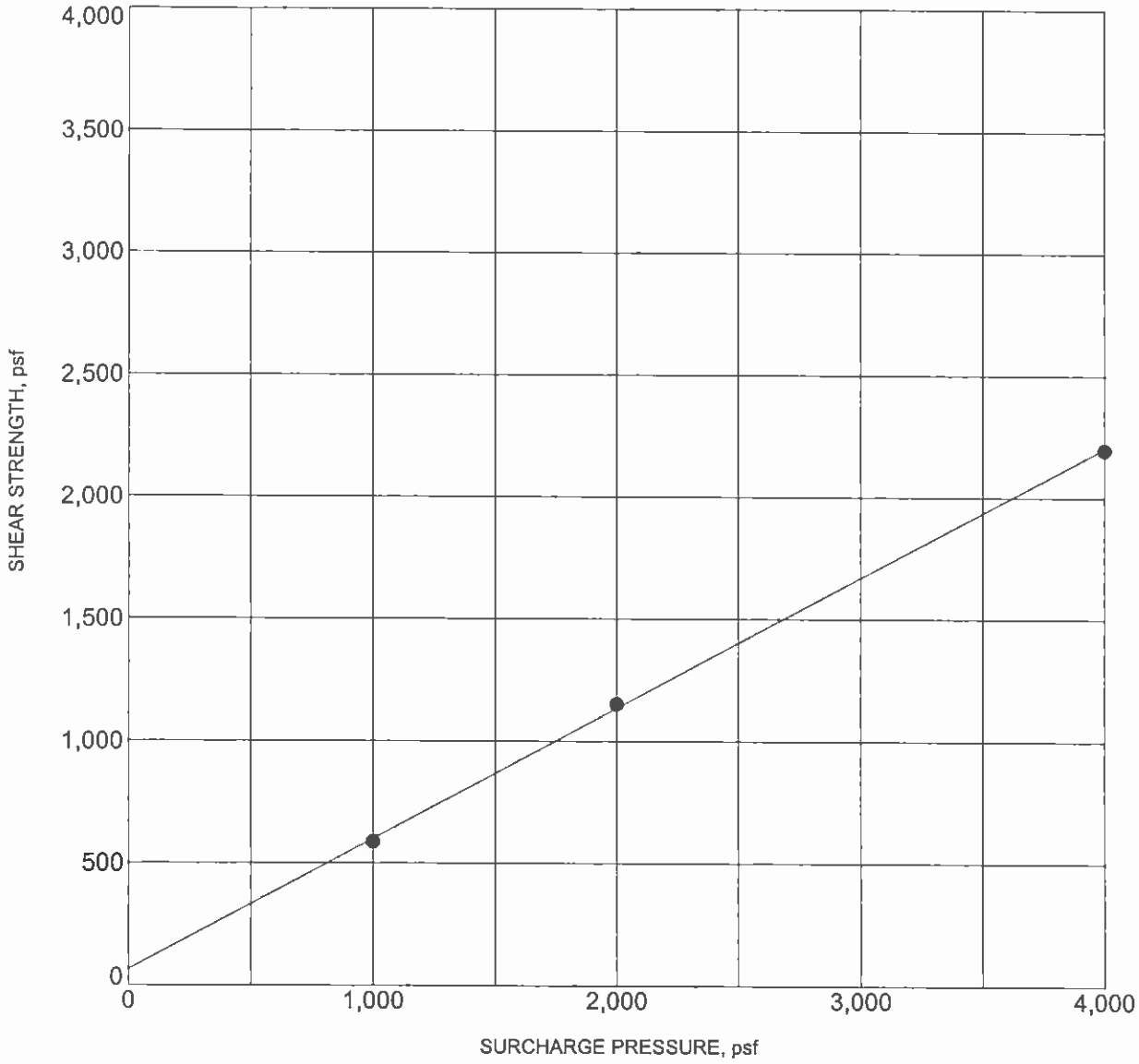
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2e



BORING NO.	:	B-3	DEPTH (ft)	:	10
DESCRIPTION	:	SAND (SP)			
COHESION (psf)	:	50	FRICTION ANGLE (degrees):		28
MOISTURE CONTENT (%)	:	9.1	DRY DENSITY (pcf)	:	93.1

NOTE: Ultimate Strength.

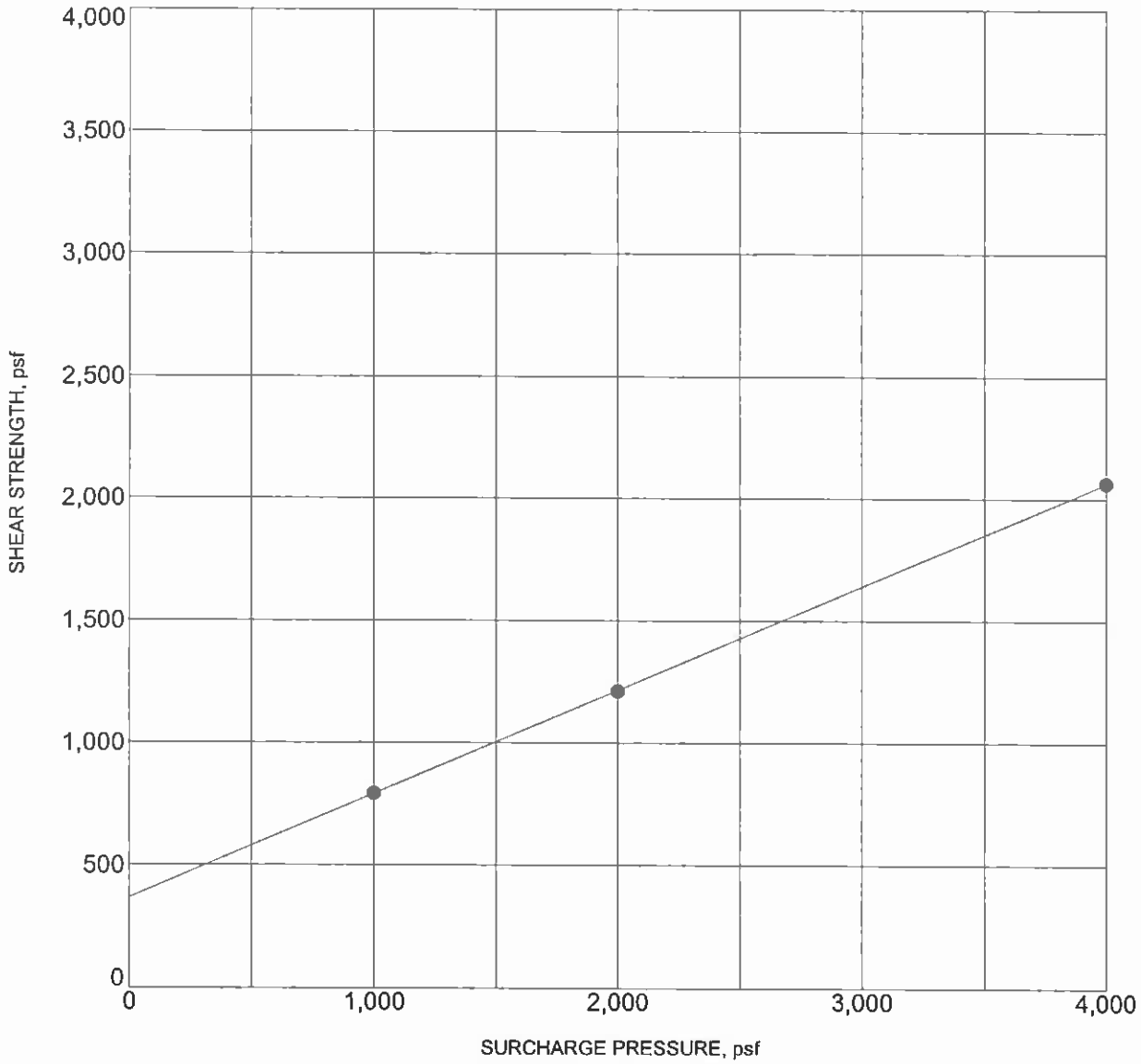
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2f



BORING NO.	:	B-4	DEPTH (ft)	:	5
DESCRIPTION	:	SAND WITH SILT (SP-SM)			
COHESION (psf)	:	350	FRICTION ANGLE (degrees):		23
MOISTURE CONTENT (%)	:	5.5	DRY DENSITY (pcf)	:	111.4

NOTE: Ultimate Strength.

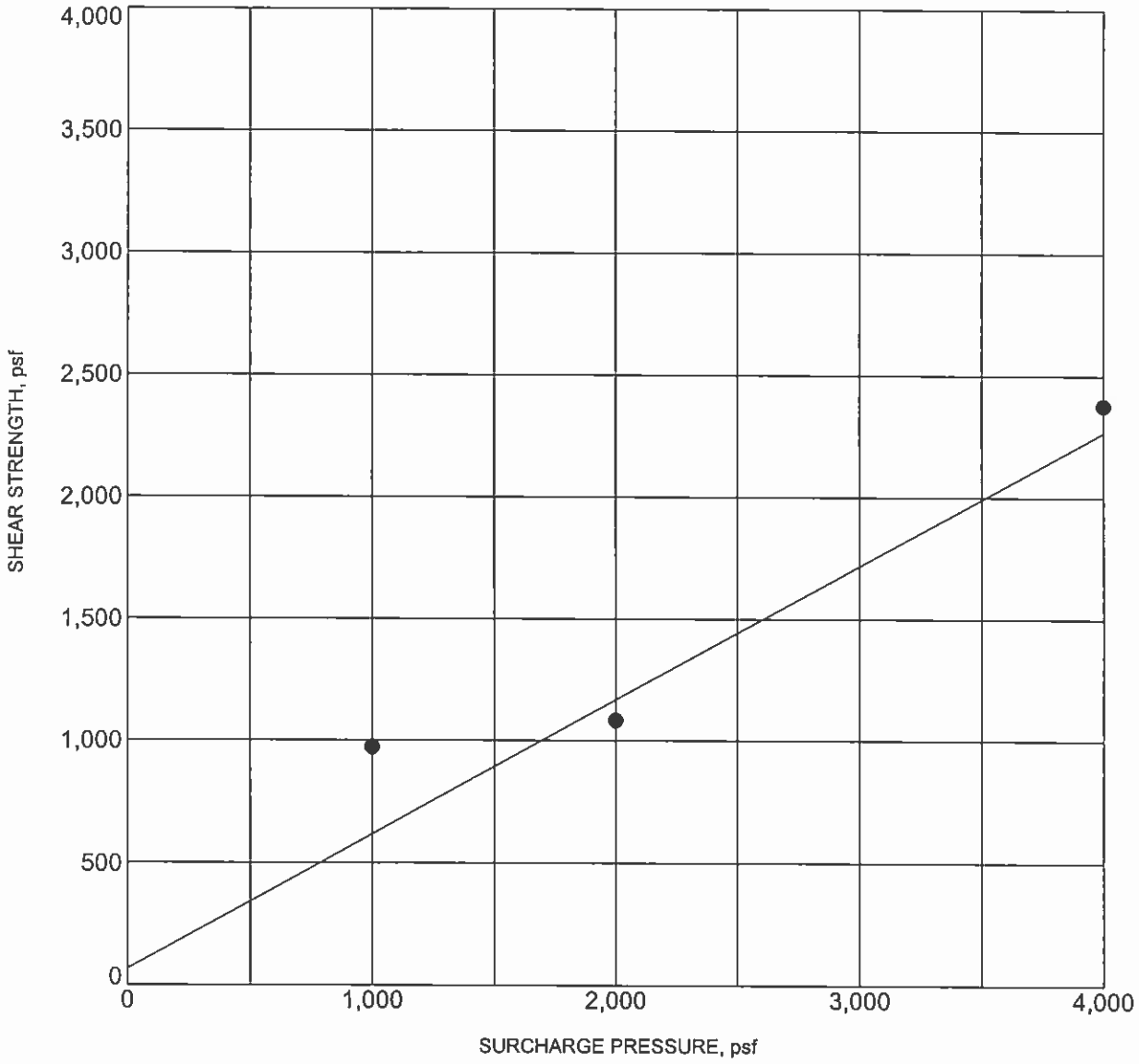
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2g



BORING NO.	:	B-4	DEPTH (ft)	:	10
DESCRIPTION	:	SAND WITH SILT (SP-SM)			
COHESION (psf)	:	100	FRICTION ANGLE (degrees):		28
MOISTURE CONTENT (%)	:	9.1	DRY DENSITY (pcf)	:	102.6

NOTE: Ultimate Strength.

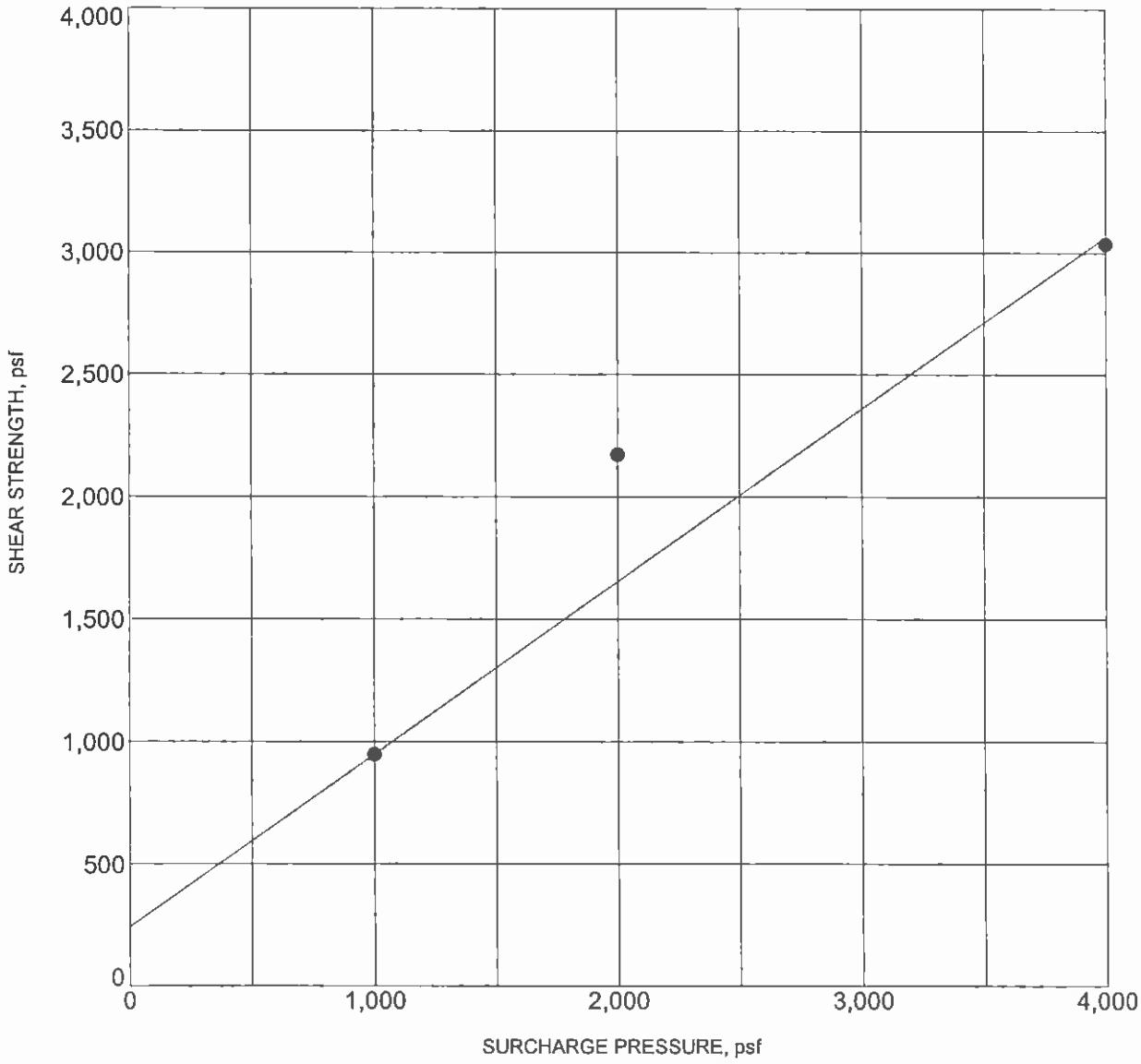
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2h



BORING NO.	:	B-5	DEPTH (ft)	:	5
DESCRIPTION	:	CLAYEY SAND (SC)			
COHESION (psf)	:	250	FRICTION ANGLE (degrees):		34
MOISTURE CONTENT (%)	:	18.1	DRY DENSITY (pcf)	:	106.8

NOTE: Ultimate Strength.

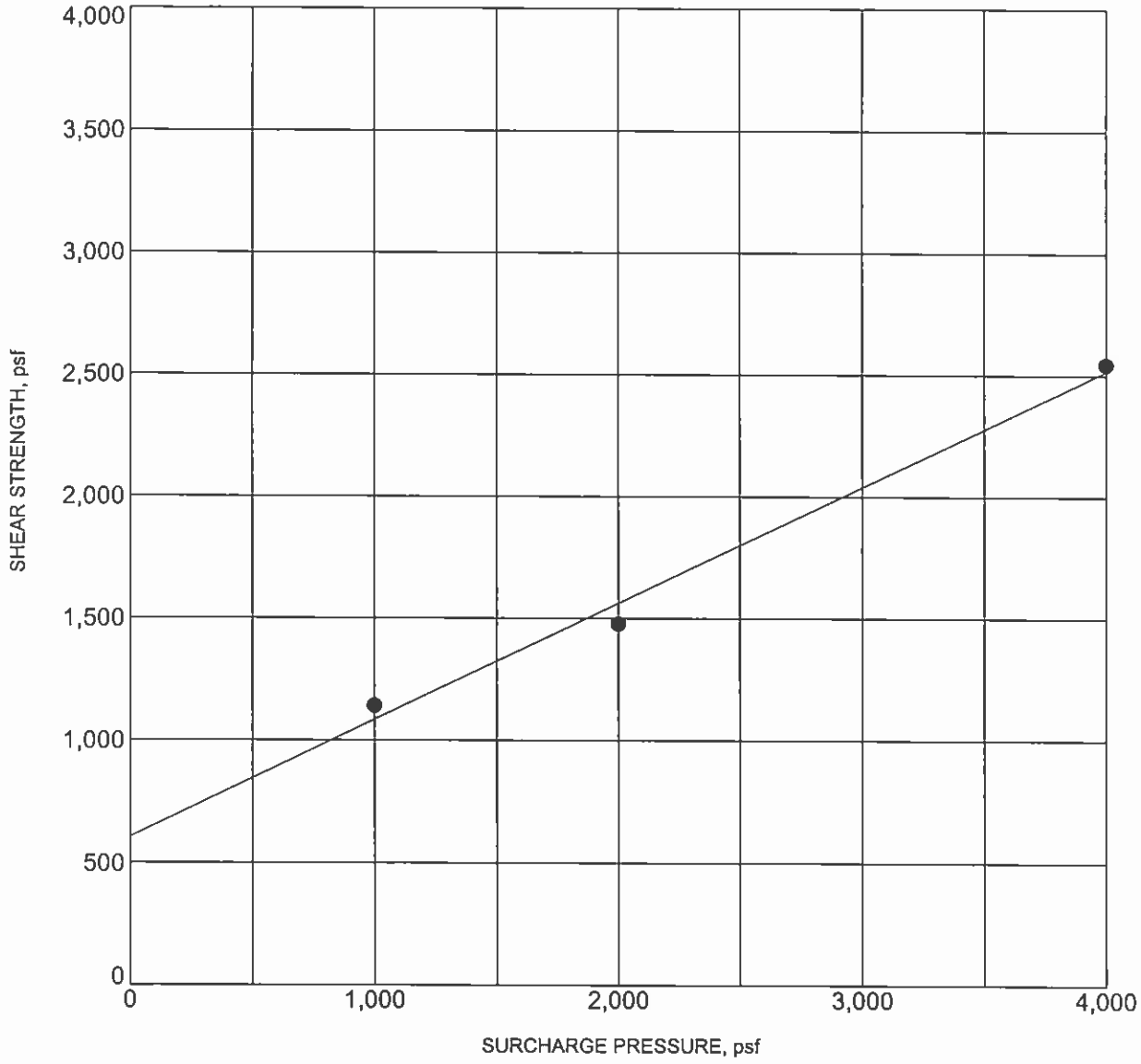
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2i



BORING NO.	:	B-5	DEPTH (ft)	:	10
DESCRIPTION	:	CLAYEY SAND (SC)			
COHESION (psf)	:	600	FRICTION ANGLE (degrees):		26
MOISTURE CONTENT (%)	:	18.2	DRY DENSITY (pcf)	:	106.1

NOTE: Ultimate Strength.

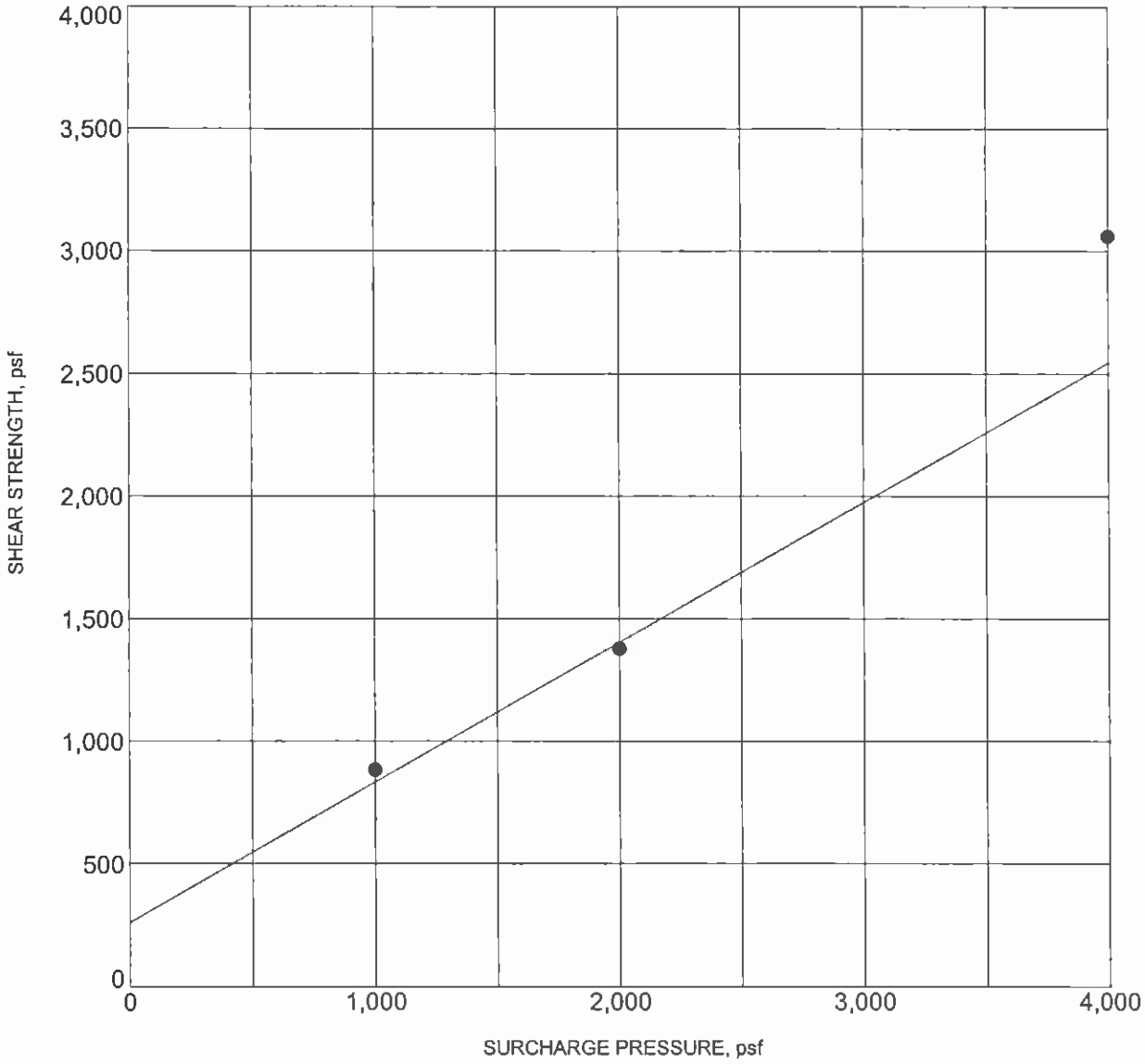
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2j



BORING NO.	:	B-6	DEPTH (ft)	:	20
DESCRIPTION	:	SANDSTONE WITH SILTSTONE:			
COHESION (psf)	:	250	FRICTION ANGLE (degrees):		31
MOISTURE CONTENT (%)	:	7.5	DRY DENSITY (pcf)	:	91.7

NOTE: Ultimate Strength.

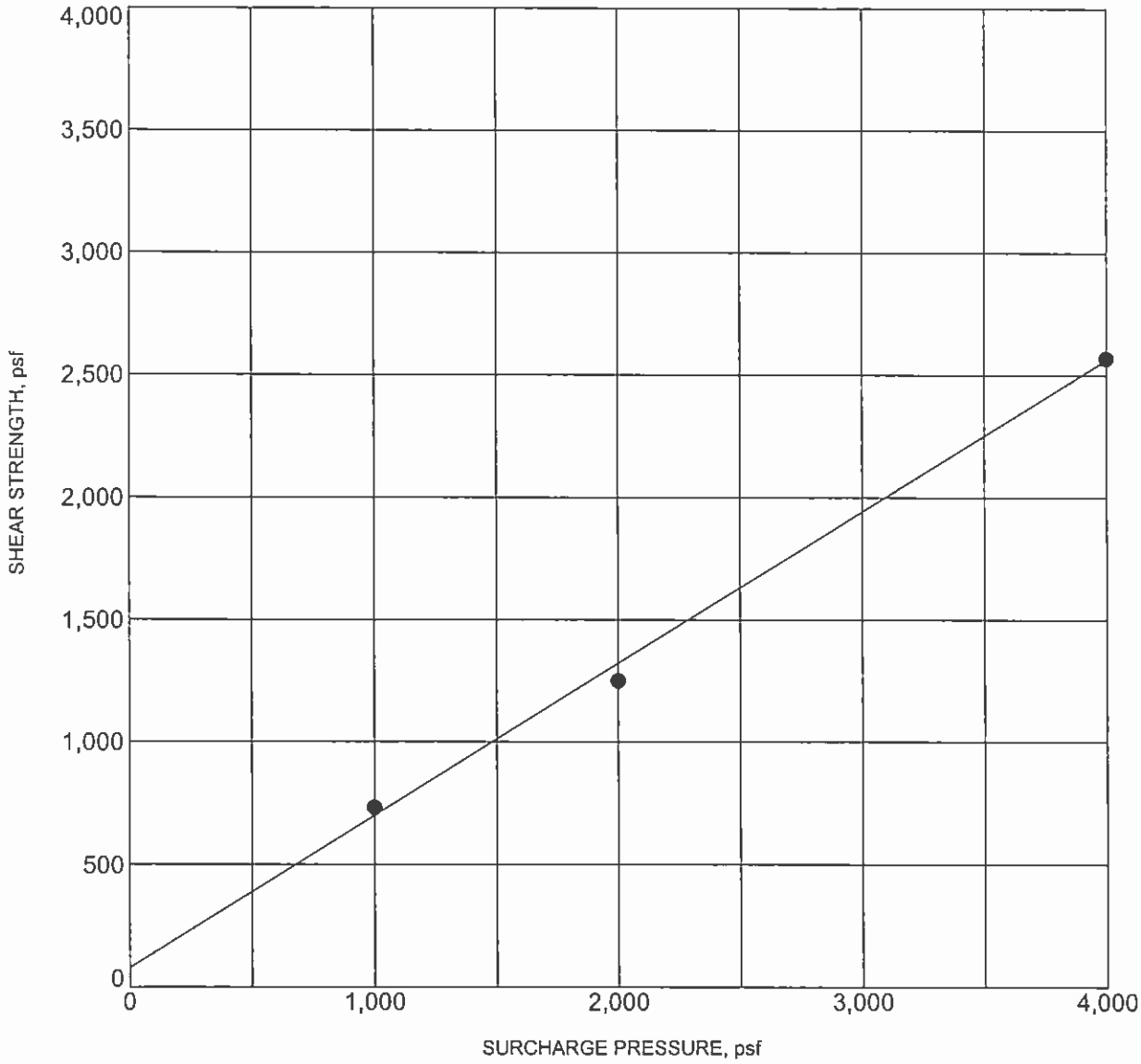
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2k



BORING NO.	:	B-7	DEPTH (ft)	:	5
DESCRIPTION	:	SANDY SILT (ML)			
COHESION (psf)	:	150	FRICTION ANGLE (degrees):		31
MOISTURE CONTENT (%)	:	25.1	DRY DENSITY (pcf)	:	86.2

NOTE: Ultimate Strength.

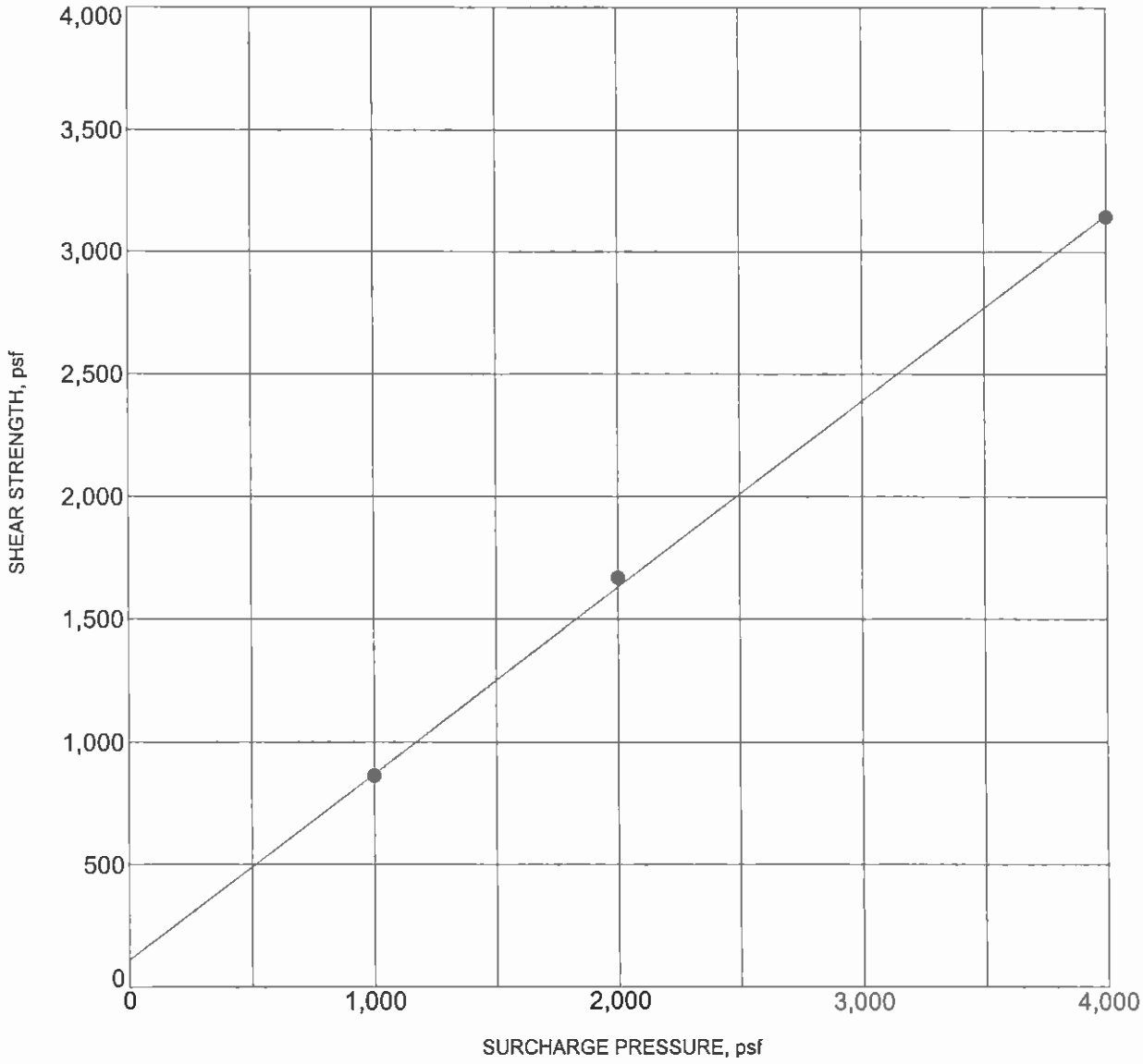
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2I



BORING NO.	:	B-7	DEPTH (ft)	:	20
DESCRIPTION	:	SILTY SAND (SM)			
COHESION (psf)	:	150	FRICTION ANGLE (degrees):		37
MOISTURE CONTENT (%)	:	10.9	DRY DENSITY (pcf)	:	100.6

NOTE: Ultimate Strength.

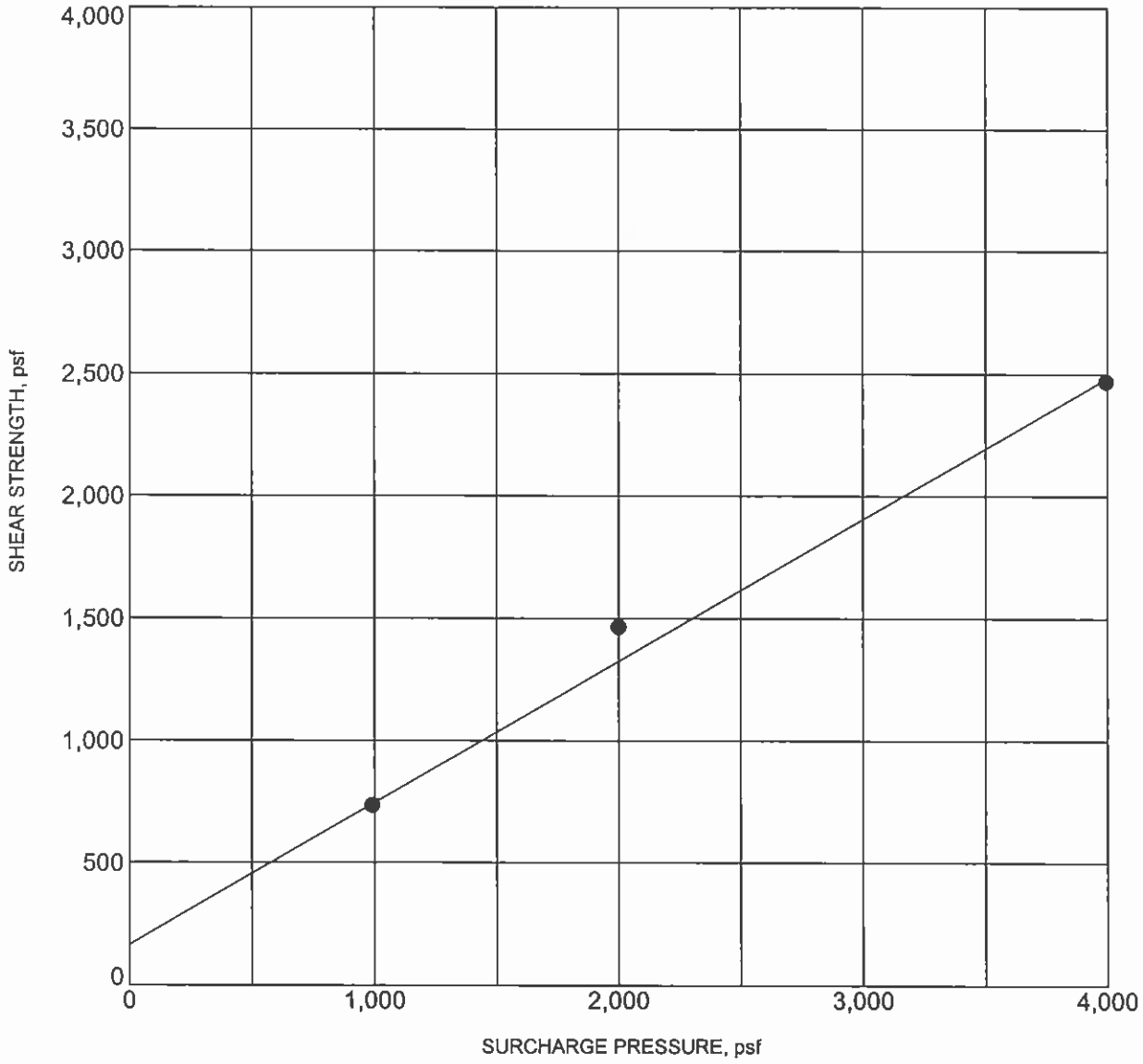
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2m



BORING NO.	:	B-9b	DEPTH (ft)	:	10
DESCRIPTION	:	CLAYEY SAND (SC)			
COHESION (psf)	:	200	FRICTION ANGLE (degrees):		30
MOISTURE CONTENT (%)	:	18.3	DRY DENSITY (pcf)	:	87.0

NOTE: Ultimate Strength.

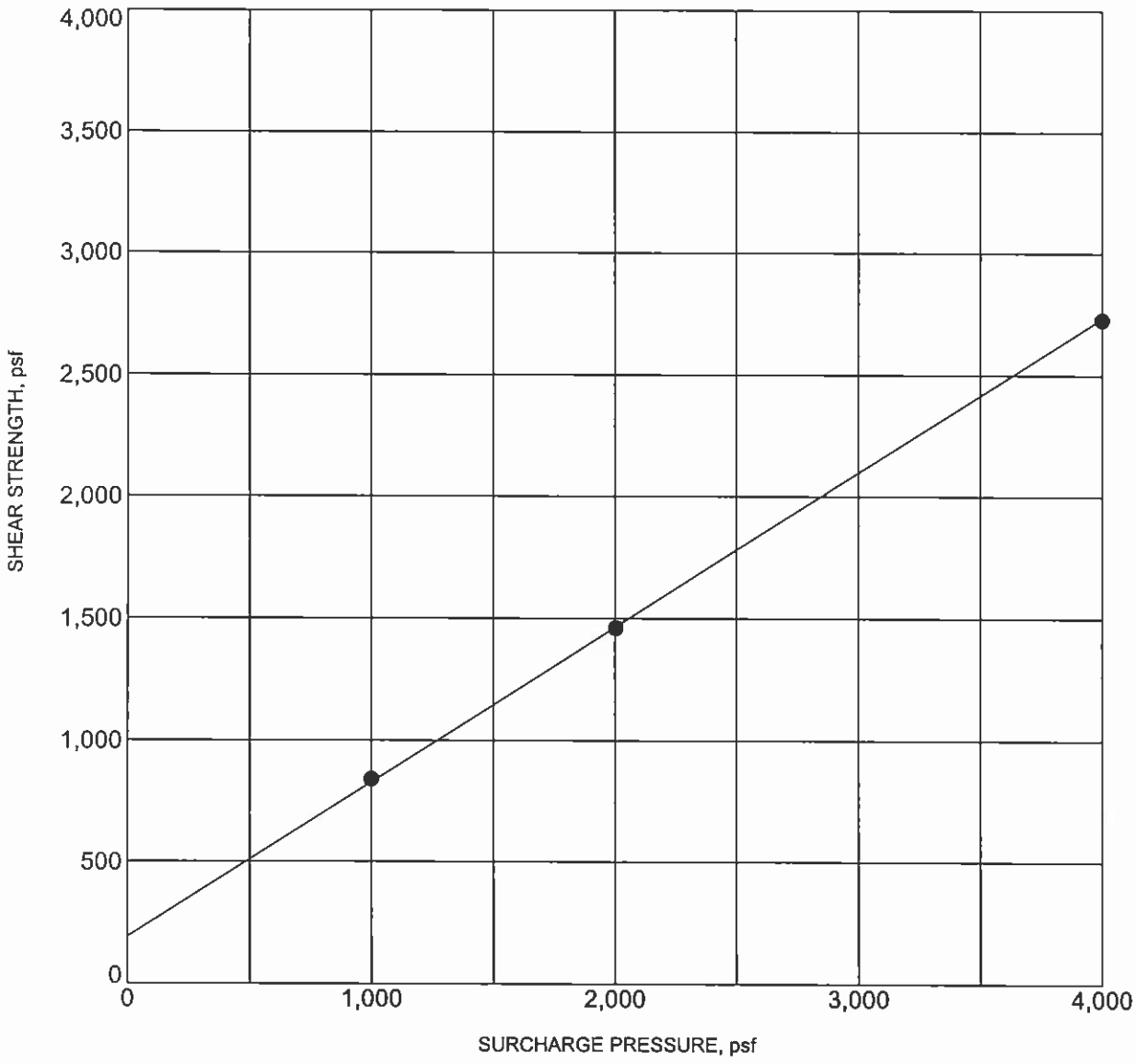
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2n



BORING NO.	:	B-14	DEPTH (ft)	:	5
DESCRIPTION	:	SILTY SAND (SM)			
COHESION (psf)	:	200	FRICTION ANGLE (degrees):		32
MOISTURE CONTENT (%)	:	10	DRY DENSITY (pcf)	:	84.8

NOTE: Ultimate Strength.

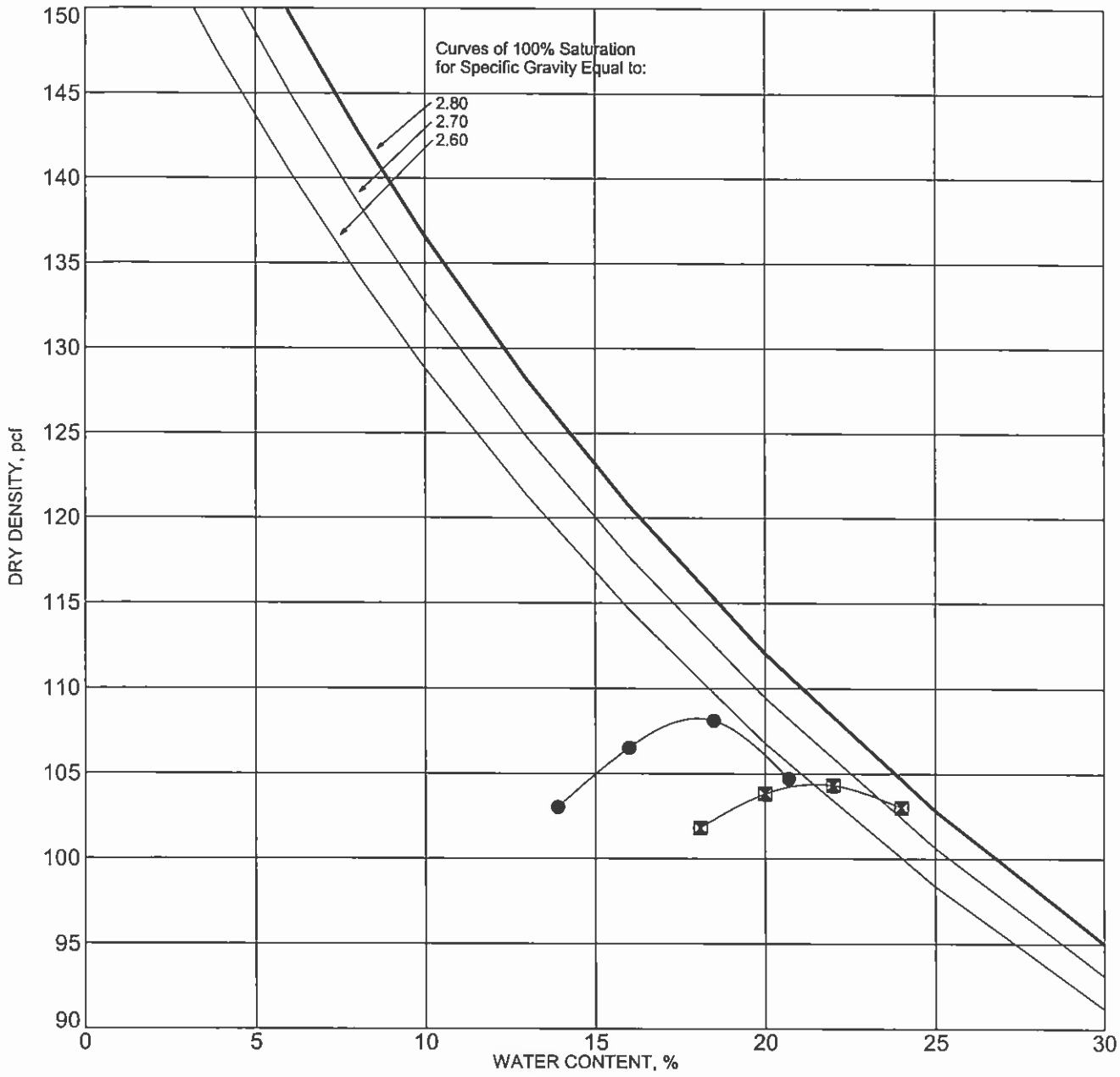
DIRECT SHEAR TEST RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No. 10-81-318-01

Drawing No. B-2o



SYMBOL	BORING NO.	DEPTH (ft)	DESCRIPTION	ASTM TEST METHOD	OPTIMUM WATER, %	MAXIMUM DRY DENSITY, pcf
●	B- 9b	7-10	CLAYEY SAND WITH GRAVEL (SC)	D1557 Method B	15.8	114.2
⊠	B-14	5-11	GRAVELLY SAND WITH SILT (SM)	D1557 Method B	21.8	104.9

MOISTURE-DENSITY RELATIONSHIP RESULTS

Converse Consultants

Project Name
SOUTHERN CALIFORNIA EDISON
MOORPARK-NEWBURY
66KV TRANS. LINE

Project No.
10-81-318-01

Drawing No.
B-3

Appendix I

Hazards and Hazardous Materials Documents

February 17, 2012

Julie Gilbert
OS – Corporate EH&S

SUBJECT: Records Search
Moorpark Newbury Transmission Project
Ventura, CA

CEH&S Environmental Engineering conducted a records search for the Moorpark Newbury Transmission Project in Ventura, California. The search focuses on the 8.5-mile long transmission line (Line) that extends from Moorpark Substation (5027 Gabbert Road, Moorpark, CA 93021) to Newbury Substation (1295 Lawrence Drive, Newbury Park, CA 91320). The northern part of the Line (north of Los Angeles Avenue) is under Moorpark City jurisdiction. The southern third of the Line is under Thousand Oaks City jurisdiction. The rest of the Line is under Ventura County jurisdiction.

CEH&S Environmental Engineering utilized its licensed HazardHunter tool (www.hazardhunter.com) to search relevant databases for available recorded records in the vicinity of the Line. Seven different categories of searches were completed on January 20, 2012 as follows:

1. **Airport Only**: 10-mile buffer linear search was performed to identify nearby airports/heliports.
    a. Data Source: U.S. Department of Transportation (updated: 02/05/2009).
    b. 9 records were found (see Figure 1, Table 1).

Table 1. Airport/Heliports Site Search Results

Name	Location	Distance (mile)
East Valley Sheriff's Station (H)	NE c/o Olsen Rd & Highway 23, Thousand Oaks, CA 91360	4.7 E
SCE Moorpark Substation (H)	5027 Gabbert Rd, Moorpark, CA 93021	0.0 E
William Shells Co. (H)	SE c/o Guiberson Rd & Calumet Canyon, Filmore, CA 93015	7.0 NE
Santa Paula (A)	S/o Freeway 126, Santa Paula, CA	9.6 NW
Camarillo (A)	S/o Freeway 101, Camarillo, CA	8.0 W
Los Angeles Co. Fire Department (H)	North of Encinal Canyon Road, Malibu, CA 90265	8.7 SE
TWI II (H)	North of Potrero Road, Triunfo Pass-Coastal, CA 91361	2.7 S
RI Science Center Helistop (H)	North of Camino Dos Rio Road, Thousand Oaks, CA 91360	1.3 E
Los Robles Regional Medical Center (H)	NE c/o Lynn Road & Janss Road, Thousand Oaks, CA 91360	2.8 E

A: Airport H: Heliport

2. **School Only**: 0.5-mile buffer linear search was performed to identify nearby public/private schools/colleges.
    a. Data Source: U.S. Department of Education, National Center for Education Statistics (updated: 03/01/2009).
    b. 2 records were found (see Figure 2, Table 2).
        - The database plotted Fillmore High School at the wrong location; it is actually about 8 mile north of the Line.

Table 2. School Sites Search Result

Name	Location	Distance (mile)
Fillmore High School	627 Sespe Avenue, Fillmore, CA 93015	~8 N
Newbury Park Adventist Academy	180 Academy Drive, Thousand Oaks, CA 91320	0.21 S

3. **Sensitive Receptors**: 0.5-mile buffer linear search was performed to identify nearby healthcare facilities.
    a. Data Source: U.S. Department of Health and Human Services (updated: 2009).
    b. 2 records were found (see Figure 3, Table 3).

Table 3. Sensitive Receptors Search Result

Name	Location	Distance (mile)
Ventura Estate Health Manor	915 Estates Drive, Newbury Park, CA 91320	0.41S
Aegeia Home Health, Inc.	1000 Business Center Circle, Newbury Park, CA 91320	0.38S

4. **Oil & Gas Wells**: 0.5-mile buffer linear search was performed to identify nearby oil and gas wells.
    a. Data Source: California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) (updated: 03/03/2009).
    b. No records were found (see Figure 4).

5. **Fire Hazard Only**: 0.5-mile buffer linear search was performed to identify nearby high wildfire threat zones.
    a. Data Source: California Department of Forestry and Fire Protection (updated: 01/01/2009).

b. A large portion of the Line is located within high wildfire threat zone. See Figure 5 for identified location of high wildfire threat zones.

6. **Hazardous Materials**: 0.5-mile buffer linear search was performed to identify nearby sites in the state and federal government databases that have record of releasing hazardous materials, being a landfill, or have underground storage tanks.

   a. Data Sources:

      - *EPA Superfund (NPL)* - U.S. Environmental Protection Agency, CERCLIS and Facility Registry System (FRS) databases (updated: 10/25/2011).
        - No records were found.
      - *Brownfields* - U.S. Environmental Protection Agency, Facility Registry System (FRS) databases (updated: 06/24/2011).
        - No records were found.
      - *Contaminated EnviroStor Sites* - California Department of Toxic Substances Control, EnviroStor Database (updated 10/05/2011).
        - 4 records were found.
          - 1 site has no further action status.
          - No information was available for the other 3 records.
      - *Contaminated GeoTracker Sites* - California State Water Resources Control Board, Geotracker (updated: 10/16/2010).
        - 14 records were found.
          - 11 have case closed status.
          - 3 have open case status.
      - *Landfills* - California Integrated Waste Management Board (updated 01/01/2009).
        - 1 record was found.
          - The site is adjacent west of New Pole 6.
      - *Toxic Release Inventory Facilities* - US Environmental Protection Agency (updated 03/01/2009).
        - 5 records were found.

- *Underground Storage Tanks (USTs)* - California State Water Resources Control Board, Geotracker (updated 03/01/2009).
  - 3 records were found.
    - All are located ¼ mile or more away from the Line.

b. A 1-mile buffer linear search was also performed using the same databases to see if anything brownfields or superfund sites are identified. No records of brownfields or superfund sites were found (see Figure 6b).

Table 4. Hazardous Materials Site Search Results

Database	Name	Distance (mile)	Comment
Landfills	Peach Hill Organic Recycling	0.37N	Composting Operation (Green Waste)
UST	City of Thousand Oaks	0.25E	FACILITY ID: 056-000-002904
UST	United Parcel Service	0.46E	FACILITY ID: 056-000-001937
UST	Wendy Drive Chevron	0.38S	FACILITY ID: 056-000-002977
TRI (Air)	Vulcan Materials Co. Moorpark	0.48E	110013286050
TRI (Air)	Baxter Bioscience	0.32E	110002910752
TRI (Air)	JDK Controls Inc.	0.24E	110002142048
TRI (Air)	Wilson Golf Division	0.13S	110002142039
TRI (Air)	Fluid Ink Technology Inc.	0.35E	110002145580
EnviroStor	Polycore Electronics Inc.	.19S	No further action of 7/31/1991.
EnviroStor	Conejo Circuits, Inc.	.25E	No information is available on EnviroStor.
EnviroStor	Multilayer Prototypes, Inc.	.37S	No information is available on EnviroStor.
EnviroStor	Baxter Health Corp., Thousand Oaks	.49E	No information is available on EnviroStor.
GeoTracker	Wendy Arco Station	.39S	Case closed as of 10/18/2011.
GeoTracker	Amplica (Former)	.34S	Case closed as of 3/31/1999.
GeoTracker	Home Savings of America	.15E	Case closed as of 12/13/1995.
GeoTracker	Chevron #9-0415	.40S	OPEN
GeoTracker	Smith Pumps	.16E	OPEN – Category 1 type
GeoTracker	GTE	.43S	Case closed as of 10/10/1996.
GeoTracker	Hill Canyon Treatment Plant	.20E	Case closed as of 6/2/2004.
GeoTracker	Predential Overall Supply	.27E	Case closed as of 7/30/2002.
GeoTracker	Northrop Aircraft Division	.43E	OPEN
GeoTracker	Conejo Corporate Center	.23E	Case closed as of 4/19/1997.
GeoTracker	Former Compsat Corp.	.34S	Case closed as of 4/1/1999.
GeoTracker	Former Amplica	.29S	Case closed as of 4/1/1999.
GeoTracker	Metropolitian Life	.43E	Case closed as of 12/13/1995.
GeoTracker	Hitch Blvd. Lift Station	.40W	Case closed as of 4/15/2002.

7. **Hazardous Waste Generators**: 0.25-mile buffer linear search was performed to identify nearby small and large quantity generators of hazardous waste.
    a. Data Source: US Environmental Protection Agency, Facility Registry System (FRS). (updated: 06/24/2011).
    b. One large quantity and 19 small quantity generators were found. Most of them are located near Newbury Substation area. (see Figure 7).
        - No records were located at locations of new or replacement poles.

Findings & Opinion:
The Airport Only, School Only, Sensitive Receptors, and Fire Hazard Only search results are presented for informational purposes only. Oil & Gas Wells, Hazardous Materials, and Hazardous Waste Generator search results are presented to identify hazardous environmental issues.

Oil & Gas Wells search did not return any results, therefore, no environmental concerns were found in that category.

For the Hazardous Materials search, none of the records found were part or overlapping the Line. Therefore, sites that are listed in the UST database, TRI database, and sites that have case-closed or no further action status should not have significant environmental impact to the Line and its planned construction activities.

Peach Hill Organic Recycling is a landfill identified in the search. The southeast corner of the landfill is adjacent to New Pole #6. Available information from Solid Waste Information System database shows that the site is being use for green waste composite. The latest available inspection report, dated September 7, 2011, indicates there were no violations found. Based on available information and the nature of the site's operation, CEH&S Environmental Engineering does not expect the site to have significant environmental impact on the Line and its planned construction activities.

The three sites from EnviroStor website with no available data is located least ¼-mile away from the Line. CEH&S Environmental Engineering recommends further investigation to determine if they would have any environmental impact to the Line.

There are three open leaking UST cases within 0.5-mile of the Line.

1. Chevron #9-0415 site (2870 Camino Dos Rios, Newbury Park, CA 91360) has gasoline as contaminant of concern and groundwater as the affected media. According to the Interim Remedial Action Plan report by Holguin, Fahan & Associates, Inc. (HFA), dated April 14, 2008, the general groundwater direction is toward the northeast. According to the Site Assessment Report and Request to Cancel Further Downgradient Assessment by HFA, dated September 8, 2011, depth to groundwater is about 36 feet below ground surface. The report also indicated that 5,187 pounds of hydrocarbons were removed by

air sparging/vapor extraction and the site achieved asymptotic mass removal conditions in 2007. Furthermore, FHA has operated oxygen emitters in four wells to reduce residual hydrocarbon concentrations. Based on the fact that the site is located 0.4 mile from the Line and that it has been remediated over the years, CEH&S Environmental Engineering does not expect the plume to migrate as far as where the Line is located and does not consider the site to pose a significant environmental impact to the Line and its planned construction activities.

2. Smith Pumps site (1299 Lawrence Dr., Newbury Park, CA 91320) has solvents as contaminants of concern and soil as the affected media. It is listed as a Category 1 site that does not pose an immediate human health threat and does not extend off-site onto neighboring properties. Since the site is located 0.16 mile east of the Line and contamination does not extend off-site, CEH&S Environmental Engineering does not expect the site to pose a significant environmental impact to the Line and its planned construction activities.
3. Northrop Aircraft Division site (1515 Rancho Conejo Blvd., Newbury Park, CA 91320) has perchlorate, petroleum, and volatile organix compounds as contaminants of concern and groundwater as the affected media. According to the Summary of Environmental Investigation/Remediation Efforts report prepared by Equipoise Corporation dated October 14, 2011, groundwater in the vicinity (at various depths) flows either to the north, northwest, or southwest. Neither of those flow directions are toward the part of the Line that is located nearby the Northrop site. CEH&S Environmental Engineering does not expect the site to pose a significant environmental impact to the Line and its planned construction activities.

Hazardous Waste Generators search did not reveal any sites that are located within or overlapped the boundary of the Line. One large quantity generator and a few small quantity generator sites are identified in the nearby industrial/warehouse area, about 400 feet south of Newbury Substation. If illegal dumping is found along the part of the Line near Newbury Substation, further investigation should be conducted to see if it is related to these generator sites. Otherwise, CEH&S Environmental Engineering does not expect these sites to pose significant environmental impact to the Line and its planned construction activities.

Thank you for this opportunity to conduct the records search for the project. If you have any questions regarding this report, please call me at PAX 74736.

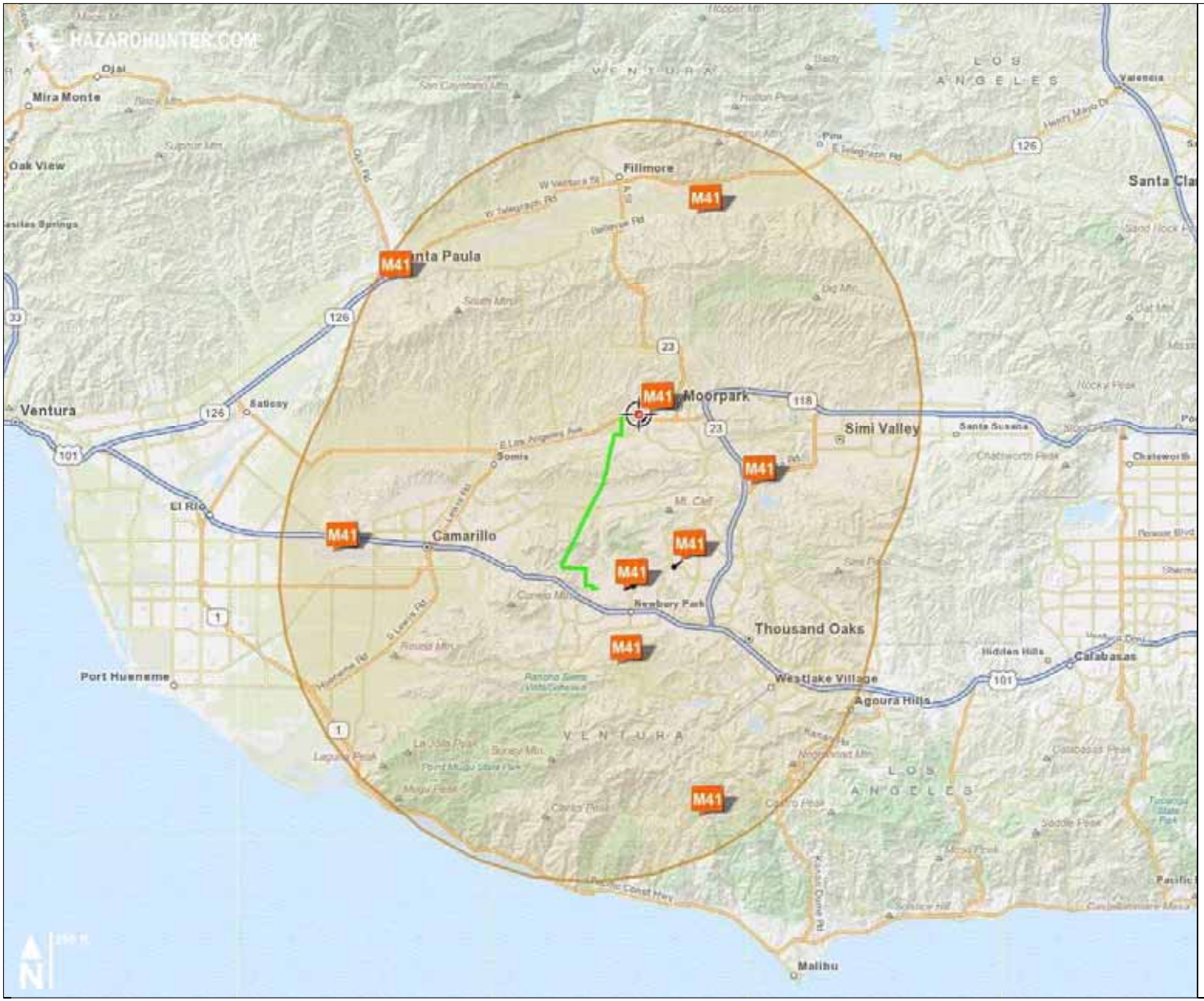
Phuong K Tran

Digitally signed by Phuong K Tran
DN: cn=Phuong K Tran, o=Southern California Edison, ou=Corporate EH&S, email=tranpk@sce.com, c=US
Date: 2012.02.17 10:23:58 -08'00'

Phuong K. Tran, PE
Environmental Engineer

Attachments
cc: Mark Passarini (w/o attachments)

ATTACHMENTS



Hazards Found

Hazard	Count
Your Search Location	
Airports	9
Total	9

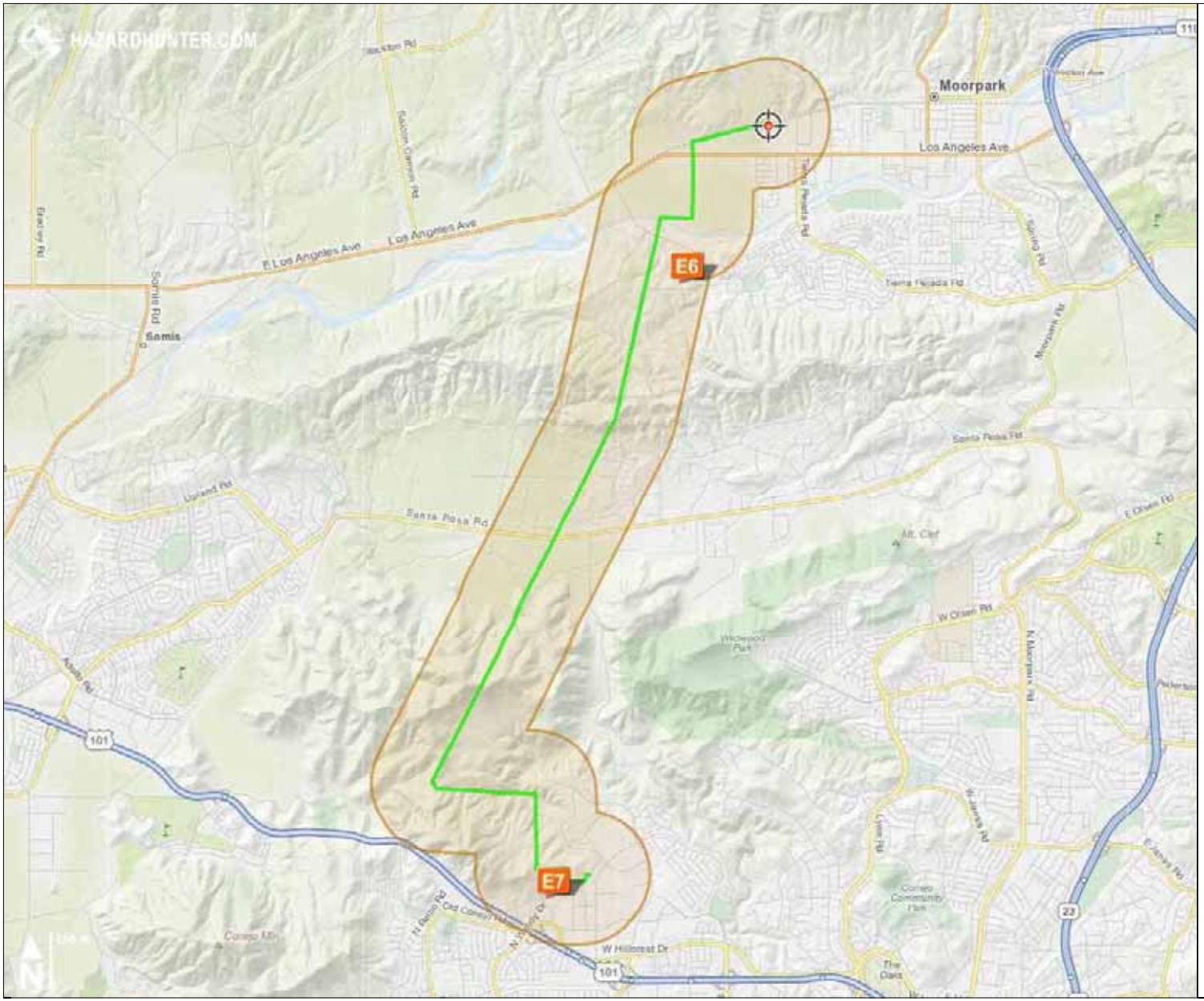
M = Man Made Hazards N = Natural Hazards P = Protected Areas
W = Water

Figure 1. Hazard Summary Map

Ventura, California

Project Name: Moorpark Newbury
Screen Type: Airport Only
Search Radius: 10 Mile
Date Prepared: Friday, January 20, 2012
Latitude: 34.212553 Longitude: -118.878335

Report Number: 2012012011_1159



Hazards Found

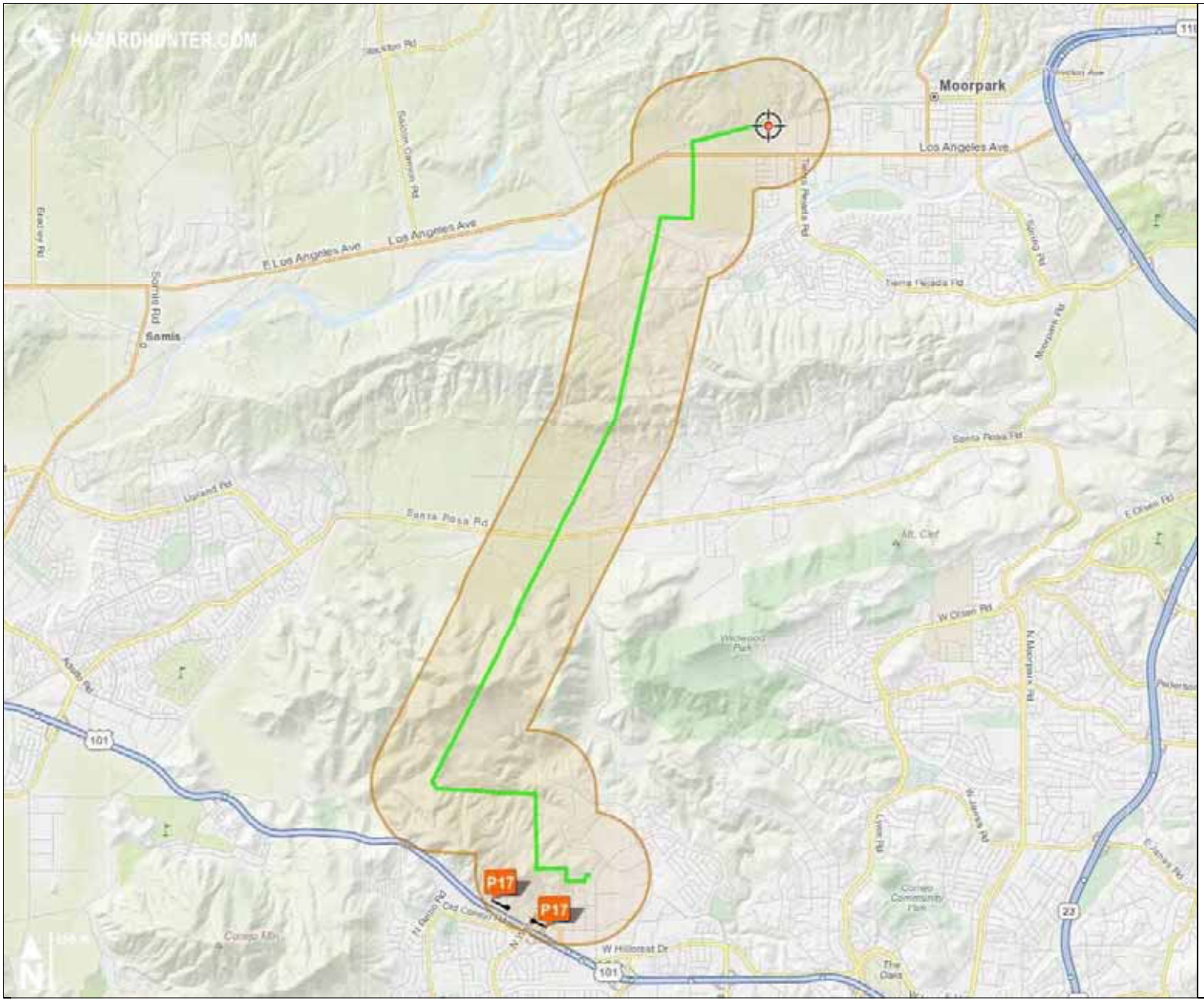
	Hazard	Count
	Your Search Location	
E7	Private Schools	1
E6	Public Schools	1
	Total	2

M = Man Made Hazards N = Natural Hazards P = Protected Areas
W = Water

Figure 2. Hazard Summary Map

Ventura, California

Project Name: **Moorpark Newbury**
Screen Type: **School Only**
Search Radius: **0.50 Mile**
Date Prepared: **Friday, January 20, 2012**
Latitude: **34.239316** Longitude: **-118.929227**



Hazards Found

	Hazard	Count
	Your Search Location	
P17	Healthcare Facilities	2
	Total	**2**

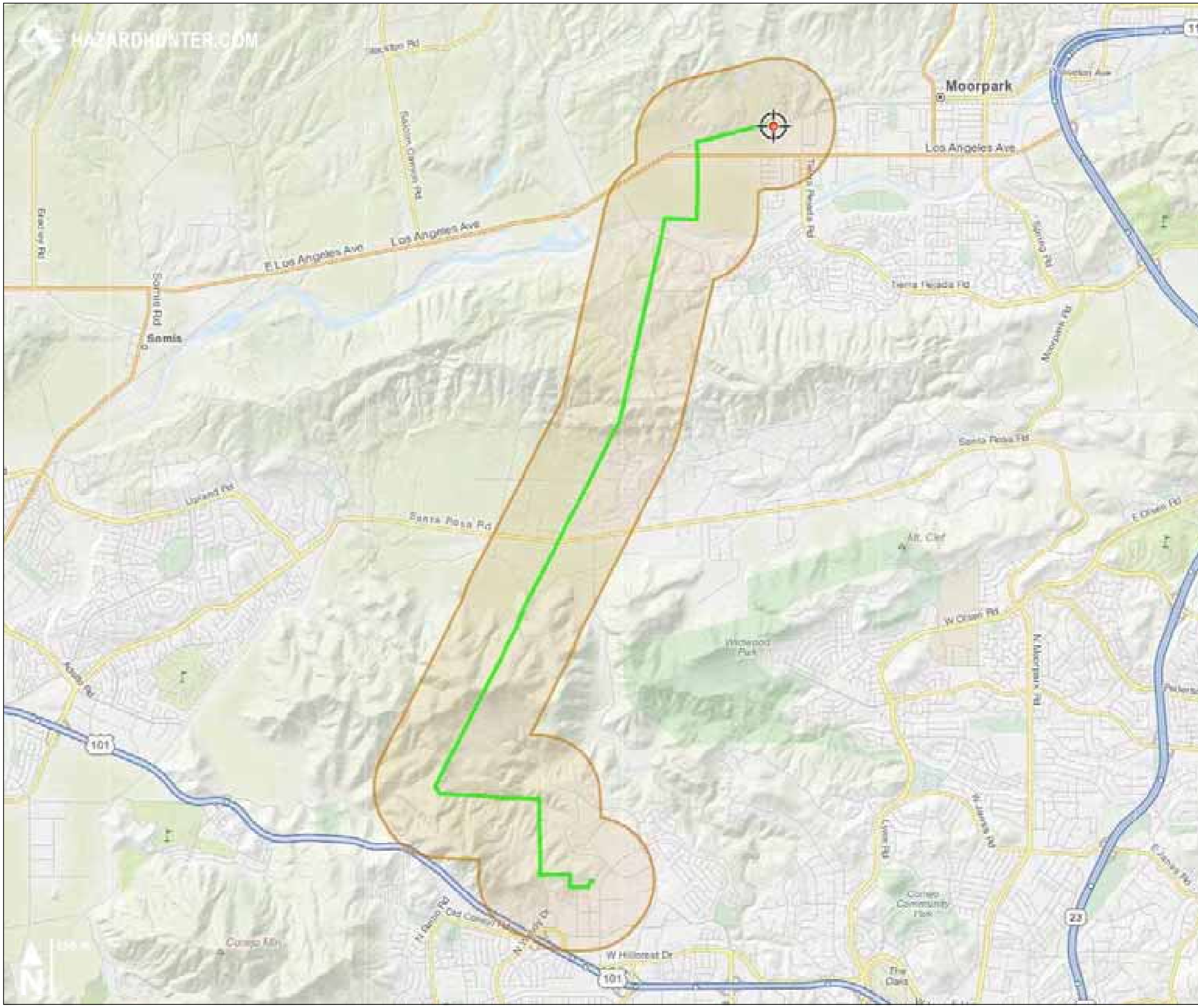
M = Man Made Hazards N = Natural Hazards P = Protected Areas
W = Water

Figure 3. Hazard Summary Map

Ventura, California

Project Name: **Moorpark Newbury**
Screen Type: **Sensitive Receptors**
Search Radius: **.5 Mile**
Date Prepared: **Friday, January 20, 2012**
Latitude: **34.239316** Longitude: **-118.929227**

Report Number: 2012012011_1164



Hazards Found

Hazard	Count
Your Search Location	
Total	0

M = Man Made Hazards N = Natural Hazards P = Protected Areas W = Water

Figure 4. Hazard Summary Map

Ventura, California

Project Name: **Moorpark Newbury**

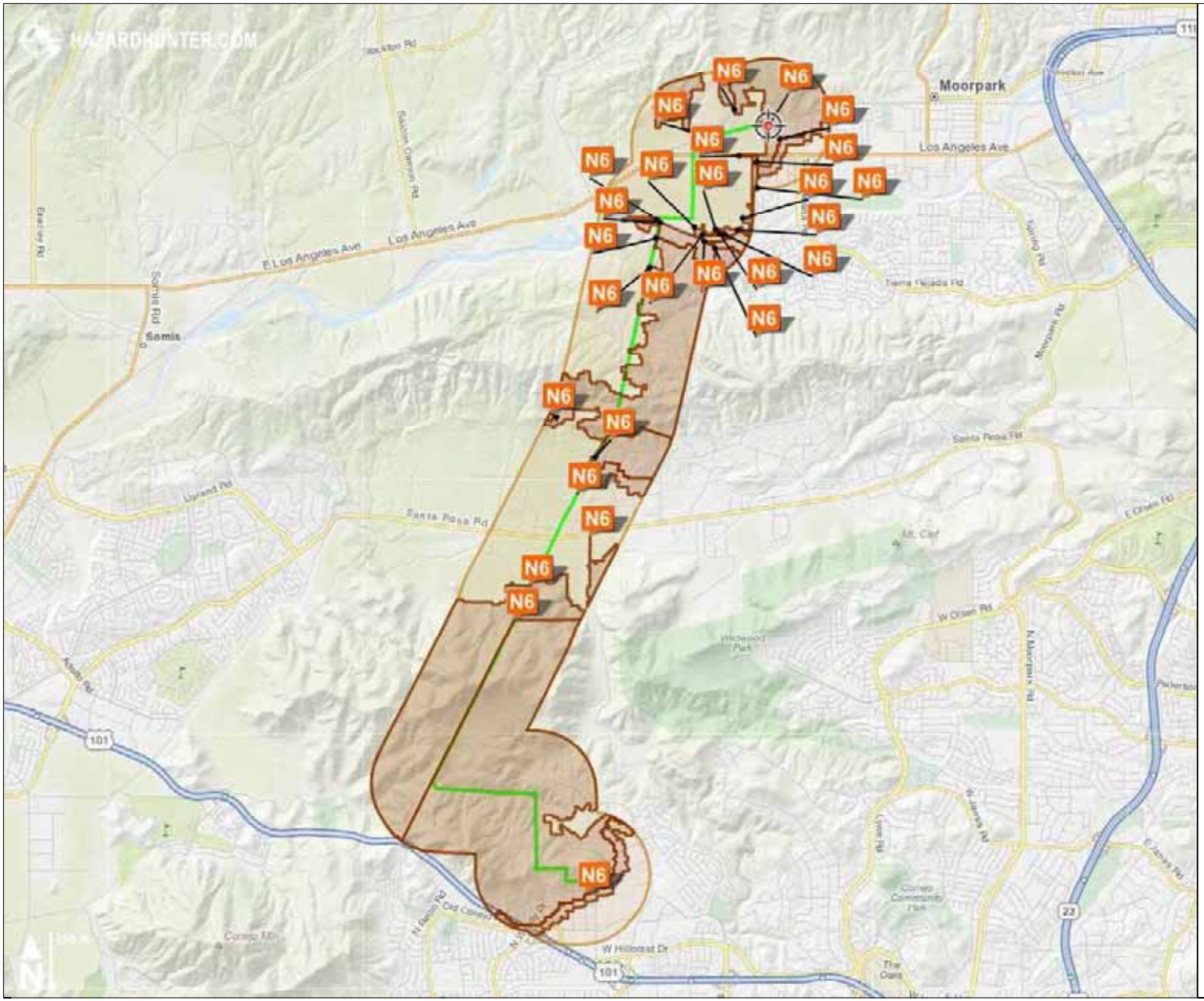
Screen Type: **Oil & Gas Wells**

Search Radius: **.5 Mile**

Date Prepared: **Friday, January 20, 2012**

Latitude: **34.239316** Longitude: **-118.929227**

Report Number: 2012012011_1166



Hazards Found

	Hazard	Count
	Your Search Location	
N6	High Wildfire Threat Zones	27
	Total	**27**

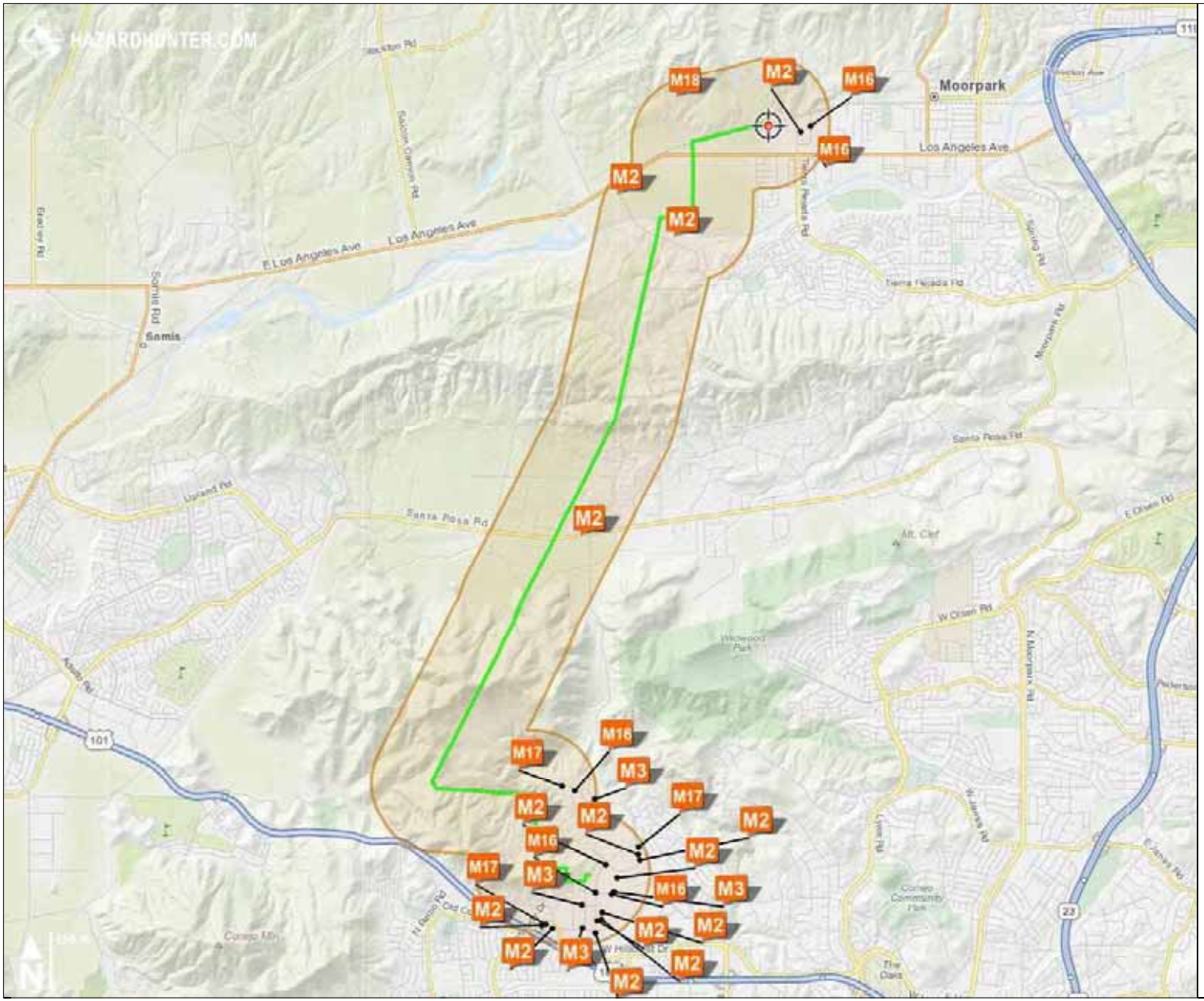
M = Man Made Hazards N = Natural Hazards P = Protected Areas
W = Water

Figure 5. Hazard Summary Map

Ventura, California

Project Name: **Moorpark Newbury**
Screen Type: **Fire Hazard Only**
Search Radius: **0.50 Mile**
Date Prepared: **Friday, January 20, 2012**
Latitude: **34.239316** Longitude: **-118.929227**

Report Number: 2012012011_1168



Hazards Found

	Hazard	Count
	Your Search Location	
M3	Contaminated Sites Envirostor	4
M2	Contaminated Sites Geotracker	14
M18	Landfills	1
M16	Toxic Release Inventory Facilities	5
M17	Underground Storage Tanks	3
	Total	**27**

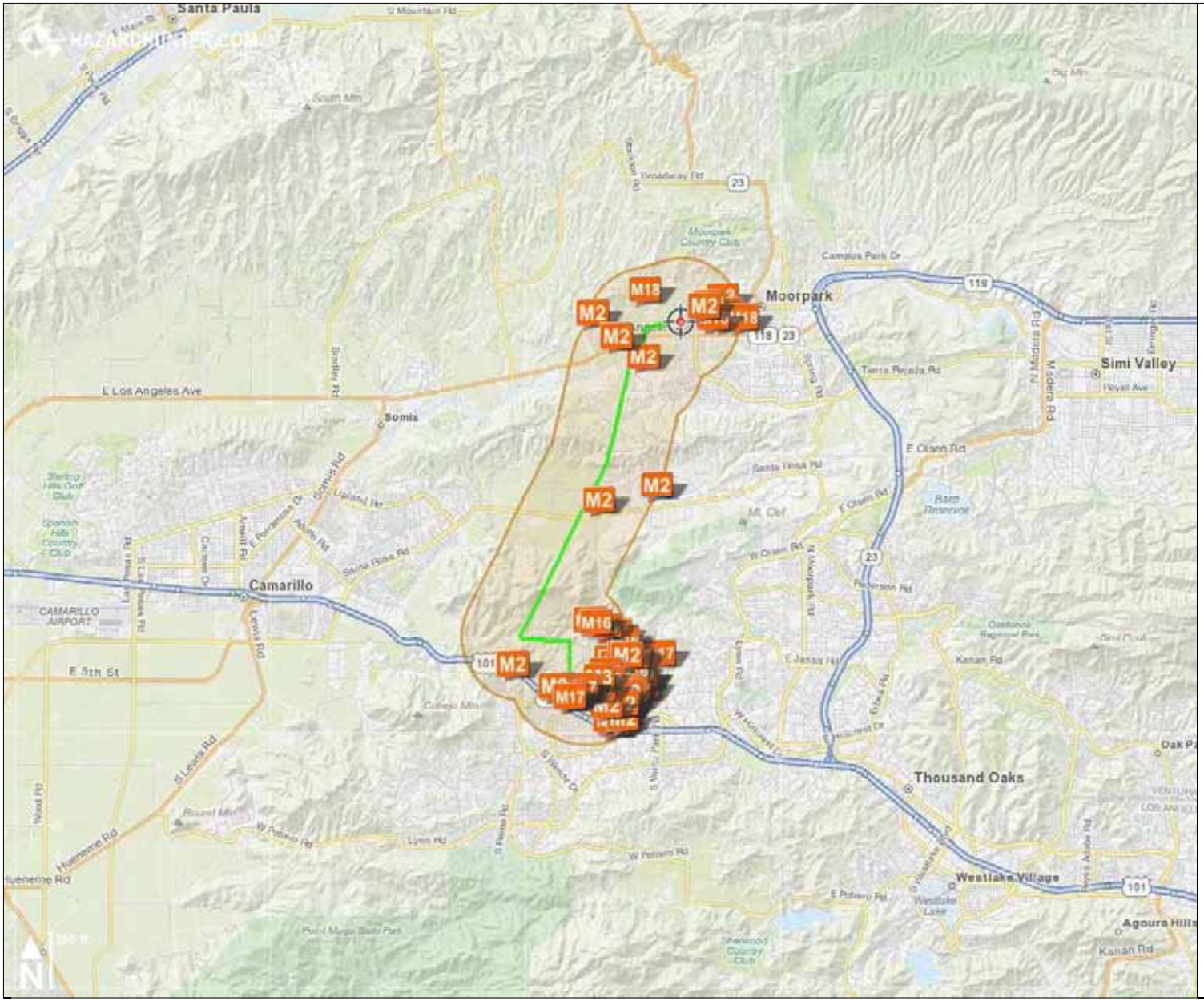
M = Man Made Hazards N = Natural Hazards P = Protected Areas
W = Water

Figure 6a. Hazard Summary Map

Ventura, California

Project Name: **Moorpark Newbury**
Screen Type: **Haz. Mat. Only**
Search Radius: **.5 Mile**
Date Prepared: **Friday, January 20, 2012**
Latitude: **34.239316** Longitude: **-118.929227**

Report Number: 2012012011_1170



Hazards Found

	Hazard	Count
	Your Search Location	
M3	Contaminated Sites Envirostor	12
M2	Contaminated Sites Geotracker	45
M18	Landfills	2
M16	Toxic Release Inventory Facilities	13
M17	Underground Storage Tanks	10
	Total	**82**

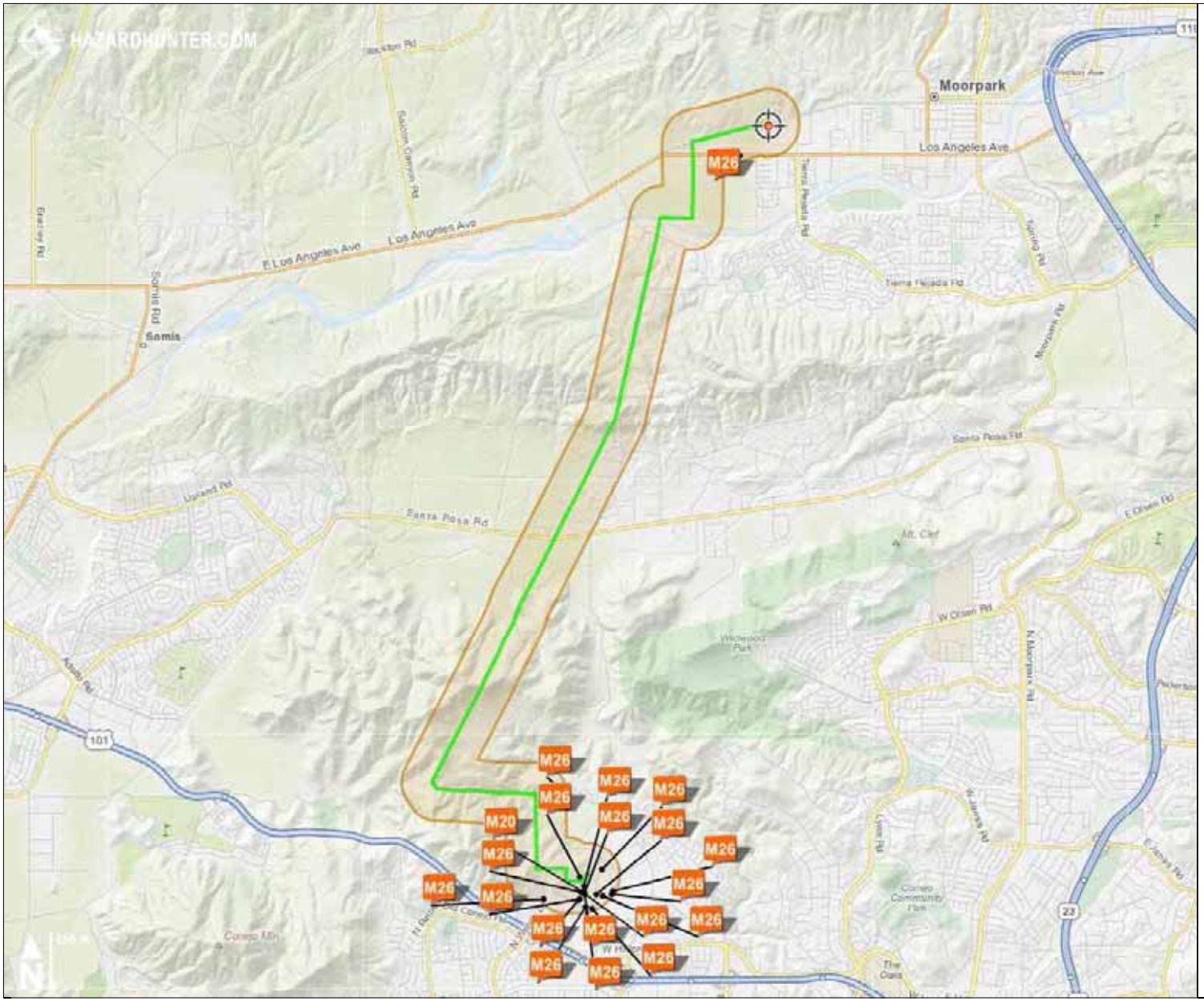
M = Man Made Hazards N = Natural Hazards P = Protected Areas
W = Water

Figure 6b. Hazard Summary Map

Ventura, California

Project Name: **Moorpark Newbury**
Screen Type: **Haz. Mat. Only**
Search Radius: **1 Mile**
Date Prepared: **Friday, January 20, 2012**
Latitude: **34.239303** Longitude: **-118.929225**

Report Number: 2012012011_1172



Hazards Found

	Hazard	Count
	Your Search Location	
M26	Hazardous Waste Generator-SQG	19
M20	Hazardous Waste Generators - LQG	1
	Total	**20**

M = Man Made Hazards N = Natural Hazards P = Protected Areas
W = Water

Figure 7. Hazard Summary Map

Ventura, California

Project Name: **Moorpark Newbury**
Screen Type: **Haz. Waste Generators**
Search Radius: **.25 Mile**
Date Prepared: **Friday, January 20, 2012**
Latitude: **34.274722** Longitude: **-118.914206**

Report Number: 2012012002_1181

HazardHunter

Site Scope

Property Hazards Screening Report

Property Location:

Ventura, California

Latitude: 34.239316 Longitude: -118.929227

Prepared: Friday, January 20, 2012

Disclaimer:

While HazardHunter.com endeavors to provide accurate information, the information is derived from multiple third-party government and other sources and may contain inaccuracies and errors from the original sources. You the User assume the sole risk of making use of, and/or relying on the information in this report, or on our website. HazardHunter.com makes no representations about the suitability, completeness, timeliness, reliability, legality in your jurisdiction, or accuracy of the information presented herein for any purpose. Such information is provided "as-is" without warranty of any kind, expressed or implied. You agree that you are responsible for the use of this report. HazardHunter.com shall not be liable for claims made against you or HazardHunter.com arising out of use of this report, you agree to defend, indemnify and hold harmless HazardHunter.com and its parent company for any and all claims arising out of use of this report and associated data.

Report Number: 2012012011_1169

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Property Hazard Screening Results

Ventura, California

Prepared: Friday, January 20, 2012

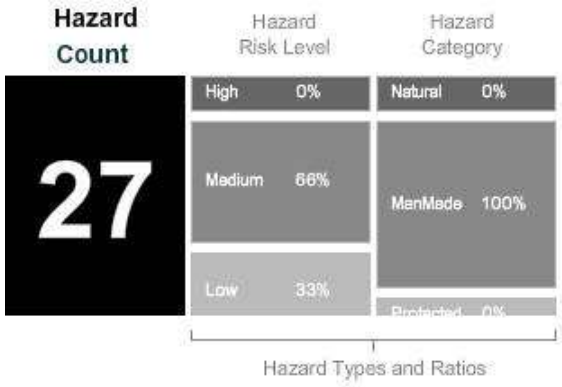
Latitude: 34.239316
Longitude: -118.929227

1 About the Hazard Screen Used:

This report was generated using the Haz. Mat. Only with a search distance of .5 Mile.

2 Results:

Hazards Found:



Overall Site Hazard Score:

3 Your Risk:

Properties with a Site Hazard Score of less than 1 are considered relatively low risk sites on the HazardHunter.com relative risk scale. These sites generally pose less threat to life and property than the average site and generally don't require extensive risk assessment and risk mitigation work unless you are particularly risk-adverse.

Properties with a Site Hazard Score between 1 and 2 are considered medium risk sites on the HazardHunter.com relative risk scale. These sites generally have some level of threat to life and property that is similar to an average site. Physical inspection and assessment of the potential hazards using qualified professionals is probably a prudent step to evaluate if the level of risk is acceptable to you, or should be mitigated by avoidance or one of many other risk mitigation options.

Properties with a Site Hazard Score greater than 2 are considered relatively high risk sites on the HazardHunter.com relative risk scale. These sites generally pose a threat to life and property greater than the average site. Some form of site-specific risk assessment and mitigation is more likely to be required at these sites if you don't want to take on "excess risk".

4 What Now?

Explore Your Results

Review the maps and tables in this report to better understand your potential risks.

Educate Yourself

Read articles about how you can protect yourself, your projects, and your property

Get Expert Help

Get help from experts to help you mitigate the potential risks.

Report Number: 2012012011_1169

HAZARDHUNTER.COM

Country	United States
State	California
County	Ventura
City	93012

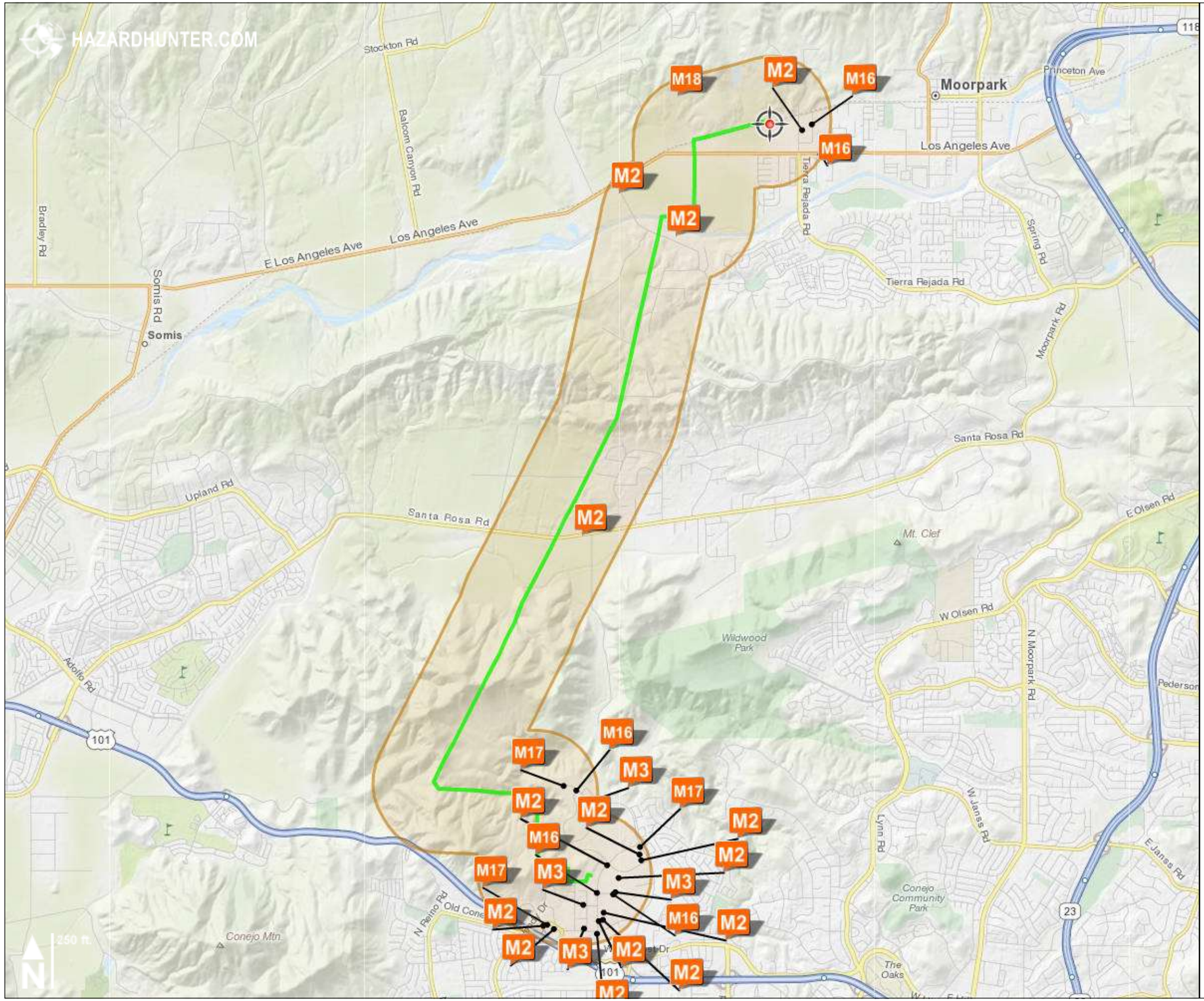
Figure 1. Site Location Map

Ventura, California

Project Name:	Moorpark Newbury
Screen Type:	Haz. Mat. Only
Search Radius:	.5 Mile
Date Prepared:	Friday, January 20, 2012

Latitude: 34.239316 Longitude: -118.929227

Report Number: 2012012011_1169



Hazards Found

	Hazard	Count
	Your Search Location	
M3	Contaminated Sites Envirostor	4
M2	Contaminated Sites Geotracker	14
M18	Landfills	1
M16	Toxic Release Inventory Facilities	5
M17	Underground Storage Tanks	3
	Total	27

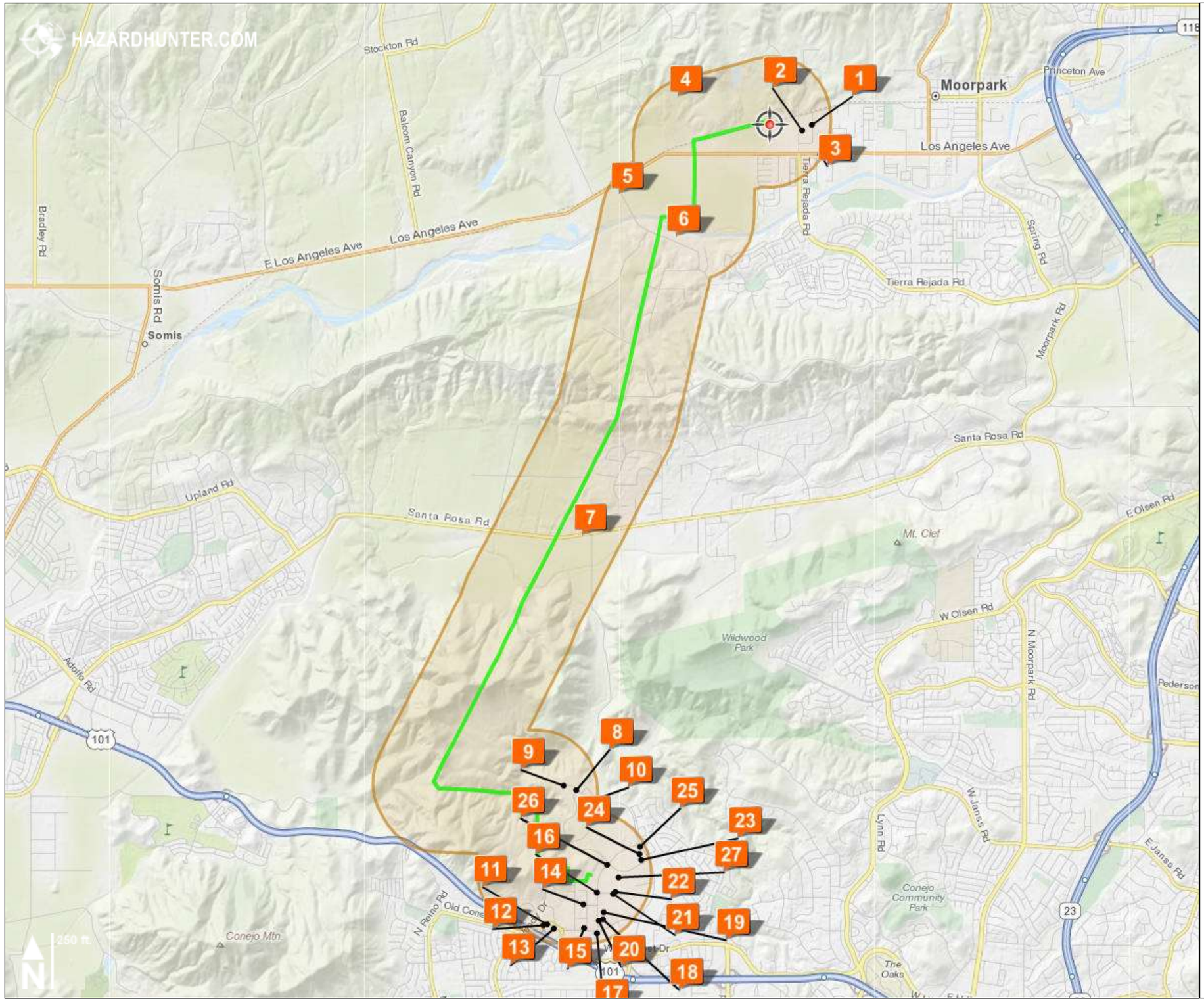
M = Man Made Hazards N = Natural Hazards P = Protected Areas
W = Water

Figure 2. Hazard Summary Map

Ventura, California

Project Name: Moorpark Newbury
Screen Type: Haz. Mat. Only
Search Radius: .5 Mile
Date Prepared: Friday, January 20, 2012
Latitude: 34.239316 Longitude: -118.929227

Report Number: 2012012011_1169



Hazards Found
are Listed in Table 1.

Figure 3. Hazard Distance Map

Ventura, California

Project Name: Moorpark Newbury
Screen Type: Haz. Mat. Only
Search Radius: .5 Mile
Date Prepared: Friday, January 20, 2012
Latitude: 34.239316 Longitude: -118.929227

Report Number: 2012012011_1169

Detailed List of Hazards Found

Ventura, California

Latitude: 34.239316
Longitude: -118.929227

Prepared: Friday, January 20, 2012

Table 1. Detailed List of Hazards Found in Your Search Radius

This table provides the individual names (where available) for the hazards listed in the Distance View Map. The the numbered markers in the table below correlate to those in the Distance View Map.

	Hazard Type	Name	Distance (miles)
	Your Location of Interest	origin	0
1	TRI Air Emissions Reporting Facility	FLUID INK TECHNOLOGY INC.	0
2	Contaminated Site-Geotracker	PRUDENTIAL OVERALL SUPPLY	0
3	TRI Air Emissions Reporting Facility	VULCAN MATERIALS CO MOORPARK	0
4	Landfill	Peach Hill Organic Recycling	0.68
5	Contaminated Site-Geotracker	HITCH BLVD. LIFT STATION	1.56
6	Contaminated Site-Geotracker	HOME SAVINGS OF AMERICA	1.69
7	Contaminated Site-Geotracker	HILL CANYON TREATMENT PLANT	4.13
8	TRI Air Emissions Reporting Facility	BAXTER BIOSCIENCE	7.29
9	Underground Storage Tank Facility	CITY OF THOUSAND OAKS	7.29
10	Contaminated Site-EnviroStor	Baxter Healthcare Corp., Thousand Oaks	7.36
11	Underground Storage Tank Facility	WENDY DRIVE CHEVRON	8.24
12	Contaminated Site-Geotracker	CHEVRON #9-0415	8.24
13	Contaminated Site-Geotracker	WENDY ARCO STATION	8.24
14	Contaminated Site-EnviroStor	POLYCORE ELECTRONICS INC.	8.38
15	Contaminated Site-EnviroStor	Multilayer Prototypes, Inc.	8.39

Report Number: 2012012011_1169

HAZARDHUNTER.COM

Detailed List of Hazards Found

Ventura, California

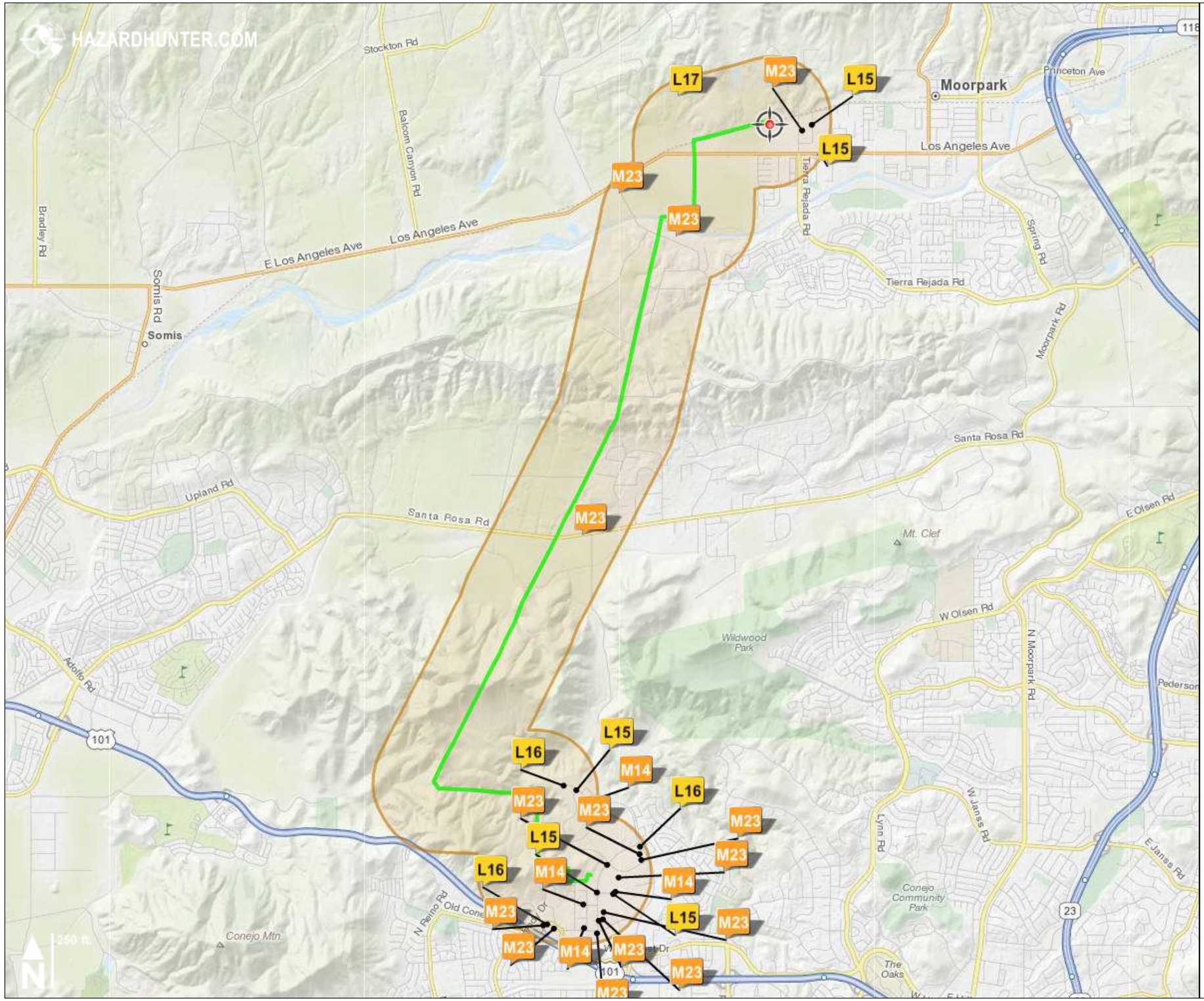
Latitude: 34.239316
Longitude: -118.929227

Prepared: Friday, January 20, 2012

Table 1. Detailed List of Hazards Found in Your Search Radius

This table provides the individual names (where available) for the hazards listed in the Distance View Map. The the numbered markers in the table below correlate to those in the Distance View Map.

	Hazard Type	Name	Distance (miles)
16	TRI Air Emissions Reporting Facility	WILSON GOLF DIVISION	8.4
17	Contaminated Site-Geotracker	GTE	8.4
18	Contaminated Site-Geotracker	FORMER COMPSAT CORP.	8.4
19	Contaminated Site-Geotracker	FORMER AMPLICA	8.4
20	Contaminated Site-Geotracker	AMPLICA (FORMER)	8.4
21	TRI Air Emissions Reporting Facility	JDK CONTROLS INCORPORATED	8.48
22	Contaminated Site-EnviroStor	Conejo Circuits, Inc.	8.48
23	Contaminated Site-Geotracker	METROPOLITAN LIFE	8.48
24	Contaminated Site-Geotracker	NORTHROP AIRCRAFT DIVISION	8.48
25	Underground Storage Tank Facility	UNITED PARCEL SERVICE	8.48
26	Contaminated Site-Geotracker	SMITH PUMPS	8.48
27	Contaminated Site-Geotracker	CONEJO CORPORATE CENTER	8.48



Hazards Found

Risk Level	% of Total	Count
M Medium Risk	67%	18
Contaminated Sites Envirostor		4
Contaminated Sites Geotracker		14
L Low Risk	33%	9
Landfills		1
Toxic Release Inventory Facilities		5
Underground Storage Tanks		3
Totals	100%	27

Figure 4. Hazard Risk Map

Ventura, California

Project Name: Moorpark Newbury
Screen Type: Haz. Mat. Only
Search Radius: .5 Mile
Date Prepared: Friday, January 20, 2012
Latitude: 34.239316 Longitude: -118.929227

HazardHunter

Site Scope

Property Hazards Screening Report

Property Location:

Ventura, California

Latitude: 34.274722 Longitude: -118.914206

Prepared: Friday, January 20, 2012

Disclaimer:

While HazardHunter.com endeavors to provide accurate information, the information is derived from multiple third-party government and other sources and may contain inaccuracies and errors from the original sources. You the User assume the sole risk of making use of, and/or relying on the information in this report, or on our website. HazardHunter.com makes no representations about the suitability, completeness, timeliness, reliability, legality in your jurisdiction, or accuracy of the information presented herein for any purpose. Such information is provided "as-is" without warranty of any kind, expressed or implied. You agree that you are responsible for the use of this report. HazardHunter.com shall not be liable for claims made against you or HazardHunter.com arising out of use of this report, you agree to defend, indemnify and hold harmless HazardHunter.com and its parent company for any and all claims arising out of use of this report and associated data.

Report Number: 2012012002_1180

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Property Hazard Screening Results

Ventura, California

Prepared: Friday, January 20, 2012

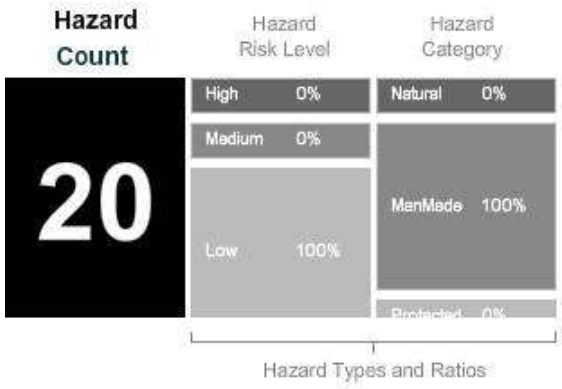
Latitude: 34.274722
Longitude: -118.914206

1 About the Hazard Screen Used:

This report was generated using the Haz. Waste Generators with a search distance of .25 Mile.

2 Results:

Hazards Found:



Overall Site Hazard Score:

3 Your Risk:

Properties with a Site Hazard Score of less than 1 are considered relatively low risk sites on the HazardHunter.com relative risk scale. These sites generally pose less threat to life and property than the average site and generally don't require extensive risk assessment and risk mitigation work unless you are particularly risk-adverse.

Properties with a Site Hazard Score between 1 and 2 are considered medium risk sites on the HazardHunter.com relative risk scale. These sites generally have some level of threat to life and property that is similar to an average site. Physical inspection and assessment of the potential hazards using qualified professionals is probably a prudent step to evaluate if the level of risk is acceptable to you, or should be mitigated by avoidance or one of many other risk mitigation options.

Properties with a Site Hazard Score greater than 2 are considered relatively high risk sites on the HazardHunter.com relative risk scale. These sites generally pose a threat to life and property greater than the average site. Some form of site-specific risk assessment and mitigation is more likely to be required at these sites if you don't want to take on "excess risk".

4 What Now?

Explore Your Results

Review the maps and tables in this report to better understand your potential risks.

Educate Yourself

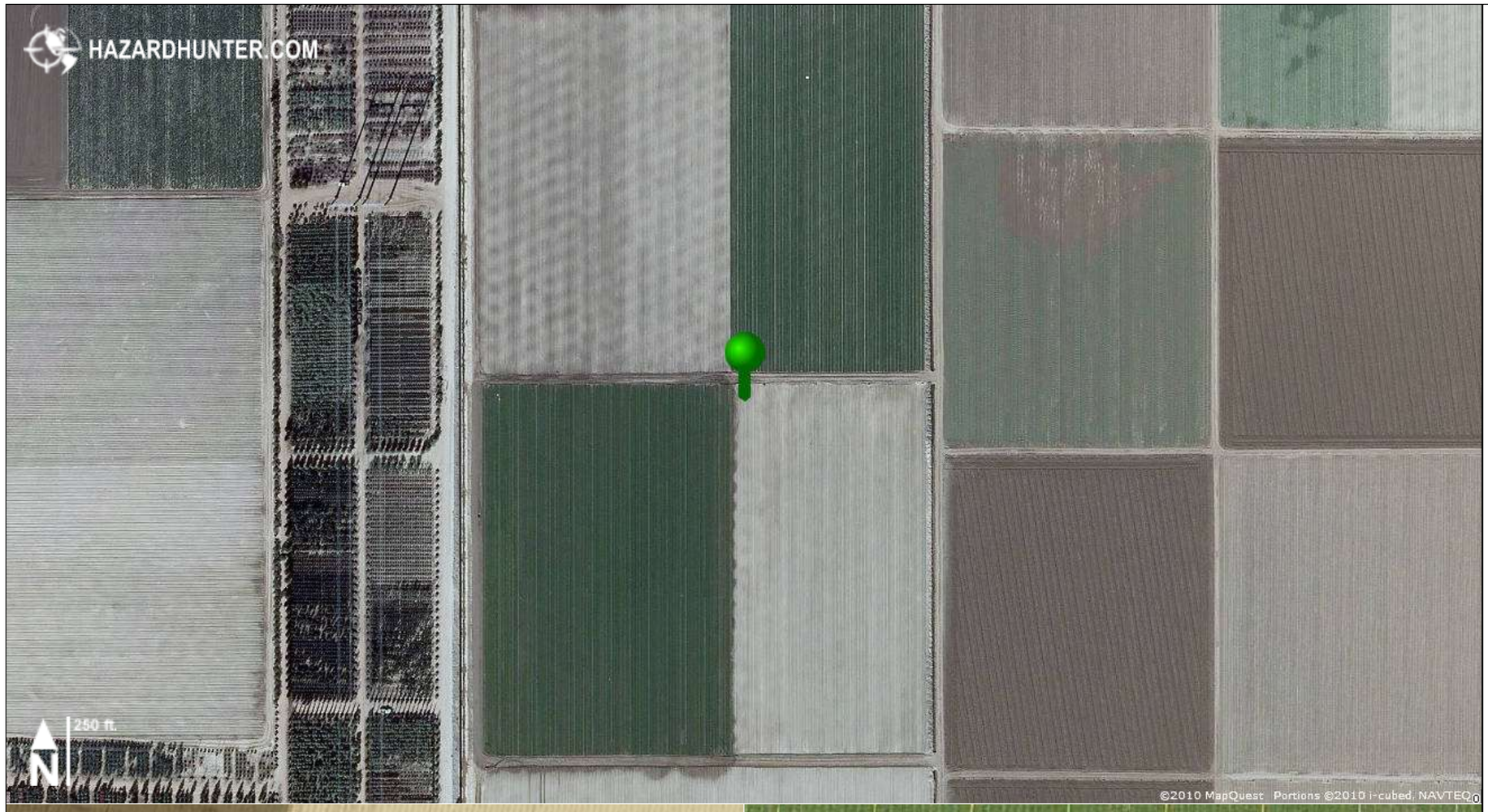
Read articles about how you can protect yourself, your projects, and your property

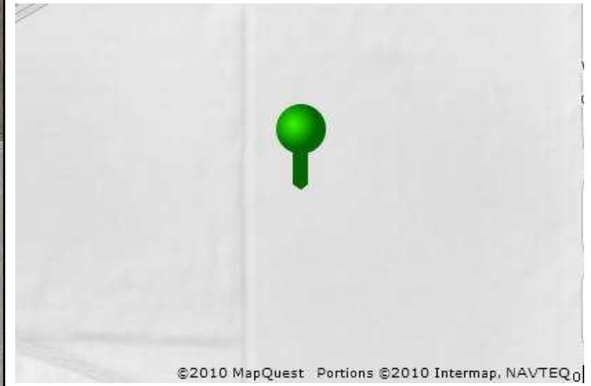
Get Expert Help

Get help from experts to help you mitigate the potential risks.

Report Number: 2012012002_1180

HAZARDHUNTER.COM





Country	United States
State	California
County	Ventura
City	93021

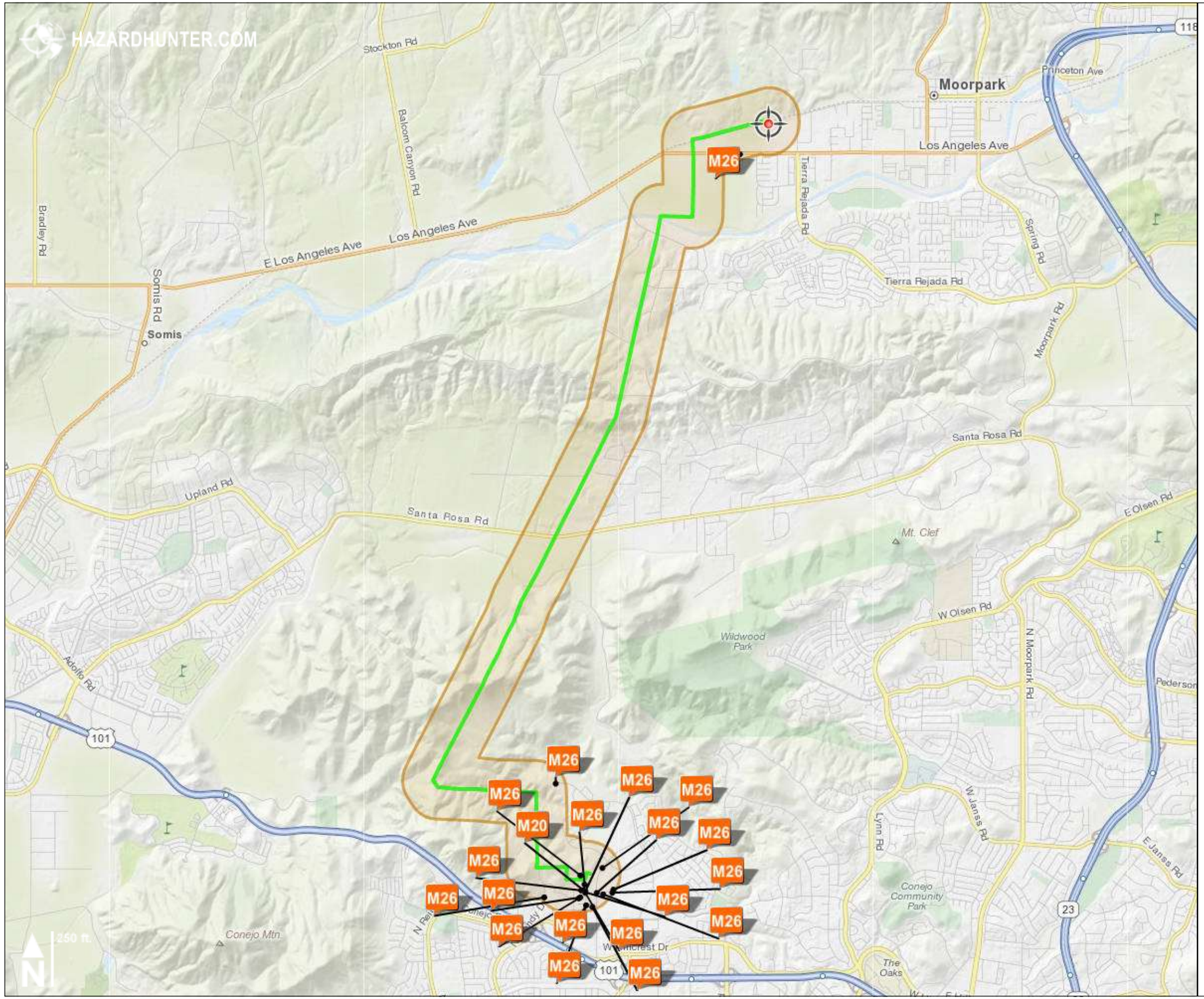
Figure 1. Site Location Map

Ventura, California

Project Name:	Moorpark Newbury
Screen Type:	Haz. Waste Generators
Search Radius:	.25 Mile
Date Prepared:	Friday, January 20, 2012

Latitude: 34.274722 Longitude: -118.914206

Report Number: 2012012002_1180



Hazards Found

	Hazard	Count
	Your Search Location	
M26	Hazardous Waste Generator-SQG	19
M20	Hazardous Waste Generators - LQG	1
	Total	20

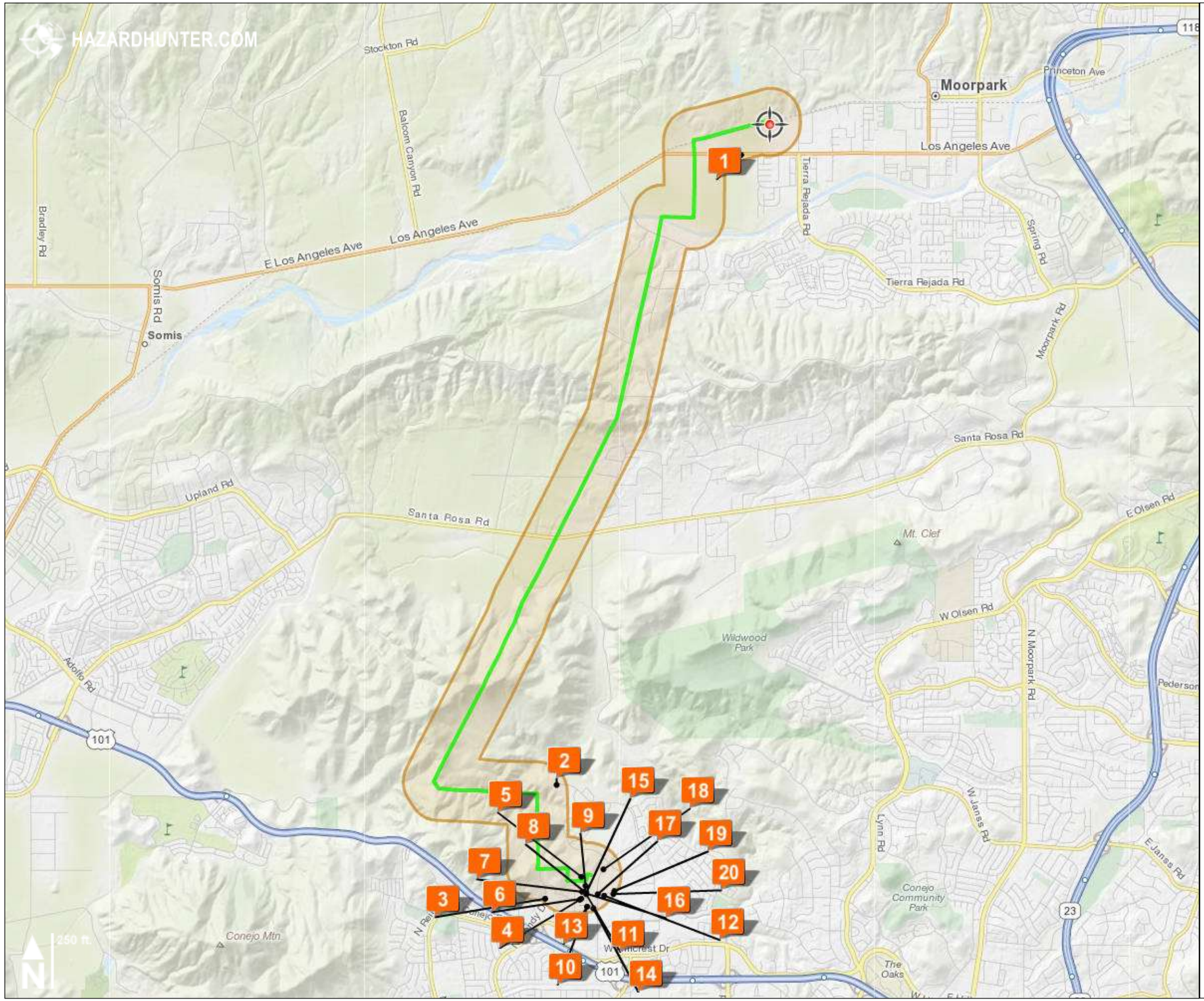
M = Man Made Hazards N = Natural Hazards P = Protected Areas
W = Water

Figure 2. Hazard Summary Map

Ventura, California

Project Name: Moorpark Newbury
Screen Type: Haz. Waste Generators
Search Radius: .25 Mile
Date Prepared: Friday, January 20, 2012
Latitude: 34.274722 Longitude: -118.914206

Report Number: 2012012002_1180



Hazards Found
are Listed in Table 1.

Figure 3. Hazard Distance Map

Ventura, California

Project Name: Moorpark Newbury
Screen Type: Haz. Waste Generators
Search Radius: .25 Mile
Date Prepared: Friday, January 20, 2012
Latitude: 34.274722 Longitude: -118.914206

Report Number: 2012012002_1180

Detailed List of Hazards Found

Ventura, California

Latitude: 34.274722
Longitude: -118.914206

Prepared: Friday, January 20, 2012

Table 1. Detailed List of Hazards Found in Your Search Radius

This table provides the individual names (where available) for the hazards listed in the Distance View Map. The the numbered markers in the table below correlate to those in the Distance View Map.

	Hazard Type	Name	Distance (miles)
	Your Location of Interest	origin	0
1	Hazardous Waste Generator-SQG	MURANKA FARM INC	0.33
2	Hazardous Waste Generator-SQG	CITY OF THOUSAND OAKS MSC	7.29
3	Hazardous Waste Generator-SQG	NEWBURY PARK ADVENTIST ACADEMY	8.24
4	Hazardous Waste Generator-SQG	AUGAT-PACTEL PRODUCTS	8.35
5	Hazardous Waste Generator-SQG	LORENZ HOUSEWARES, INC	8.36
6	Hazardous Waste Generator-SQG	POLYCORE ELECTRONICS INC	8.36
7	Hazardous Waste Generator-SQG	WELDLOGIC INC	8.36
8	Hazardous Waste Generator-LQG	JW MANUFACTURING	8.38
9	Hazardous Waste Generator-SQG	NUMERITRONIX INC	8.39
10	Hazardous Waste Generator-SQG	C M P DISPLAY SYSTEMS INC	8.4
11	Hazardous Waste Generator-SQG	CARLEE ELECTRONICS INC	8.4
12	Hazardous Waste Generator-SQG	CIRCUIT FUNCTIONS INC	8.4
13	Hazardous Waste Generator-SQG	MATTOX LABORATORIES INC	8.4
14	Hazardous Waste Generator-SQG	COAST INDEX CO INC	8.4
15	Hazardous Waste Generator-SQG	HYDELCO INC	8.4

Detailed List of Hazards Found

Ventura, California

Latitude: 34.274722

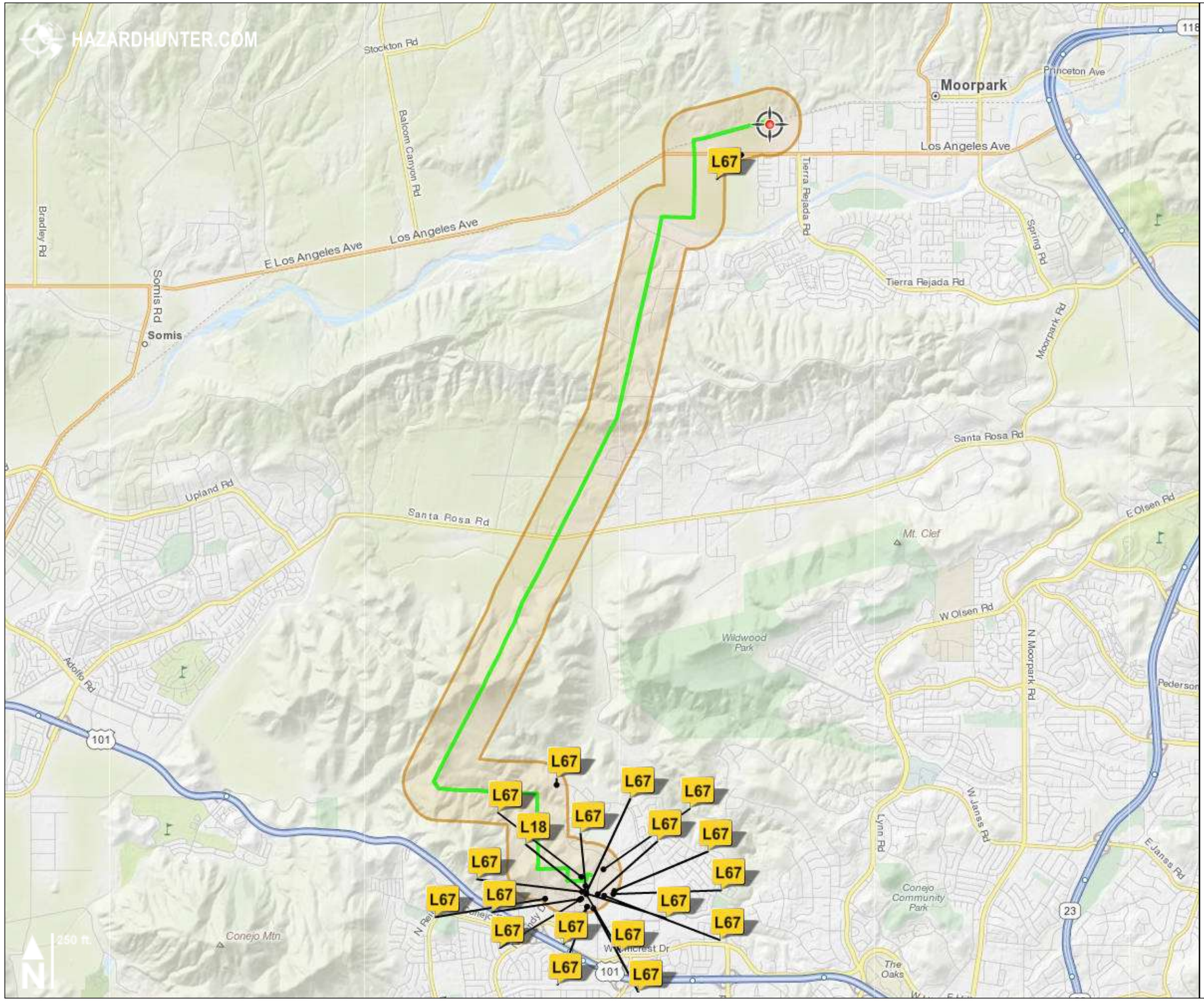
Prepared: Friday, January 20, 2012

Longitude: -118.914206

Table 1. Detailed List of Hazards Found in Your Search Radius

This table provides the individual names (where available) for the hazards listed in the Distance View Map. The the numbered markers in the table below correlate to those in the Distance View Map.

	Hazard Type	Name	Distance (miles)
16	Hazardous Waste Generator-SQG	VAN PETTY MFG, INC	8.4
17	Hazardous Waste Generator-SQG	WESTLAKE AUDIO INC	8.4
18	Hazardous Waste Generator-SQG	P C TECHNOLOGY	8.48
19	Hazardous Waste Generator-SQG	CONEJO CIRCUITS, INC	8.48
20	Hazardous Waste Generator-SQG	ACE POWDER COATING SPECIALIST	8.48



Hazards Found

Risk Level	% of Total	Count
Low Risk	100%	20
Hazardous Waste Generator-SQG		19
Hazardous Waste Generators - LQG		1
Totals	100%	20

Figure 4. Hazard Risk Map

Ventura, California

Project Name: Moorpark Newbury
Screen Type: Haz. Waste Generators
Search Radius: .25 Mile
Date Prepared: Friday, January 20, 2012
Latitude: 34.274722 Longitude: -118.914206

Leading the Way in Electricity

SOUTHERN CALIFORNIA EDISON®

An *EDISON INTERNATIONAL*® Company

Hazardous Materials Business Plan

SCE - Moorpark Substation

5027 Gabbert Rd

Moorpark, CA 93021

CERS ID: 10159591

Site Identification

Southern California Edison Moorpark Substation
5027 Gabbert Rd
Moorpark, CA 93021
County
Ventura

CERS ID
10159591
EPA ID Number

Submittal Status

Submitted on 2/28/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 3/19/2013 by *M Hernandez* for Ventura County Environmental Health

Hazardous Materials

Does your facility have on site (for any purpose) at any one time, hazardous materials at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in ASTs and USTs); or is regulated under more restrictive inventory local reporting requirements (shown below if present); or the applicable Federal threshold quantity for an extremely hazardous substance specified in 40 CFR Part 355, Appendix A or B; or handle radiological materials in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40 or 70?	**Yes**

Underground Petroleum Storage (UST)

Does your facility own or operate underground storage tanks?	**No**

Hazardous Waste

Is your facility a Hazardous Waste Generator?	**No**
Does your facility treat hazardous waste on-site?	**No**
Is your facility's treatment subject to financial assurance requirements (for Permit by Rule and Conditional Authorization)?	**No**
Does your facility consolidate hazardous waste generated at a remote site?	**No**
Does your facility need to report the closure/removal of a tank that was classified as hazardous waste and cleaned on-site?	**No**
Does your facility generate in any single calendar month 1,000 kilograms (kg) (2,200 pounds) or more of federal RCRA hazardous waste, or generate in any single calendar month, or accumulate at any time, 1 kg (2.2 pounds) of RCRA acute hazardous waste; or generate or accumulate at any time more than 100 kg (220 pounds) of spill cleanup materials contaminated with RCRA acute hazardous waste.	**No**
Is your facility a Household Hazardous Waste (HHW) Collection site?	**No**

Excluded and/or Exempted Materials

Does your facility recycle more than 100 kg/month of excluded or exempted recyclable materials (per HSC 25143.2)?	**No**
Does your facility own or operate ASTs above these thresholds? Store greater than 1,320 gallons of petroleum products (new or used) in aboveground tanks or containers.	**No**
Does your facility have Regulated Substances stored onsite in quantities greater than the threshold quantities established by the California Accidental Release prevention Program (CalARP)?	**No**

Additional Information

No additional comments provided.

Facility/Site

Southern California Edison Moorpark Substation
5027 Gabbert Rd
Moorpark, CA 93021

CERS ID
10159591

Submittal Status

Submitted on 2/28/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 3/19/2013 by *M Hernandez* for Ventura County Environmental Health

Identification

Southern California Edison

Operator Phone	Business Phone	Business Fax
(626) 302-1212	(626) 302-1212	

Beginning Date	Ending Date	
3/1/2013	3/1/2014	
Dun & Bradstreet	**SIC Code**	**Primary NAICS**
195138458	4911	221122

Facility/Site Mailing Address

PO Box 800, Attn: HMBP Program Manager
Rosemead, CA 91770

Primary Emergency Contact

Andy Melendez
Title
Safety & Environmental Specialist

Business Phone	24-Hour Phone	Pager Number
(805) 223-3091	(626) 302-1212	

Owner

Southern California Edison
(626) 302-1212
PO Box 800
Rosemead, CA 91770

Secondary Emergency Contact

Berny Osendorf
Title
Supervisor

Business Phone	24-Hour Phone	Pager Number
(626) 302-1212	(626) 302-1212	

Billing Contact

Southern California Edison
(626) 302-1212
CMSADMIN@sce.com
PO Box 800, Attn: CMS Admin
Rosemead, CA 91770

Environmental Contact

Andy Melendez
(805) 223-3091
andy.melendez@sce.com
10060 Telegraph Rd.
Ventura, CA 93004

Certification

Andy Melendez

Signer Title	Date Signed/Submitted	Document Preparer
Safety & Environmental Specialist	2/28/2013	Andy Melendez

Additional Information
Taxpayer Identification Number: 95-1240335

Locally-collected Fields

Some or all of the following fields may be required by your local regulator(s).

Property Owner
Southern California Edison
Phone
(626) 302-1212
Mailing Address
PO Box 80,0 Attn: HMBP Program Manager
Rosemead, CA 91770

Assessor Parcel Number (APN)

Number of Employees
0
Facility ID

California Environmental Reporting System (CERS) — Hazardous Materials Inventory

Facility/Site

Southern California Edison Moorpark Substation
5027 Gabbert Rd
Moorpark, CA 93021

CERS ID: **10159591**

Submittal Status

Submitted on 2/28/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 3/19/2013 by *M Hernandez* for Ventura County Environmental Health

Chemical Identification and Physical Properties

Chemical Name
Capacitor Fluid

CERS Chemical Library ID

Common Name
Capacitor Fluid

CAS Number

US EPA SRS Number

Physical State
Liquid

Hazardous Material Type
Mixture

Trade Secret

Chemical Hazard Classification

EHS

Fire Code Hazard Classes (by priority)
Combustible Liquid, Class III-B

Radioactive

Curies
0

Federal Hazard Categories
Yes — Fire
Reactive
Pressure Release
Acute Health
Yes — Chronic Health

DOT Hazard Class
3 - Flammable and Combustible Liquids

State Waste Code

Inventory Location and Quantity

Chemical Location
Inside Electrical Equipment

Chemical Location Confidential EPCRA

Map# (Optional)

Grid# (Optional)

Average Daily Amount
60

Maximum Daily Amount
60

Units
gallons

Largest Container
2

Annual Waste Amount
0

Days on Site
365

Inventory Storage Information

Aboveground Tank	Can	Box	Tank Truck, Tank Wagon
Underground Tank	Carboy	Cylinder	Tank Car, Rail Car
Tank Inside Building	Silo	Glass Bottle	Yes — Other
Steel Drum	Fiber Drum	Plastic Bottle	Inside Electrical Equipment
Plastic/Non-Metallic Drum	Bag	Tote Bin	

Storage Pressure
Ambient

Storage Temperature
Ambient

Mixture Components

Hazardous Component Name	CAS Number	% by Weight	EHS	Additional Mixture Components

Additional Chemical/Material Description

Additional Chemical Material Information

California Environmental Reporting System (CERS) — Hazardous Materials Inventory

Facility/Site

Southern California Edison Moorpark Substation
5027 Gabbert Rd
Moorpark, CA 93021

CERS ID: **10159591**

Submittal Status

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Submittal was ***Accepted***; Processed on 3/19/2013 by *M Hernandez* for Ventura County Environmental Health

Chemical Identification and Physical Properties

Chemical Name		CERS Chemical Library ID
Sulfur Hexafluoride Gas		
Common Name	**CAS Number**	**US EPA SRS Number**
SF 6 Gas	2551-62-4	

Physical State	Hazardous Material Type	Trade Secret
Gas	Pure	

Chemical Hazard Classification

EHS	Fire Code Hazard Classes (by priority)	Federal Hazard Categories		DOT Hazard Class
	Other Health Hazard		Fire	2.2 - Nonflammable Gases
Radioactive			Reactive	**State Waste Code**
		Yes	Pressure Release	
Curies		Yes	Acute Health	
0		Yes	Chronic Health	

Inventory Location and Quantity

Chemical Location		Average Daily Amount	Maximum Daily Amount	Units
Inside Electrical Equipment		30390	30390	cubic feet
Chemical Location Confidential EPCRA		**Largest Container**	**Annual Waste Amount**	
		299	0	
Map# (Optional)	**Grid# (Optional)**	**Days on Site**		
		365		

Inventory Storage Information

Aboveground Tank	Can		Box	Tank Truck, Tank Wagon
Underground Tank	Carboy	Yes	Cylinder	Tank Car, Rail Car
Tank Inside Building	Silo		Glass Bottle	Yes Other
Steel Drum	Fiber Drum		Plastic Bottle	Inside Electrical Equipment
Plastic/Non-Metallic Drum	Bag		Tote Bin	

Storage Pressure	Storage Temperature
Above Ambient	Ambient

Mixture Components

Hazardous Component Name	CAS Number	% by Weight	EHS	Additional Mixture Components

Additional Chemical/Material Description

Additional Chemical Material Information

California Environmental Reporting System (CERS) — Hazardous Materials Inventory

Facility/Site

Southern California Edison Moorpark Substation
5027 Gabbert Rd
Moorpark, CA 93021

CERS ID: **10159591**

Submittal Status

Submitted on 2/28/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 3/19/2013 by *M Hernandez* for Ventura County Environmental Health

Chemical Identification and Physical Properties

Chemical Name
Diesel Fuel No. 2

CERS Chemical Library ID

Common Name
Diesel Fuel No. 2

CAS Number
68476-34-6

US EPA SRS Number

Physical State
Liquid

Hazardous Material Type
Pure

Trade Secret

Chemical Hazard Classification

EHS

Fire Code Hazard Classes (by priority)
Combustible Liquid, Class II

Federal Hazard Categories
Yes — Fire
Reactive
Pressure Release
Yes — Acute Health
Chronic Health

DOT Hazard Class
3 - Flammable and Combustible Liquids

Radioactive

State Waste Code

Curies
0

Inventory Location and Quantity

Chemical Location
Emergency Generator

Average Daily Amount
20

Maximum Daily Amount
20

Units
gallons

Chemical Location Confidential EPCRA

Largest Container
250

Annual Waste Amount
0

Map# (Optional)

Grid# (Optional)

Days on Site
365

Inventory Storage Information

Yes	Aboveground Tank	Can	Box		Tank Truck, Tank Wagon
	Underground Tank	Carboy	Cylinder		Tank Car, Rail Car
	Tank Inside Building	Silo	Glass Bottle	Yes	Other
	Steel Drum	Fiber Drum	Plastic Bottle		Emergency Generator
	Plastic/Non-Metallic Drum	Bag	Tote Bin		

Storage Pressure
Ambient

Storage Temperature
Ambient

Mixture Components

Hazardous Component Name	CAS Number	% by Weight	EHS	Additional Mixture Components

Additional Chemical/Material Description

Additional Chemical Material Information
NFPA 325: Diesel Fuel Oil No. 2-D, min flash point 125 deg F (Placard 1/2/0).
CAS # corrected per EPA Federal Substance Registry, dfirth, 5/31/11. Note: Diesel Fuel (CAS # is 68334-30-5) is a different material.

Facility/Site

Southern California Edison Moorpark Substation
5027 Gabbert Rd
Moorpark, CA 93021

CERS ID
10159591

Submittal Status

Submitted on 2/28/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 3/19/2013 by *M Hernandez* for Ventura County Environmental Health

Chemical Identification and Physical Properties

Chemical Name
Lead Acid Battery

CERS Chemical Library ID

Common Name
Lead Acid Battery

CAS Number

US EPA SRS Number

Physical State
Liquid

Hazardous Material Type
Mixture

Trade Secret

Chemical Hazard Classification

EHS

Fire Code Hazard Classes (by priority)
Corrosive

Radioactive

Curies
0

Federal Hazard Categories

	Fire
Yes	Reactive
	Pressure Release
Yes	Acute Health
Yes	Chronic Health

DOT Hazard Class

State Waste Code

Inventory Location and Quantity

Chemical Location
In battery room

Chemical Location Confidential EPCRA

Map# (Optional)

Grid# (Optional)

Average Daily Amount
102

Maximum Daily Amount
102

Units
gallons

Largest Container
1.7

Annual Waste Amount
0

Days on Site
365

Inventory Storage Information

	Aboveground Tank		Box	Tank Truck, Tank Wagon
	Underground Tank		Cylinder	Tank Car, Rail Car
	Tank Inside Building		Glass Bottle	Yes Other
	Steel Drum		Plastic Bottle	thermoplastic container
	Plastic/Non-Metallic Drum		Tote Bin	

	Can		
	Carboy		
	Silo		
	Fiber Drum		
	Bag		

Storage Pressure
Ambient

Storage Temperature
Ambient

Mixture Components

Hazardous Component Name	CAS Number	% by Weight	EHS	Additional Mixture Components
Sulfuric Acid	7664-93-9	40.00	Yes	

Additional Chemical/Material Description

Additional Chemical Material Information
Sulfuric acid content of batteries is approximately 408 pounds (1020 lbs multiplied by 40%).

Facility/Site

Southern California Edison Moorpark Substation
5027 Gabbert Rd
Moorpark, CA 93021

CERS ID
10159591

Submittal Status

Submitted on 2/28/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 3/19/2013 by *M Hernandez* for Ventura County Environmental Health

Chemical Identification and Physical Properties

Chemical Name
Mineral Oil

CERS Chemical Library ID

Common Name
Mineral Oil

CAS Number

US EPA SRS Number

Physical State
Liquid

Hazardous Material Type
Mixture

Trade Secret

Chemical Hazard Classification

EHS

Fire Code Hazard Classes (by priority)
Combustible Liquid, Class III-B

Radioactive

Curies
0

Federal Hazard Categories
Yes **Fire**
Reactive
Pressure Release
Acute Health
Chronic Health

DOT Hazard Class

State Waste Code

Inventory Location and Quantity

Chemical Location
Inside electrical equipment

Chemical Location Confidential EPCRA

Map# (Optional)

Grid# (Optional)

Average Daily Amount
118000

Maximum Daily Amount
118000

Units
gallons

Largest Container
21382

Annual Waste Amount
0

Days on Site
365

Inventory Storage Information

Aboveground Tank	**Can**	**Box**	**Tank Truck, Tank Wagon**
Underground Tank	**Carboy**	**Cylinder**	**Tank Car, Rail Car**
Tank Inside Building	**Silo**	**Glass Bottle**	**Yes** **Other**
Steel Drum	**Fiber Drum**	**Plastic Bottle**	electrical equipment
Plastic/Non-Metallic Drum	**Bag**	**Tote Bin**	

Storage Pressure
Ambient

Storage Temperature
Ambient

Mixture Components

Hazardous Component Name	CAS Number	% by Weight	EHS	Additional Mixture Components
Severely Hydrotreated Light Naphthenic Petroleum Oil	64742-53-6	100.00		
Butylated Hydroxy Toluene	128-37-0	0.30		

Additional Chemical/Material Description

Additional Chemical Material Information

California Environmental Reporting System (CERS) — Hazardous Materials Inventory

Facility/Site

Southern California Edison Moorpark Substation
5027 Gabbert Rd
Moorpark, CA 93021

CERS ID: **10159591**

Submittal Status

Submitted on 2/28/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 3/19/2013 by *M Hernandez* for Ventura County Environmental Health

Chemical Identification and Physical Properties

Chemical Name		CERS Chemical Library ID
Nitrogen		
Common Name	**CAS Number**	**US EPA SRS Number**
Nitrogen	7727-37-9	153122

Physical State	Hazardous Material Type	Trade Secret
Gas	Pure	

Chemical Hazard Classification

EHS	Fire Code Hazard Classes (by priority)	Federal Hazard Categories		DOT Hazard Class
			Fire	2.2 - Nonflammable Gases
Radioactive			Reactive	State Waste Code
		Yes	Pressure Release	
Curies		Yes	Acute Health	
0			Chronic Health	

Inventory Location and Quantity

Chemical Location		Average Daily Amount	Maximum Daily Amount	Units
Inside electrical equipment		200	200	cubic feet
Chemical Location Confidential EPCRA		**Largest Container**	**Annual Waste Amount**	
		200	0	
Map# (Optional)	**Grid# (Optional)**	**Days on Site**		
		365		

Inventory Storage Information

Aboveground Tank	Can		Box	Tank Truck, Tank Wagon
Underground Tank	Carboy	Yes	Cylinder	Tank Car, Rail Car
Tank Inside Building	Silo		Glass Bottle	Other
Steel Drum	Fiber Drum		Plastic Bottle	
Plastic/Non-Metallic Drum	Bag		Tote Bin	

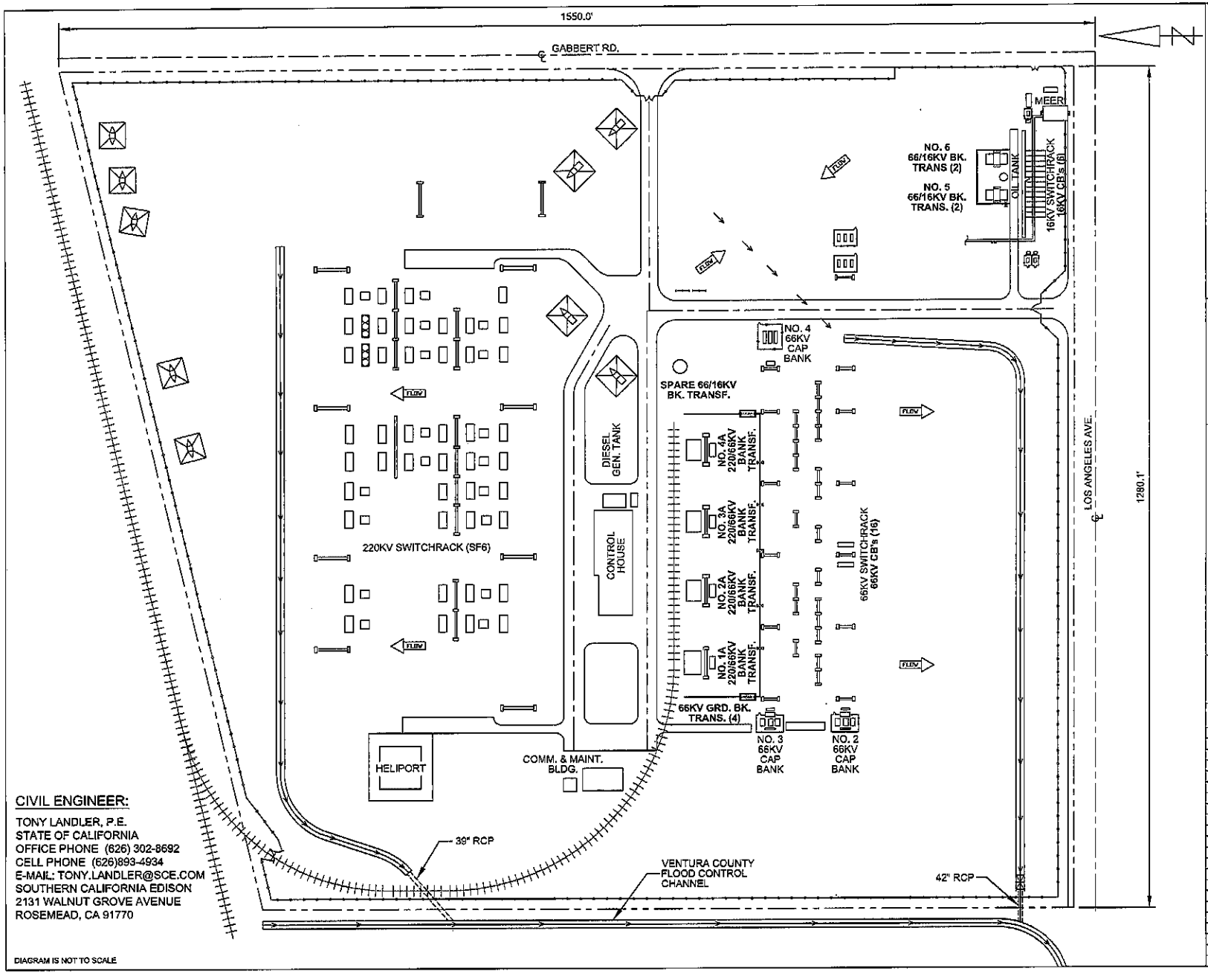
Storage Pressure	Storage Temperature
Above Ambient	Ambient

Mixture Components

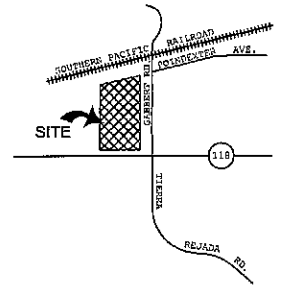
Hazardous Component Name	CAS Number	% by Weight	EHS	Additional Mixture Components

Additional Chemical/Material Description

Additional Chemical Material Information



VICINITY MAP



5027 GABBERT RD. (AT LOS ANGELES AVE.)
MOORPARK, CA 93021

NOTES

- REFER TO APPENDIX A FOR VOLUME OF OIL
- UNLESS OTHERWISE NOTED, ALL OIL IS MINERAL OIL
- SUBSTATION IS GRAVEL COVERED
- RED COLOR DENOTES REQUIRED IMPROVEMENTS

LEGEND

- PAVED DRIVEWAY
- RAMP
- BERM
- BLOCK WALL
- CHAIN LINK FENCE
- DRAINAGE VALVE
- SHEET FLOW
- DIRECTION OF DRAINAGE
- PROPERTY LINE

FIGURE 2 - SPCC PLOT PLAN

MOORPARK SUBSTATION

FILE NAME: MOORPARK_FIGURE 2_SITE PLAN.DWG

REVISIONS	
DESIGNERS	DATE
CGR ENGINEERING, INC.	04-01-09
AIYANA LUTTRELL	08-17-09

REFERENCE DRAWINGS	
5056PP-29	
5056PP-5	

CIVIL ENGINEER:

TONY LANDLER, P.E.
STATE OF CALIFORNIA
OFFICE PHONE (626) 302-8692
CELL PHONE (626)893-4934
E-MAIL: TONY.LANDLER@SCE.COM
SOUTHERN CALIFORNIA EDISON
2131 WALNUT GROVE AVENUE
ROSEMEAD, CA 91770

DIAGRAM IS NOT TO SCALE

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Ventura County Environmental Health Division
800 S. Victoria Ave., Ventura CA 93009-1730
TELEPHONE: 805/654-2813 or FAX: 805/654-2480
Internet Web Site Address: *www.ventura.org/rma/envhealth*

Emergency Response/Contingency Plan
Hazardous Materials Training Plan

At least one copy of the plan shall be maintained at the facility for use in the event of an emergency and for inspection by the local agency.

Facility Information

Business Name: Southern California Edison-Moorpark Substation	Business Telephone: (626) 302-1212
Site Address: 5027 Gabbert Rd	
City: Moorpark	Zip: 93021

Emergency Coordinators:

List personnel qualified to act as the facility's Emergency Coordinator. *(Note: Emergency Coordinator Responsibilities are described on page 2).*

PRIMARY EMERGENCY COORDINATOR	SECONDARY EMERGENCY COORDINATOR
Name: Andy Melendez	Name Berny Osendorf
Title: Safety and Environmental Specialist	Title: Supervisor
Business Phone: (626) 302-1212	Business Telehone: (626) 302-1212
24 Hour Telephone: (626) 302-1212	24 Hour Telephone: (626) 302-1212
Pager Number:	Pager Number:

☐ *(Check box only if applicable)* Additional Emergency Coordinators are listed on page ____of this plan.

Evacuation Plan:

1. The following alarm signal(s) will be used to begin evacuation of the facility *(check all which apply)*:

   ☐ Bells; ☐ Horns/Sirens; X Verbal *(i.e,. shouting)*; ☐ Other *(specify)*

2. XEvacuation map is prominently displayed throughout the facility.

Emergency and Mandatory Release Reporting Contacts:

Fire/Police/Ambulance . . . . . Phone No. **911**
State Office of Emergency Services . . . . . Phone No. **800/852-7550**
Ventura County Environmental Health Division .....(Business Hours) . . . . . Phone No. **805/654-2813**
(After Hours) . . . . . Phone No. **911**

Emergency Resource :

Nearest Hospital

Name: Los Robles Regional Medical Center	Telephone: (805) 497-2727
Address: 215 W Janss Rd	City: Thousand Oaks

Arrangements With Emergency Responders:

List arrangements made with any police department, fire department, hospital, contractor, or State or local emergency response team to coordinate emergency services.

Emergency Procedures:

Emergency Coordinator Responsibilities:

1. Whenever there is an imminent or actual emergency situation such as an explosion, fire, or release, the emergency coordinator *(or his/her designee when the emergency coordinator is on call)* shall:
   a. Identify the character, exact source, amount, and areal extent of any released hazardous materials.
   b. Assess possible hazards to human health or the environment that may result from the explosion, fire, or chemical release. This assessment must consider both direct and indirect effects specific to the properties of the released hazardous material.
   c. Activate internal facility alarms or communications systems, where applicable, to notify all facility personnel.
   d. Notify appropriate local authorities *(i.e., call 911)*.
   e. Notify the State Office of Emergency Services at 1-800/852-7550.
   f. Monitor for leaks, pressure build-up, gas generation, or ruptures in valves, pipes, or other equipment shut down in response to the incident.
   g. Take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous materials at the facility.
2. Before facility operations are resumed in areas of the facility affected by the incident, the emergency coordinator shall:
   a. Provide for proper storage and disposal of recovered waste, contaminated soil or surface water, or any other material that results from a explosion, fire, or release at the facility.
   b. Ensure that no material that is incompatible with the released material is transferred, stored, or disposed of in areas of the facility affected by the incident until cleanup procedures are completed.
   c. Ensure that all emergency equipment is cleaned, fit for its intended use, and available for use.

Responsibilities of Other Personnel:

List any emergency response functions not covered in the "Emergency Coordinator Responsibilities" section above. Next to each function, list the job title or name of each person responsible for performing the function.

Function	Name/Job Title

Describe activities and response actions personnel will take in the event of a hazardous materials release, fire or explosion.

Emergency Equipment:

EMERGENCY EQUIPMENT INVENTORY TABLE

Equipment Category	Equipment Type	Location and Capabilities *
Personal Protective, Equipment, Safety Equipment, and First Aid Equipment	☐ Air Purifying Respirators	
	☐ Chemical Monitoring Equipment *(describe)*	
	☐ Chemical Protective Aprons/Coats	
	X Chemical Protective Boots	Rubber Boots
	X Chemical Protective Gloves	Nitrile Gloves
	X Chemical Protective Suits *(describe)*	Tyvek Suits
	☐ Face Shields	
	X First Aid Kits/Stations *(describe)*	Throughout facility & on vehicles
	X Hard Hats	Carried by employees
	☐ Plumbed Eye Wash Stations	
	X Portable Eye Wash Kits *(i.e., bottle type)*	
	☐ Respirator Cartridges *(describe)*	
	X Safety Glasses/Splash Goggles	Carried by employees
	☐ Safety Showers	
	☐ Self-Contained Breathing Apparatuses (SCBA)	
	☐ Other *(describe)*	
Fire Extinguishing Systems	☐ Automatic Fire Sprinkler Systems	
	☐ Fire Alarm Boxes/Stations	
	☐ Fire Extinguisher Systems *(describe)*	
	X Other *(describe)*	Portable fire extinguishers
Spill Control Equipment and Decontamination Equipment	X Absorbents *(describe)*	Kitty Litter
	X Berms/Dikes *(describe)*	Throughout facility
	☐ Decontamination Equipment *(describe)*	
	☐ Emergency Tanks *(describe)*	
	☐ Exhaust Hoods	
	☐ Gas Cylinder Leak Repair Kits *(describe)*	
	☐ Neutralizers *(describe)*	
	☐ Overpack Drums	
	☐ Sumps *(describe)*	
	☐ Other *(describe)*	
Communications And Alarm Systems	☐ Chemical Alarms *(describe)*	
	☐ Intercoms/ PA Systems	
	☐ Portable Radios	On Vehicles
	X Telephones	Carried by employees
	☐ Underground Tank Leak Detection Monitors	
	☐ Other *(describe)*	
Additional Equipment *(Use Additional Pages if Needed)*		

* ***Describe equipment location and its capabilities.***

Training:

Check all boxes which apply.

1. **Personnel** are trained in the following procedures:

X	Internal alarm/notification
X	Evacuation/re-entry procedures & assembly point locations
X	Emergency incident reporting
X	External emergency response organization notification
X	Location(s) and contents of Emergency Response/Contingency Plan

2. **Chemical Handlers** are annually trained in the following:

X	Safe methods for handling and storage of hazardous materials
X	Location(s) and proper use of fire and spill control equipment
X	Spill procedures/emergency procedures
X	Proper use of personal protective equipment
X	Specific hazard(s) of each chemical to which they may be exposed, including routes of exposure *(i.e. inhalation, ingestion, absorption)*
X	**Hazardous Waste Handlers/Managers** are trained in all aspects of hazardous waste management specific to their job duties *(e.g., container accumulation time requirements, labeling requirements, storage area inspection requirements, manifesting requirements, etc.)*

3. **Emergency Response Team Members** are capable of and engaged in the following:

X	Personnel rescue procedures
X	Shutdown of operations
X	Liaison with responding agencies
X	Use, maintenance, and replacement of emergency response equipment
X	Refresher training, which is provided at least annually
X	Emergency response drills, which are conducted at least *(specify; e.g., "Quarterly", etc.)*

Amendment of Contingency Plan:

This plan must be reviewed, and immediately amended, if necessary, whenever:

a. Applicable regulations are revised.
b. The plan fails in an emergency.
c. The facility changes its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency.
d. The list of emergency coordinators changes.
e. The list of emergency equipment changes.

Emergency Coordinator Signature _____ Date _____

EH&S at Our Site
Information Packet for
MOORPARK SUBSTATION

Introduction

The EH&S at Our Site training consists of two components: The Computer-Based Training (CBT) component and the Site-Specific Information Packet component. Both components must be completed in order to receive credit for the training. **To receive credit for this segment of the EH&S at Our Site, you MUST certify receipt of this packet when prompted upon completion of the CBT. OR if you have recently moved to another facility, please notify Compliance Training at Compliance.Trng@sce.com to be properly enrolled at your new facility.** The following represents the Site-Specific Training component for the Moorpark Substation.

Site Specific Information

Site EH&S Manager: Mark D Kelley
Alternate Site EH&S Manager: Rob Wagner/ Ronnie Luna
CR Facility Manager: Dan Slider

You may contact any of the above individuals via the SCE Operator at (800) 621-8516.

Compliance Files

The EH&S Programs and Site Specific Implementation Plans can be found in this facility's compliance file cabinet located in Mark D. Kelley's office. The following includes important emergency information from site-specific plans (Facility Emergency Action Plan, Fire Prevention Plan, and Injury and Illness Prevention Plan) for this facility that every employee should know:

Emergency Response Coordinator (ERC) Contact Information:
Emergency Response Coordinator: Mark Kelley

Medical Facility Information:
Medical Facility Name: CMH Fillmore
Address: 852 Ventura St, Fillmore, CA 93015
Phone Number: (805) 524-2672

For medical emergencies dial (9) 9-1-1 first, followed by calling the Corporate Security Central Alarm Station (CAS) at PAX 27878 or (626) 302-7878.

First aid kits are located throughout each building. Please locate your closest first aid kit, or ask your supervisor for the location.

Emergency Procedures – In the event of an emergency, employees and emergency response team members, or Life Safety Coordinators (LSCs) where applicable, will generally follow these steps:

- **Assess** – Determine the nature of the emergency.
- **Announce** – Sound the alarm as appropriate for the type of emergency.
    - **Fire** - Use a bullhorn to notify on-site employees of the emergency, and then evacuate according to the evacuation maps located at the facility.
    - **Earthquake** – The earthquake will act as a self-evident alarm of the need to duck, cover, and hold until shaking has stopped, and then the emergency response team will verbally announce the action to take: whether to shelter-in-place or evacuate according to the evacuation maps located at the facility.
    - **Chemical Release or Other Catastrophic Event or Emergency** - Use a bullhorn to notify on-site employees of the emergency, and then wait for directions. The emergency response team, or LSCs, will verbally announce the action to take: whether shelter-in-place or evacuate according to the evacuation maps located at the facility.
- **Assemble** – Proceed to the assembly area closest to your assigned work area, only if it is safe to do so. Look for direction from emergency response team members or LSCs. If it is not safe to do so, proceed to the nearest alternate assembly area. Assembly areas can be found on Figure 1.
- **Account** – Emergency response team members (or LSCs) will take roll to identify any persons missing and will report this information to the Emergency Response Coordinator.
- **Report** – The Emergency Response Coordinator will report any missing persons and location of chemical storage areas to the emergency responders.
- **Repopulate** – After emergency responders have determined the building to be safe to re-enter, the Emergency Response Coordinator will notify emergency team members (or LSCs). Emergency team members will coordinate the repopulation of the building. In some cases, the building may not be safe to re-enter and employees will be directed to an alternate site or released to go home until further notice.

Hazard Communication - In addition, the compliance file cabinet contains the corporate Hazard Communication Program, or guidance on how to obtain a copy of the program.

All employees that use hazardous substances (chemicals or chemical products) as a part of their job are required to know and understand the hazards associated with the hazardous substances they use and how to protect themselves from any harmful effects. Supervisors and employees must review the chemical manufacturer's label; paying special attention to any warnings. Supervisors are responsible for the following:

- Evaluating employees' work areas
- Ensuring that employees are trained on the hazards associated with the hazardous substances used in the work area
- Ensuring that employees are trained on how to protect themselves from the hazards to which they may be exposed
- Ensuring that employees are trained prior to the introduction of a new chemical or chemical process into the workplace
- Providing appropriate personal protective equipment (PPE) to employees and ensuring that employees are properly trained in its use

Employees are responsible for wearing and maintaining any personal protective equipment as required. For further information on a chemical, obtain a copy of the Material Safety Data Sheet (MSDS) by contacting the 3E Company at (800) 451-8346 or online via the Portal.

Business Emergency Plan/Hazardous Material Incidents

In the event of a hazardous material release, employees shall immediately notify local management upon discovery of the release. Employees qualified to respond to a release have the following materials available for their use:

- Hand held fire extinguishers
- Oil absorbent granules
- Oil absorbent pads/booms
- Shovels
- Brooms
- Drums

The response equipment is located at the hazardous waste storage area and in the Maintenance Shop areas. Contact the TDBU Environmental Specialist if additional resources are needed.

In the event of an earthquake, on-site hazardous material systems that are vulnerable to ground-motion induced damage are the mineral oil storage tank and large oil-filled transformers in the switch racks. Site emergency personnel should immediately check the tank and transformers for damage/leaks following an earthquake.

Storm Water Best Management Practices

The facility has a Storm Water Management Plan that helps prevent storm water contamination. The Plan identifies sources of pollution and utilizes Best Management Practices (BMPs) to prevent the capture of pollutants into storm water runoff from the site.

The attached facility map shows where chemicals, a common pollutant source, are stored. Common Plan BMPs that employees should use include:

- Keeping material containers closed and in containment when not in use
- Promptly clean up spills and spill clean-up materials
- Only washing vehicles and equipment in approved areas
- Keeping the facility free of dirt and debris (contact CR if sweeping of the site is needed)

What To Do If You Have Questions

If you have any questions, ask your supervisor, site EH&S manager, or Safety & Environmental Specialist (SES) for clarification.

Moorpark Substation
Facility Evacuation Assembly Areas and Chemical Hazards

Building evacuation maps are located throughout each building. Refer to these maps for direction on how to exit the building in an emergency. Upon exiting the building, proceed to the appropriate assembly area, as identified below.

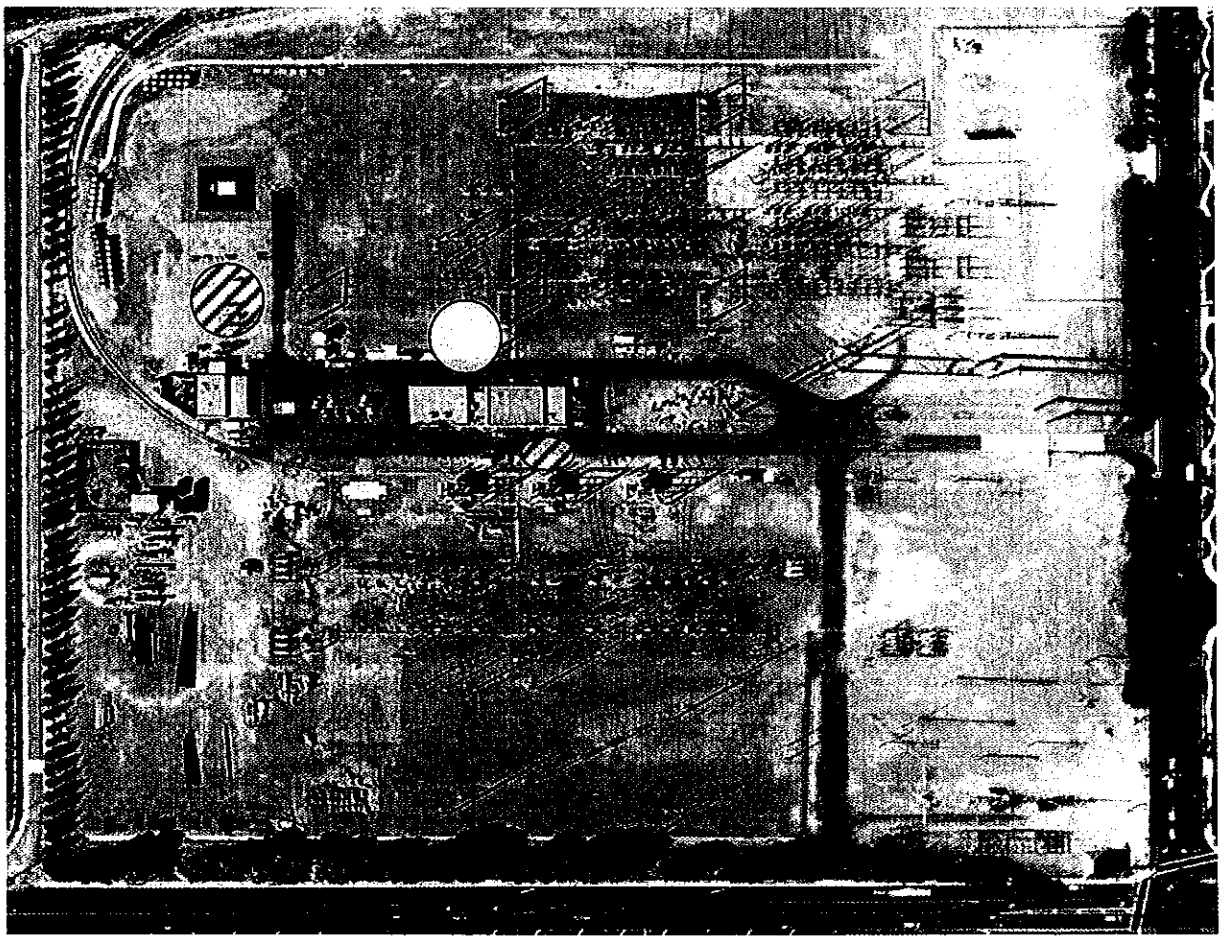


Figure 1

Yellow circles (solid) indicate the location of assembly areas.

Green circles (striped) indicate the location of chemical storage areas.

Leading the Way in Electricity

SOUTHERN CALIFORNIA EDISON®

An *EDISON INTERNATIONAL*® Company

Hazardous Materials Business Plan

SCE - Newbury Substation

1295 Lawrence Dr

Newbury Park, CA 91320

CERS ID: 10400107

Site Identification

Southern California Edison Newbury Substation
1295 Lawrence Dr
Newbury Park, CA 91320
County
Ventura

CERS ID
10400107
EPA ID Number

Submittal Status

Submitted on 6/21/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 6/21/2013 by *Gina Teresa* for Ventura County Environmental Health

Hazardous Materials

Does your facility have on site (for any purpose) at any one time, hazardous materials at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in ASTs and USTs); or is regulated under more restrictive inventory local reporting requirements (shown below if present); or the applicable Federal threshold quantity for an extremely hazardous substance specified in 40 CFR Part 355, Appendix A or B; or handle radiological materials in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40 or 70?	**Yes**

Underground Petroleum Storage (UST)

Does your facility own or operate underground storage tanks?	**No**

Hazardous Waste

Is your facility a Hazardous Waste Generator?	**No**
Does your facility treat hazardous waste on-site?	**No**
Is your facility's treatment subject to financial assurance requirements (for Permit by Rule and Conditional Authorization)?	**No**
Does your facility consolidate hazardous waste generated at a remote site?	**No**
Does your facility need to report the closure/removal of a tank that was classified as hazardous waste and cleaned on-site?	**No**
Does your facility generate in any single calendar month 1,000 kilograms (kg) (2,200 pounds) or more of federal RCRA hazardous waste, or generate in any single calendar month, or accumulate at any time, 1 kg (2.2 pounds) of RCRA acute hazardous waste; or generate or accumulate at any time more than 100 kg (220 pounds) of spill cleanup materials contaminated with RCRA acute hazardous waste.	**No**
Is your facility a Household Hazardous Waste (HHW) Collection site?	**No**

Excluded and/or Exempted Materials

Does your facility recycle more than 100 kg/month of excluded or exempted recyclable materials (per HSC 25143.2)?	**No**
Does your facility own or operate ASTs above these thresholds? Store greater than 1,320 gallons of petroleum products (new or used) in aboveground tanks or containers.	**No**
Does your facility have Regulated Substances stored onsite in quantities greater than the threshold quantities established by the California Accidental Release prevention Program (CalARP)?	**No**

Additional Information

No additional comments provided.

Facility/Site

Southern California Edison Newbury Substation
1295 Lawrence Dr
Newbury Park, CA 91320

CERS ID
10400107

Submittal Status

Submitted on 6/21/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 6/21/2013 by *Gina Teresa* for Ventura County Environmental Health

Identification

Southern California Edison

Operator Phone	Business Phone	Business Fax
(626) 302-1212	(626) 302-1212	

Beginning Date	Ending Date	
3/1/2013	3/1/2014	
Dun & Bradstreet	**SIC Code**	**Primary NAICS**
195138458	4911	221122

Facility/Site Mailing Address

P.O. Box 800 (Attn: CEH&S Compliance MOB)
Rosemead , CA 91770

Primary Emergency Contact

Andy Melendez
Title
Safety and Environmental Specialist

Business Phone	24-Hour Phone	Pager Number
(626) 302-1212	(626) 302-1212	

Owner

Southern California Edison
(626) 302-1212
P.O. Box 800 (Attn: CEH&S Compliance MOB)
Rosemead , CA 91770

Secondary Emergency Contact

Berny Osendorf
Title
Supervisor

Business Phone	24-Hour Phone	Pager Number
(626) 302-1212	(626) 302-1212	

Billing Contact

Southern California Edison
(626) 302-1212
CMSADMIN@sce.com
P.O. Box 800 (Attn: CEH&S Compliance MOB)
Rosemead , CA 91770

Environmental Contact

Andy Melendez
(626) 302-1212
Andy.melendez@sce.com
P.O. Box 800 (Attn: CEH&S Compliance MOB)
Rosemead, CA 91770

Certification

Andy Melendez

Signer Title	Date Signed/Submitted	Document Preparer
Safety and Environmental Specialist	6/21/2013	Andy Melendez

Additional Information
Taxpayer Identification number: 95-1240335

Locally-collected Fields

Some or all of the following fields may be required by your local regulator(s).

Property Owner
Southern California Edison
Phone
(626) 302-1212
Mailing Address
P.O. Box 800 (Attn: CEH&S Compliance MOB)
Rosemead , CA 91770

Assessor Parcel Number (APN)

Number of Employees
0
Facility ID

Facility/Site

Southern California Edison Newbury Substation
1295 Lawrence Dr
Newbury Park, CA 91320

CERS ID
10400107

Submittal Status

Submitted on 6/21/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 6/21/2013 by *Gina Teresa* for Ventura County Environmental Health

Chemical Identification and Physical Properties

Chemical Name
Mineral Oil

CERS Chemical Library ID

Common Name
Mineral Oil

CAS Number

US EPA SRS Number

Physical State
Liquid

Hazardous Material Type
Mixture

Trade Secret

Chemical Hazard Classification

EHS

Fire Code Hazard Classes (by priority)
Combustible Liquid, Class III-B

Federal Hazard Categories
Yes Fire
Reactive
Pressure Release
Acute Health
Yes Chronic Health

DOT Hazard Class

Radioactive

State Waste Code

Curies
0

Inventory Location and Quantity

Chemical Location
Inside electrical equipment

Average Daily Amount
12742

Maximum Daily Amount
12742

Units
gallons

Chemical Location Confidential EPCRA

Largest Container
3550

Annual Waste Amount
0

Map# (Optional)

Grid# (Optional)

Days on Site
365

Inventory Storage Information

Aboveground Tank	Can	Box	Tank Truck, Tank Wagon
Underground Tank	Carboy	Cylinder	Tank Car, Rail Car
Tank Inside Building	Silo	Glass Bottle	Yes Other
Steel Drum	Fiber Drum	Plastic Bottle	electrical equipment
Plastic/Non-Metallic Drum	Bag	Tote Bin	

Storage Pressure
Ambient

Storage Temperature
Ambient

Mixture Components

Hazardous Component Name	CAS Number	% by Weight	EHS	Additional Mixture Components
Severely Hydrotreated Light Naphthenic Petroleum Oil	64742-53-6	100.00		
Butylated Hydroxy Toluene	128-37-0	0.30		

Additional Chemical/Material Description

Additional Chemical Material Information

California Environmental Reporting System (CERS) — Hazardous Materials Inventory

Facility/Site

Southern California Edison Newbury Substation
1295 Lawrence Dr
Newbury Park, CA 91320

CERS ID: **10400107**

Submittal Status

Submitted on 6/21/2013 by *Andy Melendez* of Southern California Edison, Transmission and Distribution Organization (TD) (Rosemead, CA)
Submittal was ***Accepted***; Processed on 6/21/2013 by *Gina Teresa* for Ventura County Environmental Health

Chemical Identification and Physical Properties

Chemical Name		CERS Chemical Library ID
Sulfur Hexafluoride Gas		
Common Name	**CAS Number**	**US EPA SRS Number**
SF 6 Gas	2551-62-4	

Physical State	Hazardous Material Type	Trade Secret
Gas	Pure	

Chemical Hazard Classification

EHS	Fire Code Hazard Classes (by priority)	Federal Hazard Categories		DOT Hazard Class
	Irritant		Fire	2.2 - Nonflammable Gases
Radioactive			Reactive	**State Waste Code**
		Yes	Pressure Release	
Curies		Yes	Acute Health	
0			Chronic Health	

Inventory Location and Quantity

Chemical Location		Average Daily Amount	Maximum Daily Amount	Units
Inside electrical equipment		364	364	cubic feet
Chemical Location Confidential EPCRA		**Largest Container**	**Annual Waste Amount**	
		65	0	
Map# (Optional)	**Grid# (Optional)**	**Days on Site**		
		365		

Inventory Storage Information

	Aboveground Tank		Can		Box		Tank Truck, Tank Wagon
	Underground Tank		Carboy		Cylinder		Tank Car, Rail Car
	Tank Inside Building		Silo		Glass Bottle	Yes	Other
	Steel Drum		Fiber Drum		Plastic Bottle	electrical equipment	
	Plastic/Non-Metallic Drum		Bag		Tote Bin		

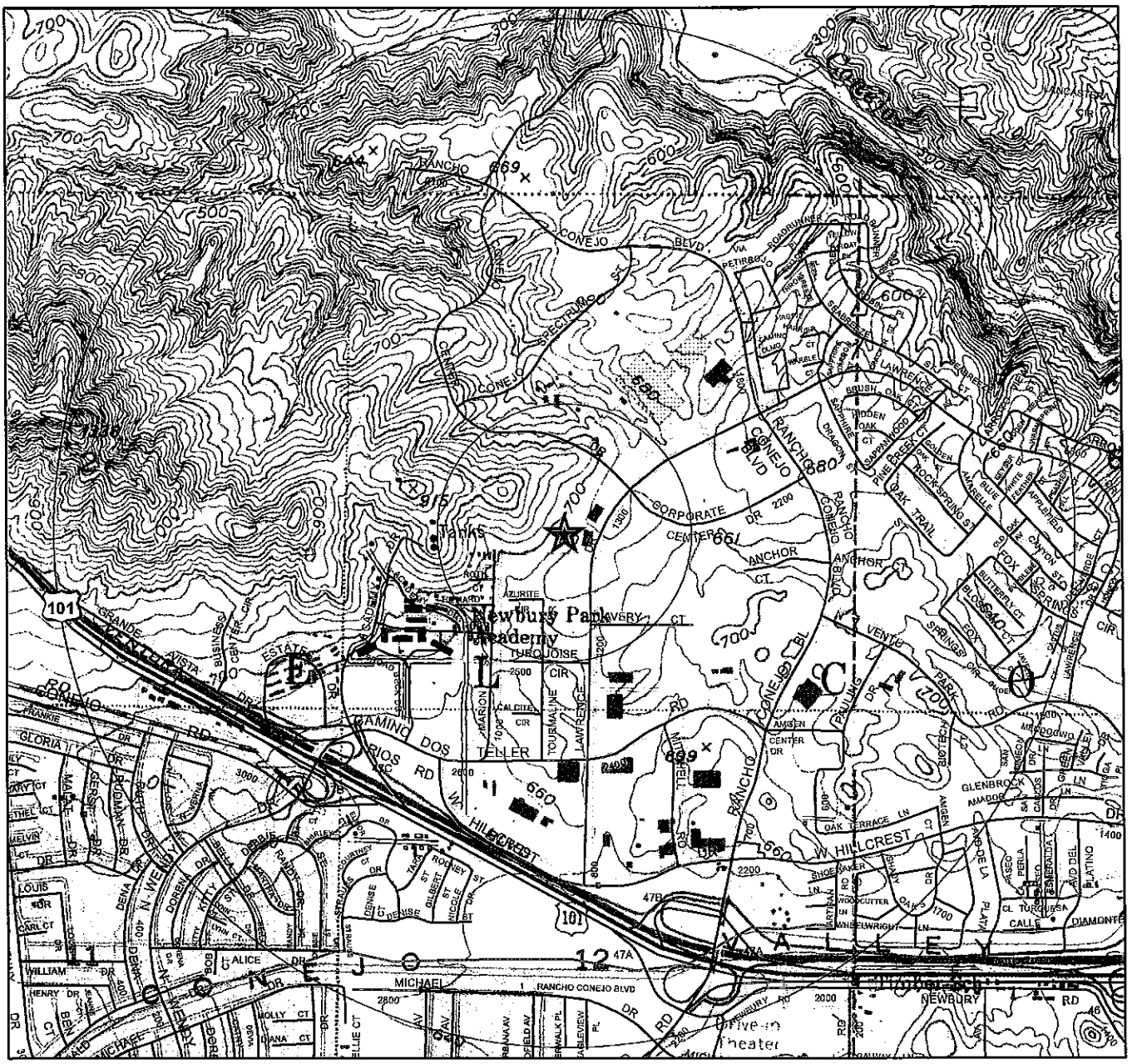
Storage Pressure	Storage Temperature
Above Ambient	Ambient

Mixture Components

Hazardous Component Name	CAS Number	% by Weight	EHS	Additional Mixture Components

Additional Chemical/Material Description

Additional Chemical Material Information



0 0.125 0.25 0.5 0.75 1 Miles

Target Property

Target Property: NEWBURY Substation
Address: 1295 LAWRENCE DR.
(REAR OF TILE TRENDS CO.)

City/State/Zip: MOORPARK/CA/91320
Source: Thomas Bros. Street Data

Map Number:	SPCC
Issued For:	A. LANDLER
Projection:	UTM NAD83 Zone 11N
Approved by:	R. Ung
GIS Phone:	(626) 302-9885
Supervisor:	R. Ung
Created by:	J. Schaefle
Date:	6/23/2009

N

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FIGURE 1

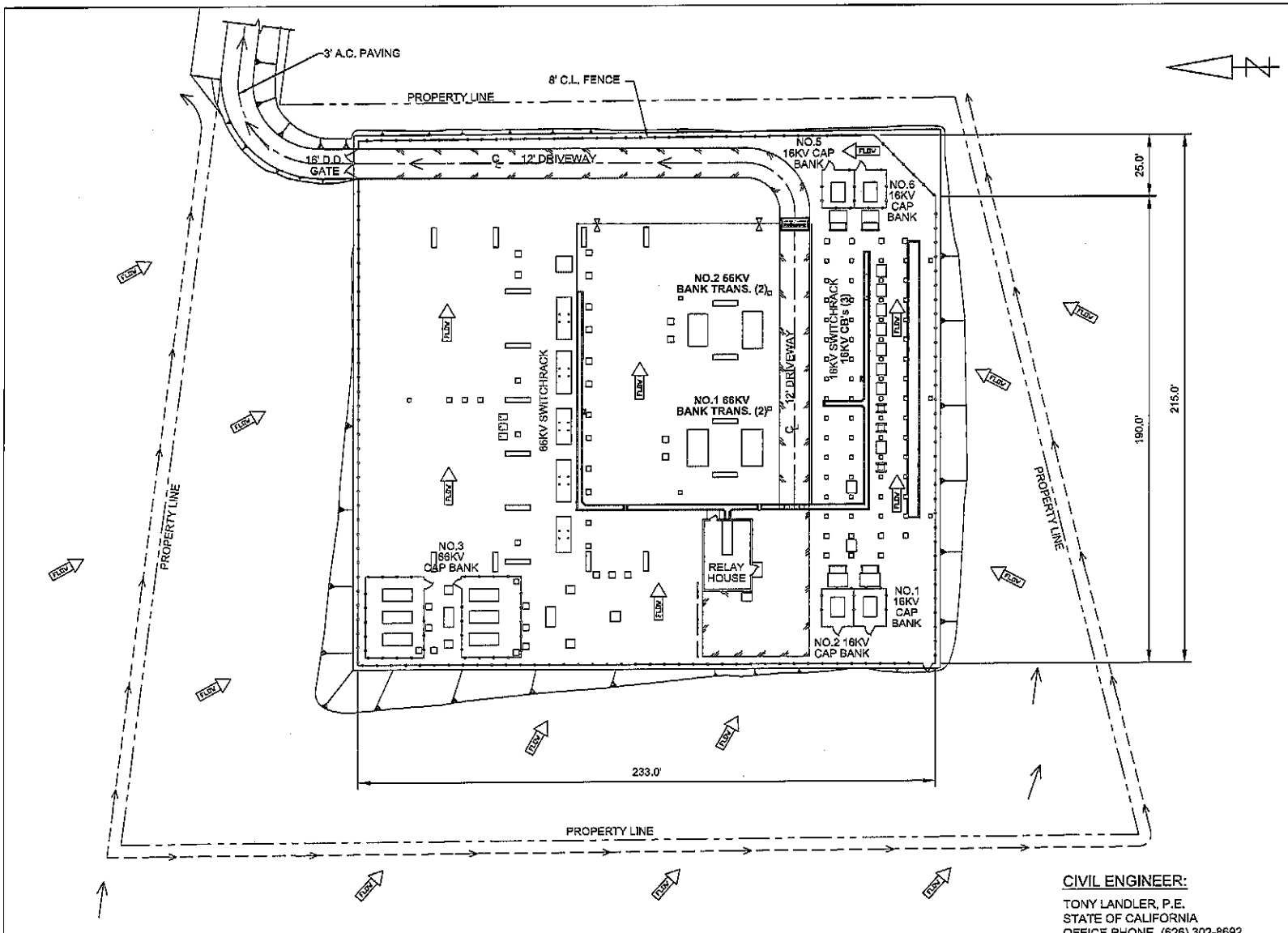
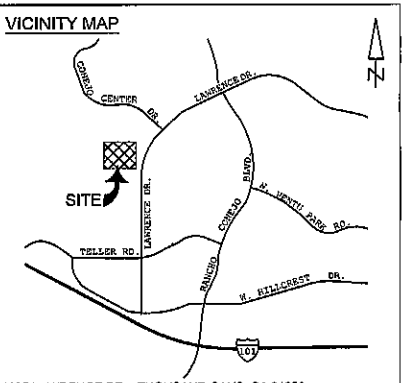


DIAGRAM IS NOT TO SCALE

VICINITY MAP



1295 LAWRENCE DR. THOUSAND OAKS, CA 91320

NOTES

- REFER TO APPENDIX A FOR VOLUME OF OIL
- UNLESS OTHERWISE NOTED, ALL OIL IS MINERAL OIL
- SUBSTATION IS GRAVEL COVERED
- RED COLOR DENOTES REQUIRED IMPROVEMENTS

LEGEND

- PAVED DRIVEWAY
- RAMP
- BERM
- BLOCK WALL
- CHAIN LINK FENCE
- DRAINAGE VALVE
- SHEET FLOW
- DIRECTION OF DRAINAGE
- PROPERTY LINE

FIGURE 2 - SPCC PLOT PLAN

NEWBURY SUBSTATION

FILE NAME: NEWBURY_FIGURE 2_SITE PLAN.DWG

REVISIONS	
DESIGNERS	DATE
CGR ENGINEERING, INC.	05-29-09
AIYANA LUTTRELL	06-18-09

REFERENCE DRAWINGS	
553965	
583300	

CIVIL ENGINEER:

TONY LANDLER, P.E.
STATE OF CALIFORNIA
OFFICE PHONE (626) 302-8692
CELL PHONE (626)893-4934
E-MAIL: TONY.LANDLER@SCE.COM
SOUTHERN CALIFORNIA EDISON
2244 WALNUT GROVE AVENUE
ROSEMEAD, CA 91770

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Ventura County Environmental Health Division
800 S. Victoria Ave., Ventura CA 93009-1730
TELEPHONE: 805/654-2813 or FAX: 805/654-2480
Internet Web Site Address: *www.ventura.org/rma/envhealth*

Emergency Response/Contingency Plan
Hazardous Materials Training Plan

At least one copy of the plan shall be maintained at the facility for use in the event of an emergency and for inspection by the local agency.

Facility Information

Business Name: Southern California Edison Newbury Substation	Business Telephone: (626) 302-1212
Site Address: 1295 Lawrence Drive	
City: Newbury Park	Zip: 91320

Emergency Coordinators:

List personnel qualified to act as the facility's Emergency Coordinator. *(Note: Emergency Coordinator Responsibilities are described on page 2).*

PRIMARY EMERGENCY COORDINATOR	SECONDARY EMERGENCY COORDINATOR
Name: Andy Melendez	Name: Berny Osendorf
Title: Safety and Environmental Specialist	Title: Supervisor
Business Phone: (626) 302-1212	Business Phone: (626) 302-1212
24 Hour Telephone: (626) 302-1212	24 Hour Telephone: (626) 302-1212
Pager Number:	Pager Number:

☐ *(Check box only if applicable)* Additional Emergency Coordinators are listed on page ____of this plan.

Evacuation Plan:

1. The following alarm signal(s) will be used to begin evacuation of the facility *(check all which apply)*:

   ☐ Bells; ☐ Horns/Sirens; x☐ Verbal *(i.e,. shouting)*; ☐ Other *(specify)*

2. x☐ Evacuation map is prominently displayed throughout the facility.

Emergency and Mandatory Release Reporting Contacts:

Fire/Police/Ambulance		Phone No. **911**
State Office of Emergency Services		Phone No. **800/852-7550**
Ventura County Environmental Health Division	(Business Hours)	Phone No. **805/654-2813**
	(After Hours)	Phone No. **911**
Emergency Resource :		

Nearest Hospital

Name: Los Robles Medical Center	Telephone: (805) 497-2727
Address: 215 Janss Road	City: Thousand Oaks

Arrangements With Emergency Responders:

List arrangements made with any police department, fire department, hospital, contractor, or State or local emergency response team to coordinate emergency services.

None

Emergency Procedures:

Emergency Coordinator Responsibilities:

1. Whenever there is an imminent or actual emergency situation such as an explosion, fire, or release, the emergency coordinator *(or his/her designee when the emergency coordinator is on call)* shall:

   a. Identify the character, exact source, amount, and areal extent of any released hazardous materials.
   b. Assess possible hazards to human health or the environment that may result from the explosion, fire, or chemical release. This assessment must consider both direct and indirect effects specific to the properties of the released hazardous material.
   c. Activate internal facility alarms or communications systems, where applicable, to notify all facility personnel.
   d. Notify appropriate local authorities *(i.e., call 911)*.
   e. Notify the State Office of Emergency Services at 1-800/852-7550.
   f. Monitor for leaks, pressure build-up, gas generation, or ruptures in valves, pipes, or other equipment shut down in response to the incident.
   g. Take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous materials at the facility.

2. Before facility operations are resumed in areas of the facility affected by the incident, the emergency coordinator shall:

   a. Provide for proper storage and disposal of recovered waste, contaminated soil or surface water, or any other material that results from a explosion, fire, or release at the facility.
   b. Ensure that no material that is incompatible with the released material is transferred, stored, or disposed of in areas of the facility affected by the incident until cleanup procedures are completed.
   c. Ensure that all emergency equipment is cleaned, fit for its intended use, and available for use.

Responsibilities of Other Personnel:

List any emergency response functions not covered in the "Emergency Coordinator Responsibilities" section above. Next to each function, list the job title or name of each person responsible for performing the function.

Function	Name/Job Title
N/A	N/A

Describe activities and response actions personnel will take in the event of a hazardous materials release, fire or explosion.

In the event of a leak, spill, fire, explosion, or airborne release, personnel will immediately respond to the scene to assess the situation. Employees are trained to respond to small, incidental spills that can be absorbed, neutralized, or otherwise controlled at the time of release. If the event is beyond the training of SCE personnel, SCE approved contractors will be contracted to immediately respond. In situations which require immediate emergency response (large fires, serious injuries, etc.), employees will call 911. Petroleum products, transformer mineral oil, and hazardous waste storage areas are located adequate distances from storm drains and/or provided with secondary containment. Absorbent materials are kept in close proximity in the event of a spill or leak. Fire extinguishers are readily available in case of fire. Adequate lighting is provided to facilitate the detection of oil or fuel leaks. Leaking oil-filled equipment, awaiting shipment, is stored in secondary containment systems.

Emergency Equipment:

EMERGENCY EQUIPMENT INVENTORY TABLE

Equipment Category	Equipment Type	Location and Capabilities *
Personal Protective, Equipment, Safety Equipment, And First Aid Equipment	☐ Air Purifying Respirators	
	☐ Chemical Monitoring Equipment *(describe)*	
	☐ Chemical Protective Aprons/Coats	
	x☐ Chemical Protective Boots	Rubber boots in vehicles
	x☐ Chemical Protective Gloves	Rubber gloves in vehicles
	x☐ Chemical Protective Suits *(describe)*	*Tyvek suits in vehicles*
	☐ Face Shields	
	x☐ First Aid Kits/Stations *(describe)*	*On vehicles*
	x☐ Hard Hats	On employees
	☐ Plumbed Eye Wash Stations	
	x☐ Portable Eye Wash Kits *(i.e., bottle type)*	*On vehicles*
	☐ Respirator Cartridges *(describe)*	
	x☐ Safety Glasses/Splash Goggles	On employees
	☐ Safety Showers	
	☐ Self-Contained Breathing Apparatuses (SCBA)	
	☐ Other *(describe)*	
Fire Extinguishing Systems	☐ Automatic Fire Sprinkler Systems	
	☐ Fire Alarm Boxes/Stations	
	x☐ Fire Extinguisher Systems *(describe)*	*On vehicles*
	☐ Other *(describe)*	
Spill Control Equipment And Decontamination Equipment	x☐ Absorbents *(describe)*	*On vehicles*
	x☐ Berms/Dikes *(describe)*	*Throughout Facility*
	☐ Decontamination Equipment *(describe)*	
	☐ Emergency Tanks *(describe)*	
	☐ Exhaust Hoods	
	☐ Gas Cylinder Leak Repair Kits *(describe)*	
	☐ Neutralizers *(describe)*	
	☐ Overpack Drums	
	☐ Sumps *(describe)*	
	☐ Other *(describe)*	
Communications And Alarm Systems	☐ Chemical Alarms *(describe)*	
	☐ Intercoms/ PA Systems	
	x☐ Portable Radios	Two-way radios in vehicles
	x☐ Telephones	Cellular phones on employees
	☐ Underground Tank Leak Detection Monitors	
	☐ Other *(describe)*	
Additional Equipment *(Use Additional Pages if Needed)*		

* ***Describe equipment location and its capabilities.***

Training: Check all boxes which apply.

1. **Personnel** are trained in the following procedures:

x☐	Internal alarm/notification
x☐	Evacuation/re-entry procedures & assembly point locations
x☐	Emergency incident reporting
x☐	External emergency response organization notification
x☐	Location(s) and contents of Emergency Response/Contingency Plan

2. **Chemical Handlers** are annually trained in the following:

x☐	Safe methods for handling and storage of hazardous materials
x☐	Location(s) and proper use of fire and spill control equipment
x☐	Spill procedures/emergency procedures
x☐	Proper use of personal protective equipment
x☐	Specific hazard(s) of each chemical to which they may be exposed, including routes of exposure *(i.e. inhalation, ingestion, absorption)*
x☐	**Hazardous Waste Handlers/Managers** are trained in all aspects of hazardous waste management specific to their job duties *(e.g., container accumulation time requirements, labeling requirements, storage area inspection requirements, manifesting requirements, etc.)*

3. **Emergency Response Team Members** are capable of and engaged in the following:

x☐	Personnel rescue procedures
x☐	Shutdown of operations
x☐	Liaison with responding agencies
x☐	Use, maintenance, and replacement of emergency response equipment
x☐	Refresher training, which is provided at least annually
x☐	Emergency response drills, which are conducted at least *(specify; e.g., "Quarterly", etc.)*

Earthquake Vulnerability:

Check all boxes which apply.

1. Identify areas of the facility where releases could occur or would require immediate inspection or isolation because of vulnerability to earthquake related ground motion:

x☐	Hazardous waste/hazardous materials storage areas
☐	Production floor
☐	Process lines/piping
☐	Laboratory
☐	Waste Treatment
x☐	Other: Electrical Equipment

2. Identify mechanical systems where releases could occur or would require immediate inspection or isolation because of vulnerability to earthquake related ground motion:

x☐	Utilities	☐ Sprinkler Systems	☐ Cabinets	☐ Shelves	☐ Racks
☐	Pressure Vessels	☐ Gas Cylinders	☐ Tanks	☐ Process Piping	☐ Shutoff Valves
x☐	Other: Electircal Equipment				

Amendment of Contingency Plan:

This plan must be reviewed, and immediately amended, if necessary, whenever:

a. Applicable regulations are revised.
b. The plan fails in an emergency.
c. The facility changes its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency.
d. The list of emergency coordinators changes.
e. The list of emergency equipment changes.

FOR OFFICE USE ONLY **Date Received:** _____

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Corporate Environment, Health & Safety
Handbook

EHS-CP-HB-001

Environmental, Health and Safety Handbook for Contractors

Approved on 11/1/10 by:

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Contents

1. Introduction

To consistently deliver the electricity that powers homes and businesses within our 50,000+ square miles of service territory, Southern California Edison (SCE) relies on qualified employees and Contractors. To that end, SCE is committed to protecting the safety and health of our employees, Contractors, and the public. Our goal is to achieve an injury-free workplace and to protect the environment while performing our operations. To achieve our goal, SCE has developed a comprehensive Environmental, Health and Safety (EH&S) management system that includes policies, programs, and procedures, and other documents that explain our approach to continuously improve our EH&S performance. This Environmental, Health and Safety Handbook for Contractors (EH&S Handbook) is an integral part of the EH&S management system.

This EH&S Handbook has been given to you to:

- Provide general guidelines and standards expected for performance of contracted work in a safe manner and with due regard for protecting the environment.
- Ensure compliance with various Federal, State, and local regulations and requirements.
- Ensure compliance with various SCE EH&S requirements.

This document is not intended to cover all aspects of EH&S issues. ***Additional information applicable to contract activities for specific SCE business organizations and/or site-specific policies and practices may be added to this EH&S Handbook as attachments after approval by Corporate EH&S (CEH&S) and Supply Chain Management.*** The EH&S Handbook is intended to supplement EH&S Contractor Orientations and pre-job project briefings.

In this EH&S Handbook the term "OSHA" refers to either the California Division of Occupational Safety and Health (Cal/OSHA) or the Federal Occupational Safety and Health Administration (OSHA) as is applicable. The use of the term "Edison Representative" is used throughout this handbook to identify the person identified as such in a purchase order/contract. The Edison Representative is responsible for coordinating and scheduling the work performed under the purchase order/contract. The Edison Representative may designate a trained SCE Point of Contact who is familiar with the contract work being performed.

1.1 SCE's Environmental Policy

SCE believes that a sound environment makes the regions where we operate a better place in which to live and work. Accordingly, the Company is committed to preserving and protecting the environment for the benefit of its neighbors, customers, employees, and future generations. This commitment encompasses full compliance with environmental laws, integration of sound environmental practices into SCE's operations, and a pledge of environmental stewardship in the communities where the Company does business.

1.2 Edison International's Commitment to Safety

SCE's commitment to the safety of our employees, Contractors, and the public is reflected in Edison International's Commitment to Safety. Contractors are expected to share and follow this commitment.

Edison International Commitment to Safety

We are committed to strengthening our safety culture to achieve an injury-free workplace by creating and sustaining a work environment that values:

- Having every employee leave the workplace unhurt—anything less is unacceptable;
- Using work behaviors and practices that uncompromisingly protect the safety of everyone;
- Caring for the safety of each other; and
- Stopping work anytime unsafe conditions or behaviors are observed until the job can be completed safely.

A continuous commitment and dedication to following these values by all of us will assure that the safest workplace is established and the safest work behaviors are always used to prevent injuries.

1.3 Principles of Operation

SCE performs its work based on the following principles of operation:

- We integrate EH&S protection and prevention into our work processes.
- We identify and mitigate hazards and unsafe conditions before we start the work.
- No job is considered successfully completed if there is an injury or an environmental event.
- If the job cannot be completed safely, it must be stopped.
- We watch out for each other and speak out to protect ourselves and others from injury and to protect the environment.
- We always follow regulatory requirements and safety rules.

2. Contractor Expectations

SCE expects that each Contractor will ensure that their workers, subcontractor workers, and agents know of and comply with their company's environmental and safety rules and procedures along with those required by SCE. *The requirements listed in this EH&S Handbook apply to all Contractors and subcontractors.*

2.1 General Expectations

In addition to the provisions in other sections of this EH&S Handbook, Contractors shall:

a. Take all prudent and proper environmental, health and safety precautions to protect SCE employees and property, other exposed persons and property, and the environment.

b. Comply with applicable SCE job-specific or department-specific requirements.

c. Comply with applicable Federal, State, local, and any other applicable environmental and occupational safety and health regulations issued or imposed by any governmental authority or by SCE.

d. Prior to commencement of any work, instruct all employees, subcontractors, and agents about relevant governmental laws and regulations, specific hazards expected to be encountered, and proper safety and environmental precautions to be observed.

e. Have available, at the work location, a copy of the Contractor's written Safety Program, including its Injury and Illness Prevention Program (IIPP), Code of Safe Practices for construction work, and written Hazard Communication Program, as required.

f. Ensure that their employees receive EH&S training as required by applicable Federal, State, and local regulations, and maintain documentation of such training.

g. Maintain copies of permits as required by applicable Federal, State, and local regulations and contractual obligations, and maintain these permits on-site if required by the issuing agency or as a condition of the permit.

h. Ensure that all Contractor personnel on SCE premises shall have a sufficient comprehension of the English language such that the personnel are able to read, understand, and follow all posted safety signs and written warnings, follow directions given during a safety or security drill or exercise, follow written or oral instructions or directives pertaining to health and safety matters, and be able to understand and follow all site-specific written health and safety plans.

2.2 SCE Stop Work Authorization and Inspections

Compliance with safety and environmental requirements and safe practices is expected for Contractors working for SCE. Contractors should understand that:

a. SCE may inspect at any time the Contractor's work for compliance with the Contractor's contractual obligations.

b. SCE may immediately stop work if an imminent risk to personnel is observed.

c. SCE's inspections in no way relieve the Contractor of the obligation to maintain its own programs or to conduct any inspections required by Federal, State, and local regulations.

d. Any violation that poses an imminent risk shall be corrected before work is allowed to continue.

3. EH&S Contractor Orientation

Prior to start of work for SCE, the Edison Representative and the Contractor must have an EH&S Contractor Orientation using the EH&S Contractor Orientation Checklist. The EH&S Contractor Orientation Checklist is a tool that provides the Edison Representative with the opportunity to provide Edison-specific and/or site-specific information as well as providing the Contractor with the opportunity to discuss environment, health, and safety issues associated with the Contractor's work. This checklist is designed to allow the Edison Representative to conduct a comprehensive EH&S Contractor Orientation that is customized to the work being performed.

4. Emergency Response

Each manned SCE facility has a site-specific Emergency Action Plan. This plan describes the alarms and emergency notification system, evacuation routes, assembly areas, and emergency contacts. Contractors are responsible for understanding the requirements of the Emergency Action Plans where they perform work. Contractors shall contact the Edison Representative prior to the start of work to review the site-specific Emergency Action Plan.

5. Reporting

Achieving our goal to work injury-free and to protect the environment requires Contractors to report safety and environmental incidents.

5.1 Injury and Incident Reporting

a. In addition to any other reporting requirement, Contractors shall promptly report all California Public Utility Commission (CPUC)-Reportable Incidents (see Definitions) to the designated Edison Representative as soon as practical but no later than 1 workday.

b. In addition to any other reporting requirement, Contractors shall promptly report all incidents beyond the level of first aid involving personal injury or property damage to the designated Edison Representative as soon as practical.

5.2 Spills or Chemical Releases

a. Contractors shall immediately notify the Edison Representative of any chemical spills or releases inside or outside any manned SCE facility not incidental to the contracted work.

b. If a release is caused by a Contractor's personnel, the Contractor shall make every reasonable effort to immediately clean-up incidental spills or contain the spill and contact their Edison Representative to determine the appropriate method for clean-up and disposal.

c. Each Contractor shall be liable for the costs of SCE's response to any spill resulting from the Contractor's actions, including, but not limited to, costs of containment, cleanup, and disposal.

6. Health and Safety Requirements

The following health and safety requirements are not intended to cover all aspects of a safety program. The following information is intended to assist Contractors in the development of safe work practices and safety plans.

6.1 General Health and Safety Requirements

a. Each Contractor shall ensure the work procedures do not conflict with the requirements of SCE policies and programs.

b. Each Contractor shall take precautions for the protection of the health and safety of Contractor personnel, SCE's employees, or other exposed persons.

6.2 Specialized Equipment

a. Each Contractor shall ensure that all specialized equipment (aerial lifts, cranes, man-lifts, fork trucks, etc.) are operated and maintained in accordance with manufacturer's specifications and as required by applicable regulations.

b. Each Contractor shall ensure that the Contractor's employees are properly trained to operate such equipment.

6.3 Confined Space Entry

A confined space inventory is available for each SCE facility. The spaces are identified and classified based on the conditions at the time of the survey. Contractors are responsible for evaluating their work site to determine if confined spaces exist. The Contractor performing work within a confined space (permit required or non-permit) shall comply with all confined space requirements as defined by OSHA, including having a Rescue Plan.

Each Contractor shall:

a. Furnish appropriate monitoring equipment and perform testing as required by regulation or adjacent work activities.

b. Ensure that information regarding the hazards is identified prior to entering the space and SCE's experience with the confined space is obtained from the Edison Representative.

c. Prior to entering the space, provide information regarding any hazards that the Contractor's work may create in the confined space.

d. Coordinate all entry operations when work includes both SCE personnel and Contractor personnel who will be working in or near the confined space.

e. Debrief with the Edison Representative when confined space operation is completed.

6.4 Fall Prevention

The following requirements are designed to protect Contractor employees and SCE employees from fall hazards.

a. For work that has a risk of falling hazards, each Contractor shall have a Fall Protection Plan in place.

b. Each Contractor shall ensure all workers are instructed in the fall protection system and the procedures to be followed before they are allowed into an area where a risk of falling exists.

6.5 Fire Prevention

Each SCE location has developed a site-specific Fire Prevention Plan that identifies potential fire hazards and the methods to prevent and to properly respond to fires. Contractors are to be familiar with and comply with these site-specific plans.

Each Contractor shall:

a. Report all fires extinguished by the Contractor to the Edison Representative. If a Contractor uses a SCE fire extinguisher, they shall report such usage to the Edison Representative.

b. Ensure that employees adhere to SCE's No Smoking policy.

c. Communicate and coordinate any impairment to fire protection systems with the Edison Representative prior to shutdown of any such system.

6.6 Hazard Communication

Before starting a new job and after work begins, each Contractor shall advise the Edison Representative of all hazardous substances to be used in the workplace and, if requested, to provide Material Safety Data Sheets (MSDSs) on such hazardous substances before starting a job.

6.7 Hot Work

Each SCE location has developed a site-specific Hot Work Plan that identifies designated areas where hot work may be performed without authorization. The plans also contain the names of personnel at the site who may authorize hot work (any task that may produce sparks such as involving welding, grinding, and/or cutting). Contractors performing hot work are to be familiar with and comply with these site-specific plans.

Contractors performing hot work at an SCE facility shall comply with the following:

a. Inform the Edison Representative of the intent to perform work that may include hot work.

b. Notify the Edison Representative that work activities may involve hot work in non-designated areas.

c. Obtain written authorization to perform the hot work activities in non-designated areas.

d. Perform hot work in compliance with the Contractor's Hot Work Program and ensure the work procedures do not conflict with the requirements of the SCE Hot Work Program or the Site-specific Hot Work Plan.

6.8 Housekeeping/Cleanup

Proper housekeeping and cleanup are essential to a safe working environment. Injuries and incidents can occur when proper housekeeping and cleanup practices are not followed.

a. Each Contractor shall maintain, as is reasonable, a hazard free and clean work area at all times.

b. When the project work is completed, each Contractor shall remove any Contractor-owned materials from the site.

6.9 Industrial Hygiene

SCE's work environments can present physical, chemical, and other health hazards to workers. SCE will inform Contractors of known chemical and physical hazards. Each Contractor is responsible for informing the Edison Representative of chemical and physical hazards that the Contractor's work creates.

Contractors and their subcontractors are responsible for the health of their workers and understanding the hazards that are present in their work area. Contractors must assess their work site for chemical and physical hazards that can impact their workers. Contractors are responsible

for informing their workers of the chemical and physical hazards present in the workplace and providing the necessary corrective measures to protect their employees including protective equipment and engineering controls as necessary.

Asbestos

All SCE buildings may contain asbestos in the building materials (e.g., gaskets, thermal system insulation, gypsum wallboard, ceiling tiles, exterior stucco, pipes, flooring, insulation, etc.).

Prior to beginning work, each Contractor should request the Edison Representative to provide the Contractor a listing of the buildings and locations containing Asbestos Containing Materials (ACM). If an asbestos survey has not been conducted or if suspect material is uncovered during work activities, each Contractor shall stop work and request the Edison Representative to have samples of the suspect materials collected and analyzed by a person certified to do so.

SCE's policy is to remove deteriorated or friable ACM when detected. When the ACM is removed, SCE and our licensed Contractors use proper containment methods to prevent potential exposures of personnel to ACM during the generation of airborne fibers that occur through cutting, tearing, grinding, or otherwise handling the materials in a way that changes the integrity of the material.

a. Contractors shall immediately report to the Edison Representative any suspected release of asbestos.

b. Contractors shall cease all operations in the immediate area of the release, until approval from the Edison Representative is obtained to resume operations.

Noise

The Contractor shall inform the Edison Representative of activities or operations that could expose SCE employees to high noise levels.

Non-Ionizing Radiation except EMF

a. The Contractor shall inform the Edison Representative of the use of any equipment that produces non-ionizing radiation.

b. Whenever any Contractor uses a Class 3A or greater laser, the Contractor shall inform the Edison Representative of such use and identify each piece of equipment in which a laser is installed. This includes alignment lasers and welding/cutting lasers.

6.10 Lockout/Tagout

Each SCE facility maintains an inventory of equipment covered by the SCE Hazardous Energy Control Program (Lockout/Tagout). Each Contractor shall:

a. Comply with its Hazardous Energy Control Program and ensure the work procedures do not conflict with the requirements of the SCE Hazardous Energy Control Program.

b. Not, under any circumstance, lockout SCE equipment without specific authorization in writing by the Edison Representative.

c. Upon completion of the job, notify the Edison Representative so operation of the equipment can be resumed after the lockouts have been removed.

6.11 Trenching and Excavations

Contractor employees are expected to be aware of the steps that must be undertaken and permit(s) required prior to beginning any excavation, trenching, and shoring activity.

a. Contractors shall perform trenching, excavation, and shoring work in accordance with applicable regulations and requirements.

b. Upon request by the Edison Representative, the Contractor shall provide a copy of the OSHA permit, if required (i.e., excavations of five or more feet).

6.12 Use and Operation of SCE Facilities, Materials, Equipment, and Vehicles

Contractors shall not use or operate SCE facilities, materials, equipment and/or vehicles unless specifically authorized in writing by the Edison Representative.

6.13 Work Area Protection and Traffic Control

a. Prior to commencing work, Contractors shall inform the Edison Representative of any potential danger to SCE personnel or other exposed persons.

b. When necessary, each Contractor shall isolate the Contractor's work areas from SCE operations, employees, or other exposed persons by using appropriate warning tape, barriers, or other effective means of isolation.

c. Each Contractor shall erect and properly maintain, at all times, all necessary safeguards for the protection of Contractor personnel, SCE's employees, and other exposed persons.

d. Where approved signs or barricades do not provide the necessary traffic control, flaggers shall be provided. Only properly trained personnel shall be used as flaggers.

7. Environmental Requirements

Contractors shall comply with all applicable provisions of Federal, State, and local environmental regulations. Furthermore, the Contractor shall use reasonable efforts to implement environmental responsibility concerning its products and processes including, where applicable, pollution prevention and waste reduction programs.

7.1 Air Quality and Air Emissions

SCE facilities operate under many permits issued by local air quality management districts. The permits place many restrictions on SCE's equipment and operational procedures. In addition, the local air districts impose rules on Contractor activities and equipment.

Each Contractor shall:

a. Secure all required air permits as applicable.

b. Maintain any required logs, reports, or notifications, and provide copies to the Edison Representative upon request.

c. Comply with all applicable rules and regulations of the Environmental Protection Agency, the California Air Resources Board and the appropriate local Air Quality Management or Air Pollution Control Districts.

7.2 Biological and Archaeological/Historical Sensitivities

a. Contractors shall maintain compliance with SCE's Directive (EHS-EP-DR-003) for an environmental evaluation of new and upgraded electrical system work involving voltages of 50 kV and greater by undertaking work only with written evidence that the project is GO-131D compliant.

b. Contractors shall maintain compliance with SCE's Directive (EHS-EP-DR-002) for environmental compliance during ground-disturbing activities, which include, but are not limited, to driving off established roads, grading, blading, trenching, digging, and vegetation removal, by undertaking work only with written evidence that an SCE Environmental Screening Form has been submitted to CEH&S, *and with written evidence that the project has been cleared to proceed by CEH&S.* The Contractor shall abide by all avoidance and minimization measures contained in the written project clearance from CEH&S. If the project scope changes from that originally reviewed and cleared by CEH&S or avoidance measures create conflicts with project objectives, the Contractor shall immediately contact the Edison Representative, who will contact CEH&S, for consultation to ensure that the project activities are in compliance with environmental laws.

c. Contractors shall comply with SCE's avian protection program by immediately reporting any raptor (e.g., hawks, eagles, owls) mortalities at SCE substation, distribution or transmission facilities, not conducting any work activities that may potentially disturb active nests (i.e., nests with eggs or young birds) without clearance from CEH&S, and avoiding tree-trimming or other potentially disruptive maintenance or construction activities in sensitive areas (e.g., riparian habitat) during nesting season (generally February through August) without clearance from CEH&S.

d. Contractors shall comply with all Federal, State, and local environmental biological and archaeological/historical resource protection regulation, including but not limited to, the Federal and State Endangered Species Acts, California Environmental Quality Act, Clean Water Act, California Fish and Game Code, Migratory Bird Treaty Act, National Historic Preservation Act, and California Health & Safety Code Section 7050.5. Contractors shall commence work on Federal and State lands only with written evidence that applicable approvals and permits have been obtained from the appropriate public land manager.

7.3 Field Work Activities

a. Contractors performing fieldwork shall adhere to all applicable Federal, State, and local regulations and contractual obligations related to working in sensitive areas.

b. Contractors shall ensure that personnel have appropriate training to protect biologically, culturally, and historically sensitive areas.

c. Contractors shall obtain all applicable permits to enter land not owned by SCE.

d. Contractors shall undertake ground disturbing activities (including vegetation removal or trimming or off-road driving) only with written evidence that the project has been cleared by CEH&S.

e. Contractors shall abide by all avoidance and minimization measures contained in the written project clearance from CEH&S.

7.4 Hazardous Materials Transportation

a. Contractors shall transport all U. S. Department of Transportation (DOT) regulated hazardous materials in accordance with all applicable Federal, State, and local regulations.

b. Contractors shall maintain all required transportation permits, approvals, authorizations, logs, reports, or notifications, and provide copies to the Edison Representative upon request.

c. Contractors shall notify the Edison Representative of any DOT reportable incidents.

7.5 Storm Water Quality

a. When working with hazardous materials, Contractors shall make every attempt to prevent spills of any kind from entering a storm drain. For instance, use of spill containment is a best management practice to meet this goal.

b. Most SCE facilities have Storm Water Quality Management Plans as required by the SCE Corporate Storm Water Program. Contractors shall be familiar with the requirements of this plan as they apply to any work being done at the facility.

c. Contractors shall not discharge any material into storm drains, sewers, or waterways unless specifically allowed by the Site's Storm Water Management Plan.

d. If any grading over ¼ acre (in total) is required, the Contractor shall contact the Edison Representative to determine whether a Storm Water Management Plan needs to be developed.

7.6 Waste Handling, Storage, Transport, and Disposal

a. Contractors shall handle, store, transport, and dispose of all wastes in accordance with Federal, State, and local regulations and contractual obligations.

b. Contractors shall coordinate all non-hazardous and hazardous waste disposals resulting from an SCE project with the Edison Representative.

c. Contractors shall not dispose of any SCE hazardous waste at facilities other than those that are authorized and approved by CEH&S.

d. Contractors shall maintain any required logs, reports, or notifications, and provide copies to the Edison Representative upon request.

e. Contractors shall deliver Generator copies of Uniform Hazardous Waste manifests to the Edison Representative within 48 hours of hazardous waste shipments.

8. Definitions

Contractor — The party entering into a contract to perform work for SCE. This term is also applicable to the Contractor's agent, person, or persons authorized to represent the Contractor, such as the Contractor's superintendent or foreman. For the purposes of the EH&S Handbook for Contractors, "Contractor" shall also include Contractor's subcontractors.

CPUC-Reportable Incidents — The California Public Utilities Commission (CPUC) defines reportable injuries as those that meet **any** of the following criteria:

- Result in fatality or personal injury rising to the level of hospitalization and attributable or allegedly attributable to utility-owned facilities

- Are the subject of significant public attention or media coverage
- Involve or allegedly involve trees or other vegetation in the vicinity of power lines and result in fire and/or personal injury whether or not in-patient hospitalization is required

DOT Reportable Incidents

During the course of transportation in commerce (including loading, unloading, and temporary storage as a direct result of a hazardous material:

- A person is killed.
- A person receives an injury requiring admittance to a hospital.
- The general public is evacuated for a one hour or more.
- A major transportation artery or facility is closed or shut down for one hour or more or the operational flight pattern or routine of an aircraft is altered.
- Fire, breakage, spillage, or suspected radioactive contamination occurs involving a radioactive material.
- Fire, breakage, spillage, or suspected contamination occurs involving an infectious substance other than a diagnostic specimen or regulated medical waste.
- A release of a marine pollutant in a quantity exceeding 450 L (119 gallons) for liquids or 400 kg (882 pounds) for solids; or a situation exists of such a nature (e.g., a continuing danger to life exists at the scene of the incident) that, in the judgment of the person in passion of the hazardous material, it should be reported to the National Response Center even though it does not meet these criteria.
- An unintentional release of a hazardous material from a package (including a tank) or any quantity of hazardous waste that has been discharged during transportation.

Edison Representative

The Edison Representative is responsible for coordinating and scheduling the work performed under the purchase order/contract. The Edison Representative may designate a trained SCE Point of Contact who is familiar with the contract work being performed.

Hazardous Waste A waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may cause or significantly contribute to an increase in serious irreversible, or incapacitating reversible illness or pose a substantial present or potential hazard to human health, safety, welfare or to the environment when improperly treated, stored, transported, used or disposed of, or otherwise managed; however, this does not include solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act of 1967 as amended, or source, special nuclear, or by product material as defined by the Atomic Energy Act of 1954.

9. Revision History

Rev	Date	Description of Revision	Contact
0	2/15/08	Initial distribution.	T. Roberts
1	6/9/08	Added discussion of the EH&S Contractor Orientation Checklist and the sufficient English language comprehension requirement (2.1 h).	T. Roberts
2	6/19/08	Editorial changes, expanded definition of Edison Representative.	T. Roberts
3	10/1/09	Feedback from SCE organizations and legal review. Deleted the terms "directing and approving" from the discussion on the Edison Representatives responsibilities in Section 1.0 on Page 4. Added definition of DOT Reportable incidents.	T. Roberts
4	11/01/10	Editorial changes. Approved by: Cecil R. House Senior Vice President, Safety, Operations Support & Chief Procurement Officer William Messner Acting Director, Corporate EH&S James P. Meyers Director, Supply Chain Management	T. Roberts

10. Attachments

None

Note: Additional information applicable to contract activities for specific SCE business organizations and/or site-specific policies and practices may be added to this EH&S Handbook as attachments after approval by CEH&S and Supply Chain Management.

Appendix J

Stormwater Pollution
Prevention Plan

SOUTHERN CALIFORNIA EDISON®

An *EDISON INTERNATIONAL*® Company

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
FOR
CONSTRUCTION ACTIVITIES
CALIFORNIA 2009-0009-DWQ
CONSTRUCTION GENERAL PERMIT

Moorpark – Newbury 66 kV

Linear Project

Moorpark, California 93012

WDID# INSERT WDID Number

Segment 2, 4, 6: LUP Type 2
Segment 1, 3, 5, 7: LUP Type 1

PREPARED BY

RBF CONSULTING

DATE: August 10, 2010

REVISED:

SOUTHERN CALIFORNIA EDISON®

An *EDISON INTERNATIONAL*® Company

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
FOR
CONSTRUCTION ACTIVITIES
CALIFORNIA 2009-0009-DWQ
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Moorpark – Newbury 66 kV

Linear Project

Moorpark, California 93012

WDID# INSERT WDID Number

Segment 2, 4, 6: LUP Type 2
Segment 1, 3, 5, 7: LUP Type 1

PREPARED BY

RBF CONSULTING

CPESC
Tanya Bilezikjian
No. 3757
IN EROSION AND SEDIMENT CONTROL

DATE: August 10, 2010

REVISED:

Owner/Legally Responsible Person

SOUTHERN CALIFORNIA EDISON CO.
John Slayton, Manager
14005 South Benson Ave
Chino, CA 91710
909 548-7186
John.Slayton@SCE.com

Developer

John Slayton, Manager
14005 South Benson Ave
Chino, CA 91710
909 548-7186
John.Slayton@SCE.com

SWPPP Preparation Date:

August 10, 2010

Estimated Construction Dates:

Construction Start Date: September 2010 Construction Completion Date: December 2011

TABLE OF CONTENTS

APPENDICES

1 SWPPP REQUIREMENTS

1.1 Introduction

This SWPPP is written to comply with requirements for coverage under the State Water Resources Control Board Order No. 2009-0009-DWQ, General Permit No. CAS000002 (Included in Attachment A of the Construction General Permit as a Linear Utility Project, Type 1 and Type 2.) The "Segments" reference in this SWPPP and the exhibits is for the purpose of Risk Levels only, and is not related to actual construction segments or phasing.

SCE will ensure that the SWPPP is developed and amended or revised by a **Qualified SWPPP Developer (QSD)** to address the following objectives:

1. All pollutants and their sources, including sources of sediment associated with construction and Linear Utility Project (LUP) activity are controlled.
2. All non-storm water discharges are identified and either eliminated, controlled, or treated.
3. Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in storm water discharges and authorized non-storm water discharges from LUPs during construction.
4. Post-construction stabilization BMPs installed to reduce or eliminate pollutants are effective and properly maintained.

1.2 Certifications

1.2.1 Legally Responsible Person Certification

SWPPP Certification by a Legally Responsible Person (LRP)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Date: _____

Contact Signature: _____

Owner Name: Ed Antillon

Owner Title: Director of Transmission and Distribution Business Unit Technical Services

1.2.2 Certifications by Qualified SWPPP Developer

SCE will ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD).

RBF Consulting
Tanya Bilezikjian
14725 Alton Parkway
Irvine, California 92618-2027
949 472-3505

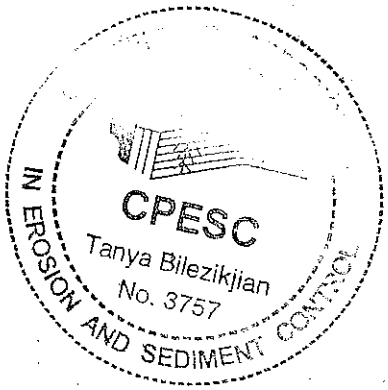
Qualifications: California registered civil engineer (No. 72119)
CPESC
CPSWQ

Date: August 17, 2010

QSD Signature: Tanya Bilezikjian

Print QSD Name: Tanya Bilezikjian

QSD Title: Project Manager



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Tanya Bilezikjian
14725 Alton Parkway
Irvine, California 92618-2027
949 472-3505

Qualifications: California registered civil engineer (No. 72119)
CPESC
CPSWQ

Date: _____

QSD Signature: _____

Print QSD Name: Tanya Bilezikjian

QSD Title: Project Manager

1.2.3 Qualified SWPPP Practitioner

SCE will ensure that all BMPs required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). The QSP is responsible for non-storm water and storm water visual observations, sampling and analysis (as required), and for ensuring full compliance with the permit and implementation of all elements of the SWPPP.

A QSP may delegate any or all of the activities associated with their responsibilities to a designee who has received project specific SWPPP training to perform the task(s) appropriately, but the QSP shall ensure adequate deployment. A list of name(s), address(es), and telephone number(s) of the person(s) directed by the QSP responsible for SWPPP management and implementation, water pollution control, and Permit compliance during construction, shall be provided and included in Appendix K. Documentation of all training for individuals responsible for activities associated with compliance with this General Permit (formal and informal) shall be documented and included in Appendix J.

The QSP for the project is listed below and shall be considered the initial call-out for all storm water related issues.

John Slayton, CPESC #5955
Technical Specialist
Southern California Edison
14005 South Benson Avenue
Chino, California 91710
(626) 302-1212

Qualifications and documentation of the QSP are included in Appendix K.

If additional response resources are required for any storm water or pollution prevention issues, the QSP shall immediately contact the On-Duty TDBU-Safety and Environmental Specialist (E-SES), available on a 24-hour basis. The E-SES can be contacted via the SCE Operator at (626) 302-1212.

Specific responsibilities of the QSP are as follows:

1. Implement prompt and effective erosion and sediment control measures.
2. Implement all non-storm water management and materials and waste management activities such as: monitoring discharges; maintaining consistent overall general site clean-up; making sure vehicle and equipment cleaning, fueling, and maintenance areas are properly maintained; ensuring adequate on-site spill control materials and equipment; ensuring that no materials other than storm water are discharged such that they will not have an adverse effect on receiving waters or storm drain systems; and preventing any other unauthorized discharges.
3. Ensure proper maintenance of BMPs and ensure immediate repairs to BMPs, as needed.
4. Conduct or oversee routine storm water and non-storm water inspections, as required.
5. Conduct or oversee pre-storm inspections.
6. Conduct or oversee storm event inspections.
7. Conduct or oversee post-storm inspections.

8. Evaluate and initiate updates and amendments to the SWPPP based on field inspections and scope of work. Document and coordinate amendments with the QSD.

9. Ensure submittal of the annual report and all supporting documentation to State Water Resources Control Board Order (SWRCB) Storm Water Multiple Application and Report Tracking System (SMARTS) by September 1 of each year.

10. Submit in a timely fashion any and all Notices of Discharge and reports of Illicit Connections or Illegal Discharges to the Regional Water Quality Control Board (RWQCB).

11. Ensure the Precipitation Logbook (Appendix O) is maintained, which includes entering precipitation amounts recorded by a rain gauge or weather station within 1 mile of the project when an event produces more than 1 inch of rain within 24 hours approximate duration of the event, a narrative evaluation of the erosion prevention effectiveness of BMPs, and post-storm modifications to those BMPs. The Precipitation Logbook is required per the Mitigation Measure Requirement of the final Environmental Impact Report Statement, Application No. A.07-06-031, (Aspen, October 2009).

12. Ensure the Precipitation Logbook is submitted to the CPUC 30 days following the first storm event after construction has begun and annually, thereafter.

1.3 Permit Registration Documents (PRDs)

PRDs will be filed electronically to the SWRCB via SMARTS by the LRP or approved signatory no later than 7 days prior to the commencement of construction activities. Permit coverage shall not commence until the PRDs and the annual fee are received by the State Water Board, and a Waste Discharge Identification Number (WDID) number is assigned and sent by SMARTS.

Copies of the filed PRDs are in this SWPPP Appendix B. The following PRDs are required for all projects:

1. Notice of Intent (NOI)
2. Risk Assessment (Construction Site Sediment and Receiving Water Risk Determination)
3. Site Map
4. Annual Fee
5. Signed Certification Statement

1.4 SWPPP Availability and Implementation

The General Permit (Section XIV.C) requires the SWPPP be available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawings will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone. **The SWPPP will be implemented concurrently with the start of ground disturbing activities.**

1.5 SWPPP Amendments

The General Permit requires that the SWPPP be amended or revised by a QSD (Section XIV.A) and that the SWPPP include a listing of the date of initial preparation and the date of each

amendment. Amendments must be signed by a QSD (Section VII.B.6). It is recommended that all amendments be dated, directly attached to the SWPPP, and logged in SWPPP Appendix C).

The SWPPP must be revised or modified:

- To reflect modifications to stormwater control measures made in response to a change in design, construction, operation, or maintenance at the construction site that has or could have a significant effect on the discharge of pollutants to the waters of the United States that has not been previously addressed in the SWPPP.
- If during inspections or investigations by site staff, or by local, state, tribal or federal officials, it is determined that the existing stormwater controls are ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the construction site.
- Based on the results of an inspection, as necessary to properly document additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP must be completed in a timely manner.

Amendments to the SWPPP will be prepared and certified by the QSD; documented on the SCE amendment form; and tracked on the amendment log. Fill out the forms completely; document the reason for the amendment and how it modifies current conditions. Cross out the old information in the SWPPP that is being amended and note the amendment number that replaces the information next to the item.

1.6 Retention of Records

The General Permit (Sections I.J.69 and IV.G) requires that all dischargers maintain a paper or electronic copy of all required records for three years from the date generated or date submitted, whichever is last. These records must be available at the construction site until construction is completed. The discharger shall furnish the RWQCB, SWRCB, or US Environmental Protection Agency (EPA), within a reasonable time, any requested information to determine compliance with this General Permit. State in the SWPPP where documents will be kept and how these requirements will be met. RWQCB's may require records to be retained for longer periods.

1.7 Required Non-Compliance Reporting

SCE will give advance notice to the RWQCB and local storm water management agency of any planned changes in construction activity, which may result in noncompliance with the General Permit requirements.

The General Permit identifies several areas of non-compliance reporting. It is the responsibility of the permittee to properly document reportable discharges or other violations of the General Permit. Exceedances and violations will be reported using the SMARTS system and will include the following:

- Self-reporting of any discharge violations or to comply with RWQCB enforcement actions.
- Discharges which contain a hazardous substance in excess of reportable quantities established in 40 CFR §§ 117.3 and 302.4 unless a separate National Pollutant Discharge Elimination (NPDES) Permit has been issued to regulate those discharges.

- Numeric Action Level (NAL) exceedances (NAL Exceedance Report upon request of the RWQCB) (Only for LUP Type 2 and 3).

- Numeric Effluent Limitation (NEL) Violation Report (Only for LUP Type 3). In the event that a LUP Type 3 discharger has violated an applicable NEL, SCE will submit an NEL Violation Report to the State Water Board no later than 24 hours after the NEL exceedance has been identified.

1.8 Annual Report

Each permittee will prepare, certify, and electronically submit an Annual Report via SMARTS no later than September 1 of each year (beginning September 1, 2011). Reporting requirements are identified in Section XVI of the General Permit and include providing a summary of:

1. A summary and evaluation of all sampling and analysis results, including copies of laboratory reports.

2. The analytical method(s), method report unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit").

3. A summary of all corrective actions taken during the compliance year.

4. Identification of any compliance activities or corrective actions that were not implemented.

5. A summary of all violations of the General Permit.

6. The names of individual(s) who performed the facility inspections, sampling, visual observation (inspections), and/or measurements.

7. The date, place, time of facility inspections, sampling, visual observation (inspections, and/or measurements, including precipitation (rain gauge).

8. Documentation of all training for individuals responsible for all activities associated with compliance with this General Permit.

9. Documentation of all training for individuals responsible for BMP installation, inspection, maintenance, and repair.

10. Documentation of all training for individuals responsible for overseeing, revising, and amending the SWPPP.

1.9 Changes to Permit Coverage

The General Permit (Section II.C) allows a permittee to reduce or increase the total acreage covered under the General Permit when a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is sold to a different entity; or when new acreage is added to the project.

To change the project acreage, the permittee will electronically file changes to the PRDs using SMARTS. These revisions include updated site information, a modified SWPPP map, and other appropriate SWPPP updates. In addition, the landowner of the removed acreage will be notified of the applicable requirements for obtaining permit coverage and new landowner information (including name, address, phone number, and email address) will be documented and included in the SWPPP.

1.10 Notice of Termination

To terminate coverage under the General Permit, permittee will submit a **Notice of Termination** (NOT) electronically via SMARTS. Photos are required to be submitted with the NOT. Filing a NOT certifies that all General Permit requirements have been met. The NOT is submitted when the construction project is complete and within 90 days of meeting all General Permit requirements for termination and final stabilization (Section II.D). Requirements include:

- The site will not pose any additional sediment discharge risk than it did prior to construction activity.
- All construction related equipment, materials and any temporary BMPs no longer needed are removed from the site.
- Post-construction stormwater management measures are installed and a long-term maintenance plan that is designed for a minimum of five years has been developed.

The NOT must demonstrate that the project meets all of the requirements of Section II.D.1 of the General Permit by one of the following methods:

- Photo Documentation: 70% final cover method (no computational proof required)
- Revised Universal Soil Loss Equation: RUSLE/RUSLE2 method (computational proof required)
- Results of Testing and Analysis: Custom method (discharger demonstrates that site complies with final stabilization)

2 PROJECT AND SITE INFORMATION

2.1 Project and Site Information

Moorpark – Newbury 66 kV Project

The project will consist of 8.9 miles of 66 kV subtransmission lines and supporting structures. Different sections of the project are described below:

- 5.1 miles of new single circuit 66 kV construction on 27 engineered tubular steel poles (TSP) with span length approximately equal to existing adjacent 200 kV tower spans in existing right-of-way (ROW).

- 2.5 miles of double circuit 66 kV construction in existing ROW. Includes replacing 14 lattice towers with 13 engineered TSPs, re-conductoring the existing 66 kV circuit (Moorpark-Newbury-Pharmacy 66 kV) and installing the new Moorpark-Newbury 66 kV circuit in the adjacent position on the new TSPs. Span length approximately equal to existing 66 kV tower spans.

- 1.2 miles of double circuit 66 kV construction. Includes replacing 31 wood poles with lightweight steel poles and adding a second circuit (Moorpark-Newbury 66 kV) to the existing Moorpark-Newbury-Pharmacy 66 kV line. Also includes transferring Distribution and telecommunications Carrier Solutions facilities to new poles. Average span length 181 ft.

- Project also includes the undergrounding of approximately 2,000 feet of new 66kV circuit inside the Moorpark Substation

Existing R/W roads to a majority of the pole/tower locations exist, but some may require grading for construction access. Roads will need to be created or re-graded to 4 pole/tower locations. Holes will be created for tower concrete footings or poles at each location. The "Segments" reference in this SWPPP and the exhibits is for the purpose of Risk Levels only, and is not related to actual construction segments or phasing.

Project/Site Name: Moorpark – Newbury 66 kV		
Project Street/Location: Linear Project near Moorpark, California		
Project Acreage: 7.50		
City: Moorpark	State: California	ZIP Code: 93012
County: Ventura		
Latitude: 34.1501 Longitude: 118.5545 Regional Board: Los Angeles (4)		
WDID tracking number:		
Are storm water discharges from the Site subject to MS4 requirements? ☐Yes ☒No If so, are MS4 requirements addressed in this SWPPP ☐Yes ☐No Description: Project only increases impervious area by 280 S.F. and therefore does not trigger the requirement for a SUSMP.		
Previous Land Use: Transmission Right-of-Way, Open Space		
Proposed Land Use: Transmission Right-of-Way		
Existing Site Impervious Area: 0 Acres Existing Pervious Site Area: 7.50 Acres		
Proposed Site Impervious Area: 280 S.F. Proposed Site Pervious Area: 7.49 Acres		
Are there any known contaminants on site from previous land uses or operations? ☐Yes ☒No		
Description: None		
This site is within a municipal jurisdiction that has Standard Urban Water Management Plan Program SUSMP or Water Quality Management Plan Program (WQMP) or local equivalent. ☒Yes ☐No If answering "NO" then Post Construction Run Off requirements are located in Appendix J. Note that LUP projects are not required to comply with Post Construction requirements.		
Receiving Water Information: Calleguas Creek. Some sections of the project are within the flood prone areas of the receiving water; these are LUP Type 2 areas. All other areas are within the project are within the Calleguas Creek watershed.		
Does this project discharge to a water body listed as impaired due to Sedimentation/Siltation or Turbidity pursuant to Clean Water Act, Section ☒Yes ☐No Does the site drain into a water body with a sediment-related TMDL? ☐Yes ☐No Does the disturbed area discharge to a water body with designated beneficial uses of SPAWN & COLD & MIGRATORY? ☐Yes ☒No DESCRIBE SENSITIVE WATERS HERE: Project is within the Calleguas Creek watershed which is listed on the 303(d) list as impaired for Sedimentation/Siltation, primarily due to natural sources and farming operations.		

2.1.1 Vicinity Map

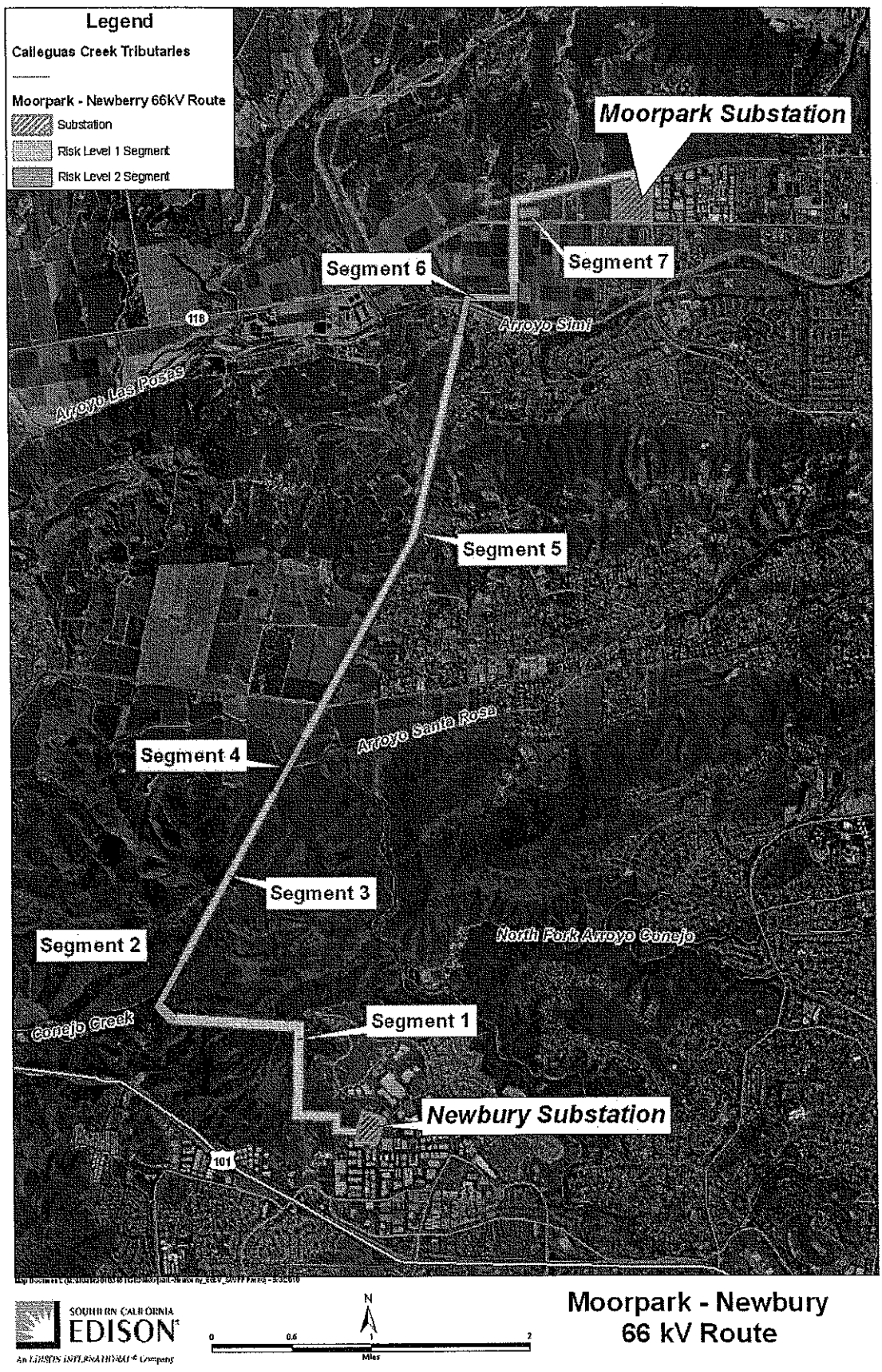


Figure 1: Vicinity Map

2.2 Stormwater Run-On from Offsite Areas

The General Permit requires (Section XIV.A.4) that the SWPPP address calculations and design details as well as BMP controls for site run-on.

The project involves the placement of 71 new or replacement 66 kV poles or towers within and adjacent to existing poles and towers along an 8.9 mile route. Current run-on and post construction run-on will not change as a result of this project. All run-on is either from adjacent land or land within the existing transmission right-of-way.

2.3 Findings of the Construction Site Sediment and Receiving Water Risk Determination

A site risk analysis was conducted by modifying the CGP's Risk Determination Worksheet to determine the LUP Type for this project. The linear nature of this project allowed for different segments to have different receiving water risks, and subsequently, different overall Risk Levels. The entire project is located in the Calleguas Creek watershed, which has various tributaries listed on the 2006 303(d) list for sediment related impairments. As specified in Attachment A.1 of the permit, portions of the project that are located within the flood plain or flood prone area (riparian zone) of a sediment sensitive receiving water body will have a "High" receiving water risk; portions of the project outside of the riparian zone will have a "Medium" receiving water risk. For this project, detailed hydrology data was not available. Therefore, a conservative estimate of 1000 feet was used to estimate the flood prone area of the receiving water. Segments within 1000 feet of a tributary of Calleguas Creek are considered to be within the flood prone zone and, as a result, have a "High" receiving water risk. These project segments (red segments shown in Figure 1 - Vicinity Map) have a Low project sediment risk and a High receiving water risk, which results in an overall LUP Type 2 Risk Level. Project segments that lie more than 1000 feet away from sediment impaired tributaries (outside of the flood prone zone) are considered to have a "Medium" receiving water risk. These segments (green segments shown in Figure 1 - Vicinity Map) have a "Low" project sediment risk and a "Medium" receiving water risk, which results in an overall Type 1 Risk Level. Both Type 1 and Type 2 segments of this project will have permit requirements addressed according to their specified Risk Levels. The "segments" referenced in this SWPPP are for the purpose of defining Type 1 and Type 2 areas and do not correspond to any sections as defined for construction phasing or project section areas as part of the plans or CPUC submittals.

Project location and schedule information was used to determine the R-factor, K-factor, and LS-factor components for each segment.

- The EPA's Rainfall Erosivity Calculator tool was used to calculate the segment R-factors.
- The segment-specific K factors were obtained using the State Board's K-factor map.
- The segment LS-factors were calculated using the Risk Determination Worksheet and averaging slopes and sheet flow lengths along pole installation/replacement right of way.

The Risk Determination Worksheets are included in Appendix B. A summary is provided in Table 1 below showing the tower locations and the corresponding segments and risk levels.

Table 1: Project Segment Summary

Segment Number	Risk Level	Pole Information
1	1	Pole Replacements: 35 (#s 37- 71). Remove 1 Pole.
2	2	Pole Replacements:3 (#s 34-36).
3	1	Pole Replacements:6 (#s 28- 33).
4	2	New Poles:3 (#s 25-27).
5	1	New Poles:13 (#s 12-24).
6	2	New Poles:3 (#s 9-11).
7	1	New Poles:8 (#s 1-8).

2.4 Construction Schedule

Estimated Project Start Date: September 2010

Estimated Project Completion Date: December 2011

Table 2: Sequence of Construction Phase Activities

Contractor shall prepare and insert a detailed schedule for construction activities and water quality BMP installation and maintenance.

Date	Segment	Construction Activity

2.5 Potential Construction Site Pollutant Sources

2.5.1 Potential Sources of Sediment

Table 3: Potential Sources of Sediment from Construction Activities

Installation of sediment controls & erosion controls
Vehicle tracking
Pole foundation hole drilling operations
Exposed soils

2.5.2 Other Pollutants Sources

Table 4: Construction Activity, Associated Pollutants, and Equipment

	Activity Type	Pollutant	Visually Observable
Soil Disturbance:			
☒	Clear & Grub	Sediment and organics	Cloudy to opaque
☐	Remove and Re-compact	Sediment	Cloudy to opaque
☐	Fine Grading	Sediment	Cloudy to opaque
☐	Trenching	Sediment	Cloudy to opaque
☒	Stockpiling	Sediment	Cloudy to opaque
Asphalt:			
☐	Street Construction	Hydrocarbons	Oily sheen
☐	Street Improvements	Hydrocarbons	Oily sheen
☐	Street Demolition	Hydrocarbons	Oily sheen
Concrete Laden Liquid:			
☐	Curb & Gutter	pH	Cloudy to Milky
☐	Sidewalks	pH	Cloudy to Milky
☒	Foundations	pH	Cloudy to Milky
☐	Driveways	pH	Cloudy to Milky
☐	Medians	pH	Cloudy to Milky
☐	Stuccoing	pH	Cloudy to Milky
☐	Grouting	pH	Cloudy to Milky
☒	Washouts/Clean up	pH	Cloudy to Milky
General:			
☐	Framing	Sawdust	Yes
☐	Painting	Paint (when wet)	Yes
☐	Dry Walling	Gypsum/Joint Compound	Yes
☐	Tiling	Ceramic dust	Yes
☐	Cabinet Building/Installing	Sawdust	Yes
☐	Plumbing	PVC Glue (when wet)/Plastic	Yes
☐	Wiring/Electrical Utilities	Copper/Plastic/Metals	Yes
☐	Heating/Air Conditioning	Sheet metal/fiberglass wool	Yes
☐	Landscaping	Containers/mulch/soil	Yes

Equipment Type		Equipment Type	
☒	Backhoe loader(s)	☒	Fork & Rough-terrain lifts (Pettibone)
☒	Water truck(s)	☒	Generator(s) portable
☐	Scraper(s)	☒	Concrete boom pumps
☒	Loader(s)	☒	Concrete pumps
☒	Bull dozer(s)	☐	Asphalt planer / grinder
☐	Motor-grader	☐	Asphalt paving machine
☒	Excavator(s) / Track hoe(s)	☐	Street striping equipment
☒	Dump trucks (10-wheel)	☒	Building material delivery trucks
☐	Belly/Bottom dumps (tractor/trailer)	☒	Personal cars and light trucks
☒	Tractor: skip loader	☐	Waste hauling trucks
☒	Skid steer loaders (Bobcat)	☐	Trencher(s)
☒	Concrete delivery trucks	☐	Stucco/Plaster spray pumps
☒	Portable concrete mixers	☐	Spray paint equipment (airless)
☒	Compaction equipment	☒	Hole drilling rig (Note: Hole drilling rig is on a excavator platform and regular line truck

Check YES box on left if potential construction site pollutant applies to this site. Update as necessary.

Table 5: Potential Construction Site Pollutants

YES	Material Type	Pollutant	Visually Observable	Typical Location
☒	Diesel Fuel	Petroleum distillates, naphthalene, xylene	Sheen/Stain	Staging area, pole sites
☒	Gasoline	Benzene, toluene, xylene, MTBE	Sheen/Stain	Staging area, pole sites
☒	Hydraulic Oil	Mineral oil, trace additives	Sheen/Stain	Staging area, pole sites
☒	Engine Oil	Mineral oil, additives, combustion byproducts	Sheen/Stain	Staging area, pole sites
☒	Transmission Oil	Mineral oil, trace additives	Sheen/Stain	Staging area, pole sites
☒	Engine Coolant	Ethylene and propylene glycol, heavy metals	Green/red	Staging area, pole sites
☒	Grease	Petroleum hydrocarbons	Sheen/Stain	Staging area, pole sites
☐	Kerosene	Petroleum hydrocarbons	Sheen/Stain	Staging area
☐	Fertilizer	Nitrogen, phosphorus	No	Material storage area
☐	Pesticide	Water-insoluble chlorinated hydrocarbons, organophosphates, carbonates, and pyrethrums.	Varies	Material storage area
☐	Herbicide	Chlorinated hydrocarbons, organophosphates	Varies	Material storage area
☐	Soil Amendments		No	Material storage area
☒	Concrete (wet)	Fly cash, heavy metals, Portland cement	White solid	Pole foundations

YES	Material Type	Pollutant	Visually Observable	Typical Location
☐	Concrete coring slurry	Turbidity and pH	Gray liquid	Home construction & streets
☐	Concrete sawing slurry	Turbidity and pH	Gray liquid	Home construction & streets
☐	Cement	Aluminum calcium iron oxide, calcium sulfate	Gray powder	Home construction & streets
☐	Drywall joint compound	Pigment, vinyl acetate	White putty	Home construction
☐	Grout	Silica sand, Portland cement	White powder	Block wall & Home construction
☐	Paint	Ethylene glycol, titanium oxide, VOC	Colored liquid	Home construction
☐	Sealers	Diacetone alcohol,		Home construction & Streets
☐	Adhesives		White/yellow	Home construction
☒	Sanitary waste	Human waste	Yes	Staging areas & all construction areas
☒	Biological Waste	Animal waste	Yes	All areas
☐	Asphalt	Asphalt fumes, cutback asphalt,	Black material	Streets
☐	Curing Compounds	Glass Oxide, urea extended phenol	Creamy white	Home construction & Streets
☐	Waste wash water		Suds, foam, froth	All areas
☐	Wood Preservatives		Amber liquid	Home construction
☐	Cleaning Solvents	Perchloroethylene, methylene chloride, TCE	Varies	Staging areas
☒	Sediment	Soil, Turbidity, dust	Muddy	All areas
☐	Vegetation	Organic matter	Yes	All areas
☒	Solid Waste	Floatable and blowable trash and debris	Yes	All areas
☐	Tile			Home construction & material storage areas
☐	Historic land use contaminants (if applicable)			

2.6 Identification of Non Stormwater Discharges

All efforts are to be made to minimize non-stormwater discharges. On-site inspections will include observations for non-stormwater discharges. Activities that may result in discharges will be monitored and controlled as needed.

Authorized non-storm water discharges include:

- Water used to control dust.

- Foundation or footing drains where flows are not contaminated with process materials such as solvents.

The discharge of non-storm water is authorized under the following conditions:

- The discharge does not cause or contribute to a violation of any water quality standard.
- The discharge does not violate any provision of the General Permit.
- The discharge is not prohibited by the applicable Basin Plan
- The SWPPP includes and implements BMPs required by the General Permit to prevent or reduce the contact of the non-stormwater discharge with construction materials or equipment
- The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants.
- The sampling information is reported in the Annual Report.

If any of the above conditions are not satisfied, the discharge is not authorized by the CA CGP and not permitted by this SWPPP. Notify the Regional Water Board of any anticipated non-storm water discharges not already authorized by CA CGP or another NPDES permit, to determine whether a separate NPDES permit is necessary.

2.6.1 Expected Non-Stormwater Discharges and Controls

Allowable non stormwater discharges anticipated to be encountered in this project include the following:

Waters to Control Dust

Dust control will be implemented when wind exceeds 15 MPH or when there is visible dust generated from the site via a small diameter (3/4" to 1") fire or garden hose or with a water truck depending on the area being serviced. All efforts will be made not to over-apply the water spray to avoid any surface run off. In the event there is surface run off it will be controlled with the use of perimeter silt fence. Any discharges from the property will be observed and operations ceased if levels of sediment in the discharge pose a negative impact on the drainage system or receiving waters.

Responsible party: QSP & all trades are responsible to control dust for their operations.

Any changes in construction that will produce other allowable non storm water discharges will be identified. The SWPPP will be amended and the appropriate erosion and sediment controls will be implemented.

Compliance with the CGP does not relieve the project of other potentially applicable discharge requirements of the various other plan requirements such as but not limited to the Basin Plan, ASBS, or adopted TMDL allocations.

3 LUP TYPE SPECIFIC PROJECT REQUIREMENTS

3.1 Good Site Management Housekeeping

SCE will implement good site management (i.e., "housekeeping") measures for construction materials that could potentially be a threat to water quality if discharged. At a minimum, the good housekeeping measures shall consist of the following:

1. Identify the products used and/or expected to be used and the end products that are produced and/or expected to be produced. This does not include materials and equipment that are designed to be outdoors and exposed to environmental conditions (i.e. poles, equipment pads, cabinets, conductors, insulators, bricks, etc.).

2. Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.). Inactive areas are defined as stockpiled materials not scheduled to be re-disturbed for at least 14 days. Note: with the onset of precipitation all stockpile materials shall be protected. Poles 40 through 61 are within Lyon's pentachaeta habitat and 6 inches of topsoil that we used following pole placement. The 6 inches of topsoil can be placed in a bucket and preserved for placement once each pole is completed.

3. Store chemicals in watertight containers with appropriate secondary containment to prevent any spillage or leakage or in a storage shed providing complete enclosure.

4. Minimize exposure of construction materials to precipitation (not applicable to materials designed to be outdoors and exposed to the environment).

5. Implement BMPs to control the off-site tracking of loose construction and landscape materials.

SCE will implement good housekeeping measures for waste management, which at a minimum shall consist of the following:

1. Preventing disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.

2. Ensuring the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the storm water drainage system or receiving water.

3. Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.

4. Covering waste disposal containers at the end of every business day and prior to a rain event.

5. Preventing discharges from waste disposal containers to the storm water drainage system or receiving water. Containing and securely protecting stockpiled waste material from wind and rain at all times unless actively being used.

6. Implementing procedures that effectively prevent and address hazardous and nonhazardous spills.

7. Developing a spill response and implementation procedure prior to commencement of construction activities. To these ends, the SWPPP shall require that:

    - Equipment and materials for cleanup of spills shall be available on site and that spills and leaks shall be cleaned up immediately and disposed of properly.

- Appropriate spill response personnel are assigned and trained.

8. Ensuring the containment of concrete washout areas and other washout areas that may contain additional pollutants to prevent discharge into the underlying soil and onto the surrounding areas.

SCE will implement good housekeeping for vehicle storage and maintenance, which at a minimum, shall consist of the following:

1. Preventing oil, grease, or fuel from leaking into the ground, storm drains or surface waters.

2. Implementing appropriate BMPs whenever equipment or vehicles are fueled, maintained, or stored.

3. Cleaning leaks immediately and disposing of leaked materials properly.

SCE will implement good housekeeping for landscape materials, which at a minimum shall consist of the following:

This project does not include any landscape materials.

SCE will conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. This potential pollutant list shall be kept with the SWPPP and shall identify all non-visible pollutants which are known, or should be known, to occur on the construction site. At a minimum, when developing BMPs, SCE will do the following:

1. Consider the quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each potential pollutant source handled, produced, stored, recycled, or disposed of at the site.

2. Consider the degree to which pollutants associated with those materials may be exposed to and mobilized by contact with storm water.

3. Consider the direct and indirect pathways that pollutants may be exposed to storm water or authorized non-storm water discharges.

4. Conduct an assessment of past spills or leaks, non-storm water discharges, and discharges from adjoining areas.

5. Ensure retention of sampling, visual observation, and inspection records.

6. Ensure effectiveness of existing BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges.

7. SCE will implement good housekeeping measures on the construction site to control the air deposition of site materials and from site operations.

3.2 Non-Storm Water Management

Proper management of non-storm water requires a LUP discharger to:

1. Implement measures to control all non-storm water discharges during construction.

2. Wash vehicles in such a manner as to prevent non-storm water discharges to surface waters or Municipal Separate Storm Sewer System (MS4) drainage systems.

3. Clean streets in such a manner as to prevent unauthorized non-storm water discharges from reaching surface water or MS4 drainage systems.

3.3 Erosion Control

Proper and effective erosion control requires a LUP discharger to:

1. Implement effective wind erosion control.

2. Provide effective soil cover for inactive areas and all finished slopes, and utility backfill.

3. Limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.

3.4 Sediment Controls

Proper and effective sediment control requires a LUP discharger to:

1. Establish and maintain effective perimeter controls as needed, and implement effective BMPs for all construction entrances and exits to sufficiently control erosion and sediment discharges from the site.

Additional LUP Type 2 Requirement: LUP Type 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow lengths in accordance with Table 2 below. All sediment controls must be placed in areas that avoid any sensitive plants on-site.

Table 6: Critical Slope/Sheet Flow Length Combinations

Slope Percentage	Sheet Flow Length Not to Exceed
0-25%	20 feet
25-50%	15 feet
Over 50%	10 feet

Additional LUP Type 2 Requirement: LUP Type 2 dischargers shall ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent off-site tracking of sediment.

Additional LUP Type 2 Requirement: LUP Type 2 dischargers shall ensure that all storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire washoff locations) are maintained and protected from activities that reduce their effectiveness.

Additional LUP Type 2 Requirement: LUP Type 2 dischargers shall inspect all immediate access roads. At a minimum daily and prior to any rain event, the discharger shall remove any

sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).

4 BEST MANAGEMENT PRACTICES

Copies of BMP fact sheets specific to this project are located in Appendix H of this SWPPP.

4.1 Erosion and Sediment Control

4.1.1 Erosion Control BMPs

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles. This project will implement the following practices for effective erosion control:

- EC-1: Scheduling
- EC-2: Preservation of Existing Vegetation
- EC-4: Hydroseeding
- EC-5: Soil Binders
- EC-7: Geotextiles and Mats

Sufficient erosion control materials, as detailed in Appendix H, will be maintained on site to allow implementation, in conformance with General Permit requirements and as described in this SWPPP. This includes implementation requirements for active areas and inactive areas that require deployment before the onset of rain events. The contractor must implement the best combination of erosion control methods including hydroseeding, soil binders, and geotextiles, based on site conditions during and after grading. Hydroseeding or the use of straw blankets that include bio-degrade elements should be used on existing areas containing plant life that is disturbed during construction. This does not include areas immediately adjacent to new poles. It also does not include the existing access/maintenance dirt road that will be bladed for the purpose of smoothing for access only. The seed mix, if hydroseeding is utilized, shall be per specifications to be provided by SCE. This will probably be either sterile or native seed. Risk Level 2 areas, as shown on the project vicinity map, must be stabilized sufficiently to meet Numeric Action Levels during effluent monitoring. Ultimately the site must be stabilized with vegetation, over a minimum of 70% of the project disturbed site area.

All access roads must be constructed to ensure drainage is conveyed down slopes in a non-erosive manner. This may include installation of engineered overside drains (typically called a McCarthy drain by SCE staff), rock check dams, or rip rap. BMP Fact Sheets to address this issue include

- SE-4 Check Dams
- EC-10 Velocity Dissipation Devices
- EC-11 Slope Drains.

4.1.2 Sediment Control BMPs

Sediment controls are structural measures that are intended to complement and enhance the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been

detached and transported by the force of water. This project will implement the following practices for effective sediment control:

- SE-5: Fiber Rolls
- SE-6: Gravel Bag Berm
- SE-7: Street Sweeping and Vacuuming
- SE-10: Storm Drain Inlet Protection

Sufficient quantities of temporary sediment control materials, as detailed in Appendix H, will be maintained on-site throughout the duration of the project to allow implementation of temporary sediment controls in the event of predicted rain and for rapid response to failures or emergencies, in conformance with other Permit requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

If fiber rolls are utilized, they should be the sterile and weed free varity.

4.1.3 Wind Erosion Control

Wind erosion control consists of applying water to prevent or minimize dust nuisance. This project will implement the following practices for effective wind erosion control:

- WE-1: Wind Erosion Control

Water trucks and/or a portable tank shall be made available to the field crews with an adequate supply of water to be used as necessary to mitigate the generation of airborne dust particulates from the construction sites. Water used for dust control will be applied in such a manner to minimize runoff from the site.

4.1.4 Tracking Control

Tracking control consists of preventing or reducing the tracking of sediment off-site by vehicles leaving the construction area. This project will implement the following practices for tracking control:

- TC-1 Stabilized Construction Entrance/Exit

4.2 BMP Implementation Specific for this Project for Non-Storm Water Management and Material Management

4.2.1 Non-Storm Water Management BMPs

Non-storm water management BMPs are source control BMPs that prevent pollution at their source by limiting or reducing potential pollutants at their source or eliminating off-site discharge. These practices involve day-to-day operations of the construction site and are usually under the control of the contractor. These BMPs are also referred to as "good housekeeping practices" which involve keeping a clean, orderly construction site. This project will implement the following practices for effective non-storm water management controls:

- NS-2: Dewatering Practices

- NS-6: Illicit Connection/Discharge
- NS-9: Vehicle and Equipment Fueling
- NS-10: Vehicle and Equipment Maintenance
- NS-12: Concrete Curing

4.2.2 Waste Management and Materials Pollution Controls

Waste management and materials pollution control BMPs, like non-storm water management BMPs, are source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with storm water. These BMPs are also referred to as "good housekeeping practices" which involve keeping a clean, orderly construction site.

Waste management consists of implementing procedural and structural BMPs for handling, storing and disposing of wastes generated by a construction project to prevent the release of waste materials into storm water runoff or discharges through proper management of the following types of wastes: solid, sanitary, concrete, hazardous, and equipment-related washes.

This project will implement the following practices for effective waste management controls:

- WM-1: Material Delivery and Storage
- WM-2: Material Use
- WM-3: Stockpile Management
- WM-4: Spill Prevention and Control
- WM-5: Solid Waste Management
- WM-6: Hazardous Waste Management (if needed)
- WM-7: Contaminated Soil Management (if needed)
- WM-8: Concrete Waste Management
- WM-9: Sanitary/Septic Waste Management

4.3 Post-Construction Storm Water Management Measures

4.3.1 Post-Construction Runoff Reduction

Project located in an area subject to a Phase 1 or Phase 2 MS4 Permit approved Stormwater Management Plan (SWMP).

Yes __X__ No _____

5 BMP INSPECTION AND MAINTENANCE

5.1 BMP Inspection and Maintenance

Inspections of active LUP construction areas will be conducted by the Site QSP or their qualified designee who has received project specific SWPPP training as follows:

- Daily (visual inspection only, documented using inspection log)
- Weekly (documented using checklist and filed in SWPPP)
- Prior to a forecast storm event (documented using checklist and filed in SWPPP)
- After a rain event that causes runoff from the construction site (documented using checklist and filed in SWPPP)
- At 24-hour intervals during extended rain events (documented using checklist and filed in SWPPP)
- Quarterly non-storm water visual inspections

Daily inspections will be performed by the QSP or a designee with appropriate training to verify that the appropriate BMPs for storm water and non-storm water are being implemented in the following construction site locations:

- Areas where active construction is occurring (including staging areas)
- Project excavations are closed, with properly protected spoils, and that road surfaces are cleaned of excavated material and construction materials such as chemicals by either removing or storing the material in protective storage containers at the end of every construction day
- Land areas disturbed during construction are returned to preconstruction conditions or an equivalent protection is used at the end of each workday to eliminate or minimize erosion and the possible discharge of sediment or other pollutants during a rain event.

A tracking or follow-up procedure shall follow any inspection that identifies BMPs that need maintenance or have failed, or could fail to operate as intended. If deficiencies are identified during BMP inspections, repairs or design changes to BMPs must be initiated within 72 hours of identification and need to be completed as soon as possible. A program for maintenance, inspection and repair of BMPs is shown in the Monitoring and Reporting Program (Section 8.0). Inspection checklists are found in Appendix I. Completed inspection checklists will be kept with the SWPPP.

6 TRAINING

The General Permit requires (Section VII) that all elements of the SWPPP be developed by a QSD and implemented by a QSP. The QSP may delegate tasks to trained employees provided adequate supervision and oversight is provided.

Personnel at the site shall receive training appropriate for individual roles and responsibilities on the project. Appropriate personnel shall receive training on SWPPP implementation, BMP inspection and maintenance, and record keeping. Document all training activities (formal and informal) and retained a record of training activities in SWPPP Appendix K. Training documentation must also be submitted in the Annual Report.

Qualified SWPPP Developer - The discharger shall ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience:

- California registered professional civil engineer;
- California registered professional geologist or engineering geologist;
- California registered landscape architect;
- Professional hydrologist registered through the American Institute of Hydrology;
- Certified Professional in Erosion and Sediment Control (CPESC)™ registered through Enviro Cert International, Inc.;
- Certified Professional in Storm Water Quality (CPSWQ)™ registered through Enviro Cert International, Inc.
- Professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET);

No later than September 2, 2011, a QSD shall have attended a State Water Board-sponsored or approved QSD training course. The discharger shall list the name and telephone number of the currently designated Qualified SWPPP Developer(s) in the SWPPP.

The designated Qualified SWPPP Developer is:

Name	Phone Number	Qualification
Tanya Bilezikjian	(949) 472-3505	P.E., CPESC, CPSWQ

Qualified SWPPP Practitioner - The discharger shall ensure that all BMPs required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for nonstorm water and storm water visual observations, sampling and analysis. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:

- Certified erosion, sediment and storm water inspector registered through Enviro Cert International, Inc.
- Certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

No later than September 2, 2011, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

The designated Qualified SWPPP Practitioner(s) is(are):

Name	Phone Number	Qualification
John Slayton	909 548-7186	CPESC

The QSP(s) identified above will provide direction to the following contractors, subcontractors, superintendents and others as listed below.

7 RESPONSIBLE PARTIES AND OPERATORS

7.1 Responsible Parties

The General Permit (Section VII.B.4) requires that the name of any "Approved Signatory" be listed in the SWPPP, and a copy of the written agreement or other mechanism that provides this authority from the LRP be provided in the SWPPP.

Table 7: Name of the Approved Signatory:

Printed Name	Title/Function
John Slayton	Manager, Southern California Edison Co. TDBU Safety and Environmental Programs & Services

7.2 Contractor List

The discharger shall include, in the SWPPP, a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.

Table 8: Contractor List

Name	Work Address	Phone No.	Emergency Phone No.	Trade/ Service

8 MONITORING AND REPORTING PROGRAM

This Monitoring and Reporting Program (M&RP) is a guide for the QSP and/or qualified individual(s) supervised by the QSP for monitoring and sampling procedures and instructions. The QSP is to determine whether BMPs included in the SWPPP are effective and if immediate actions are needed and/or SWPPP revisions are necessary to reduce pollutants in storm water and authorized non-storm water discharges. The monitoring program must be implemented at the appropriate level to protect water quality at all times throughout the duration of the project.

Because segments are both Type 1 and Type 2 for this project, this M&RP has been designed to meet LUP Type 1 and Type 2 monitoring and reporting requirements. The "segments" referenced in this SWPPP are for the purpose of defining Type 1 and Type 2 areas and do not correspond to any sections as defined for construction phasing or project section areas as part of the plans or CPUC submittals.

The SCE QSP is responsible for implementing the requirements of the M&RP from the commencement to the completion of construction activity. Additionally, the SCE QSP must ensure the site is stabilized after all construction activity has been completed.

Revisions to the M&RP are the responsibility of SCE and will be performed when any of the following occur:

- Site conditions or construction activities change such that a change in monitoring is required to comply with the requirements and intent of the General Permit.
- SCE is required to revise the M&RP based on a review by the RWQCB.
- The Regional Water Board requires additional monitoring and reporting program requirements including sampling and analysis of discharges to CWA § 303(d)-listed water bodies.

This M&RP requires routine and storm-related site inspections as well as requisite, conditionally based sample collection for LUP sites. Inspections and sample collection shall be conducted per the following table:

Table 9: LUP Summary of Monitoring Requirements

LUP Type	Visual Inspections				Sample Collection		
	Daily Site BMP	Pre-storm Event Baseline	Daily Storm BMP	Post Storm	Storm Water Discharge	Receiving Water	Non-Visible (when applicable)
1	X						X
2	X	X	X	X	X		X

Observations and results from the visual inspections shall be documented on the LUP inspection sheet and included in Appendix I.

8.1 LUP Type 1 M&RP Requirements

SCE will be required to comply with the following M&RP requirements for the Type 1 project segments (see Figure 1 - Vicinity Map). The "segments" referenced in this SWPPP are for the purpose of defining LUP Type areas and do not correspond to any sections as defined for construction phasing or project section areas as part of the plans or CPUC submittals.

8.1.1 LUP Type 1 Inspection Requirements

Inspection programs are required for LUP Type 1 projects where temporary and permanent stabilization BMPs are installed and are to be monitored after active construction is completed. Inspection activities shall continue until adequate permanent stabilization is established and, in areas where re-vegetation is chosen, until minimum vegetative coverage is established in accordance with the General Permit, Attachment A Section C.1 (Appendix A).

1. SCE will ensure that all inspections are conducted by trained personnel. The name(s) and contact number(s) of the assigned inspection personnel are listed in the SWPPP in Appendix K.

2. The SCE QSP will ensure that all visual inspections are conducted daily during working hours and in conjunction with other daily activities in areas where active construction is occurring.

3. The SCE QSP will ensure that photographs of the site taken before, during, and after storm events are taken during inspections, and submitted through the State Water Board's SMARTS website once every 3 rain events.

4. The SCE QSP will conduct daily visual inspections to verify that:

    - Appropriate BMPs for storm water and non-storm water have been implemented in areas where active construction is occurring (including staging areas).

    - Any excavation is closed, and associated spoil piles are properly protected to withstand rain and wind.

    - Road surfaces are cleaned of excavated material.

    - Construction materials (e.g., chemicals) are either removed from the project site or stored in appropriate protective storage containers at the end of every construction day.

    - Land areas disturbed during construction are returned to preconstruction conditions or appropriate protection is installed prior to the end of each workday to eliminate or minimize erosion and the possible discharge of sediment or other pollutants during a rain event.

Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met).

Inspection forms shall be filled out completely and accurately, and signed and dated by the inspector. The original forms shall be filed at the project site trailer or maintained with the project superintendent if a site trailer is not in use. If possible, the inspector should retain of copy of all inspections he or she authored.

8.1.2 LUP Type 1 Non-visible Pollutant Monitoring Requirements

For LUP Type 1 construction projects, the SCE QSP will implement sampling and analysis requirements to monitor non-visible pollutants associated with:

1. The construction sites
2. Activities producing pollutants that are not visually detectable in storm water discharges
3. Activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters

Sampling and analysis for non-visible pollutants is only required where the QSP believes pollutants associated with construction activities have the potential to be discharged with stormwater runoff due to a spill or in the event there was a breach, malfunction, failure, and/or leak of any BMP. Also, failure to implement BMPs may require sample collection.

The QSP will rely on visual observations in accordance with the monitoring program described above to determine when to collect samples. SCE is not required to collect samples if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.

The QSP will collect samples at a point down-gradient from all discharge locations where the visual observations were made that triggered the monitoring, and which can be safely accessed. For sites where sampling is required, personnel trained in water quality sampling procedures will collect any and all storm water samples. If sampling for non-visible pollutants is required, the QSP will ensure that samples are analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment provided in Appendix G.

The SCE QSP is not required to physically collect samples or conduct visual observations (i.e., inspections) during dangerous weather conditions such as flooding and electrical storms, outside of scheduled site business hours, or when access to the site is deemed unsafe by the project superintendent. However, If the discharger does not collect the required samples or conduct an inspection and perform visual observations due to these exceptions, an explanation shall be included in both the SWPPP and the Annual Report.

For each sampling event, the SCE QSP will ensure the following are adhered to as practicably and safely as possible:

1. Collect samples during the first 2 hours of discharge from rain events that occur during business hours and which generate runoff.
2. Ensure that a sufficiently large sample of storm water (that has not come into contact with the disturbed soil or the materials stored or used on-site) will be collected for comparison with the discharge sample. Samples shall be collected during the first 2 hours of discharge from rain events that occur during daylight hours and which generate runoff.
3. Compare the results of the uncontaminated sample to the results of discharge samples using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS).
4. Ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed. Portable meters shall be calibrated according to manufacturer's specification. For laboratory analyses, all sampling, sample

preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136.

5. Ensure that all field and/or analytical data are kept in the SWPPP document. Monitoring data can be found within Appendix M.

For samples to be analyzed in the field, collection, analysis, and equipment calibration will be in accordance with the field instrument manufacturer's specifications.

8.2 LUP Type 2 M&RP Requirements

SCE will be required to comply with the following M&RP requirements for the Type 2 project segments (see Figure 1 - Vicinity Map)

8.2.1 LUP Type 2 Inspection Requirements

Inspection programs are required for LUP Type 2 projects where temporary and permanent stabilization BMPs are installed and are to be monitored after active construction is completed. Inspection activities shall continue until adequate permanent stabilization is established and, in areas where re-vegetation is chosen, until minimum vegetative coverage is established in accordance with the General Permit, Attachment A Section C.1 (Appendix A)

1. SCE will ensure that all inspections are conducted by trained personnel. The name(s) and contact number(s) of the assigned inspection personnel should be listed in the SWPPP.

2. SCE will ensure that all visual inspections are conducted daily during working hours and in conjunction with other daily activities in areas where active construction is occurring.

3. SCE will ensure that photographs of the site taken before, during, and after storm events are taken during inspections, and submitted through the State Water Board's SMARTS website once every three rain events.

4. SCE will conduct daily visual inspections to verify that appropriate BMPs for storm water and non-storm water are being implemented and in place in areas where active construction is occurring (including staging areas).

5. SCE will conduct inspections of the construction site prior to anticipated storm events, during extended storm events, and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity. Pre-storm inspections are to ensure that BMPs are properly installed and maintained; post-storm inspections are to assure that BMPs have functioned adequately. During extended storm events, inspections shall be required during normal working hours for each 24-hour period.

6. Inspections may be discontinued in non-active construction areas where soil-disturbing activities are completed and final soil stabilization is achieved (e.g., paving is completed, substructures are installed, vegetation meets minimum cover requirements for final stabilization, or other stabilization requirements are met).

7. SCE will implement a monitoring program for inspecting projects that require temporary and permanent stabilization BMPs after active construction is complete. Inspections shall ensure that the BMPs are adequate and maintained. Inspection activities shall continue until adequate permanent stabilization is established and, in vegetated areas,

until minimum vegetative coverage is established in accordance with Section C.1 of this Attachment.

8. If possible, SCE will install a rain gauge on-site at an accessible and secure location with readings made during all storm event inspections. When readings are unavailable, data from the closest rain gauge with publicly available data may be used.

9. SCE will Include and maintain a log of the inspections conducted in the SWPPP. The log will provide the date and time of the inspection and who conducted the inspection.

8.2.2 LUP Type 2 Stormwater Effluent Monitoring Requirements

SCE is required to monitor effluent discharges for all active construction areas located in Type 2 project segments. Type 2 projects are required to meet Numeric Action Levels (NALs) for pH and turbidity in site stormwater discharges. Effluent monitoring requirements for LUP Type 2 projects are summarized in Table 9.

Table 10: Effluent Monitoring Requirements for LUP Type 2 Project

LUP Type	Frequency	Effluent Monitoring
2	Minimum of 3 samples per day characterizing discharges associated with construction activity from the project active areas of construction.	Turbidity, pH, and non- visible pollutant parameters (if applicable)

Whenever daily average analytical effluent monitoring results indicate that the discharge is below the lower NAL for pH, exceeds the upper NAL for pH, or exceeds the turbidity NAL, SCE will conduct a construction site and run-on evaluation to determine whether pollutant source(s) associated with the site's construction activity may have caused or contributed to the NAL exceedance and shall immediately implement corrective actions if they are needed.

The site evaluation will be documented in the SWPPP and specifically address whether the source(s) of the pollutants causing the exceedance of the NAL:

- Are related to the construction activities and whether additional BMPs or SWPPP implementation measures are required to meet BAT/BCT requirements; reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives; and (3) determine what corrective action(s) were taken or will be taken and with a description of the schedule for completion.

  and/or:

- Are related to the run-on associated with the construction site location and whether additional BMPs or SWPPP implementation measures are required to:

  1. Meet BAT/BCT requirements

  2. Reduce or prevent pollutants in storm water discharges from causing exceedances of receiving water objectives

  3. Decide what corrective action(s) were taken or will be taken, including a description of the schedule for completion.

Additional, specific LUP Type 2 stormwater effluent monitoring requirements include the following:

1. SCE will collect storm water grab samples from sampling locations characterizing discharges associated with activity from the LUP active areas of construction. At a minimum, 3 samples shall be collected per day of discharge.

2. SCE will collect samples of stored or contained storm water that is discharged subsequent to a storm event producing precipitation of ½ inch or more at the time of discharge.

3. SCE will ensure that storm water grab sample(s) obtained be representative of the flow and characteristics of the discharge.

4. SCE will analyze their effluent samples for pH, turbidity, and any additional parameter for which monitoring is required by the Regional Water Board.

8.2.3 LUP Type 2 Storm Water Effluent Sampling Locations

1. SCE will perform sampling and analysis of storm water discharges to characterize discharges associated with construction activity from the entire disturbed project or area.

2. SCE will select analyze storm water discharges using field meters calibrated in accordance with Table 10.

3. SCE will ensure that all storm water sample collection preservation and handling shall be conducted in accordance with the "Storm Water Sample Collection and Handling Instructions" below.

8.2.4 LUP Type 2 Non-visible Pollutant Monitoring Requirements

SCE will implement sampling and analysis requirements to monitor non-visible pollutants associated with construction sites, activities producing pollutants that are not visually detectable in storm water discharges, and activities which could cause or contribute to an exceedance of water quality objectives in the receiving waters. Specific requirements include the following:

1. Sampling and analysis for non-visible pollutants is only required where SCE believes pollutants associated with construction activities have the potential to be discharged with storm water runoff due to a spill or in the event there was a breach, malfunction, failure and/or leak of any BMP. Also, failure to implement BMPs may require sample collection.

    - Visual observations made during the monitoring program described above will help SCE determine when to collect samples.

    - SCE are not required to sample if one of the conditions described above (e.g., breach or spill) occurs and the site is cleaned of material and pollutants and/or BMPs are implemented prior to the next storm event.

2. SCE will collect samples down-gradient from the discharge locations where the visual observations were made triggering the monitoring and which can be safely accessed. For sites where sampling and analysis is required, personnel trained in water quality sampling procedures shall collect storm water samples.

3. If sampling for non-visible pollutant parameters is required, SCE will ensure that samples be analyzed for parameters indicating the presence of pollutants identified in the pollutant source assessment required in Section J.2.a.i.

4. SCE will collect samples during the first two hours of discharge from rain events that occur during business hours and which generate runoff.

5. SCE will ensure that a sufficiently large sample of storm water that has not come into contact with the disturbed soil or the materials stored or used on-site will be collected for comparison with the discharge sample. Samples shall be collected during the first two hours of discharge from rain events that occur during daylight hours and which generate runoff.

6. SCE will compare the uncontaminated sample to the samples of discharge using field analysis or through laboratory analysis. Analyses may include, but are not limited to, indicator parameters such as: pH, specific conductance, dissolved oxygen, conductivity, salinity, and Total Dissolved Solids (TDS).

7. For laboratory analyses, all sampling, sample preservation, and other analyses must be conducted according to test procedures pursuant to 40 C.F.R. Part 136. SCE will ensure that field samples are collected and analyzed according to manufacturer specifications of the sampling devices employed. Portable meters shall be calibrated according to manufacturer's specification.

8. SCE will ensure that all field and/or analytical data are kept in the SWPPP document.

During non-visible pollutant storm water sample collection and handling, the LUP Type 2 discharger shall:

1. Identify the parameters required for testing and the number of storm water discharge points that will be sampled. Request the laboratory to provide the appropriate number of sample containers, types of containers, sample container labels, blank chain of custody forms, and sample preservation instructions.

2. Determine how to ship the samples to the laboratory. The testing laboratory should receive samples within 48 hours of the physical sampling (unless otherwise required by the laboratory). The options are to either deliver the samples to the laboratory, arrange to have the laboratory pick them up, or ship them overnight to the laboratory.

3. Use only the sample containers provided by the laboratory to collect and store samples. Use of any other type of containers could contaminate your samples.

4. Prevent sample contamination, by not touching, or putting anything into the sample containers before collecting storm water samples.

5. Not overfilling sample containers. Overfilling can change the analytical results.

6. Tightly screw the cap of each sample container without stripping the threads of the cap.

7. Complete and attach a label to each sample container. The label shall identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label should also identify any sample containers that have been preserved.

8. Carefully pack sample containers into an ice chest or refrigerator to prevent breakage and maintain temperature during shipment. Remember to place frozen ice packs into the

shipping container. Samples should be kept as close to 4° C (39° F) as possible until arriving at the laboratory. Do not freeze samples.

9. Complete a Chain of Custody form for each set of samples. The Chain of Custody form shall include the discharger's name, address, and phone number, identification of each sample container and sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.

10. Upon shipping/delivering the sample containers, obtain both the signatures of the persons relinquishing and receiving the sample containers.

11. Designate and train personnel to collect, maintain, and ship samples in accordance with the above sample protocols and good laboratory practices.

8.2.5 LUP Type 2 Visual Observation and Sample Collection Exceptions

SCE will be prepared to collect samples and conduct visual observation (inspections) to meet the minimum visual observation requirements of this Attachment. SCE is not required to physically collect samples or conduct visual observation (inspections) under the following conditions:

1. During dangerous weather conditions such as flooding and electrical storms;

2. Outside of scheduled site business hours.

3. When access to the site is unsafe due to storm events.

4. If the LUP Type 2 or 3 discharger does not collect the required samples or visual observation (inspections) due to these exceptions, an explanation why the sampling or visual observation (inspections) were not conducted shall be included in both the SWPPP and the Annual Report.

8.2.6 LUP Type 2 Storm Water Sample Collection and Handling Instructions

Refer to Table 10 for test Methods, detection Limits, and reporting Units.

Table 11: Test Methods, Detection Limits, Reporting Units

Parameter	Test Method	Min. Detection	Numeric Action Level
pH	Field test with calibrated portable instrument	0.2 pH Units	lower NAL = 6.5 upper NAL = 8.5
Turbidity	EPA 0180.1 and/or field test with calibrated portable instrument	1 NTU	250 NTU

8.2.7 LUP Type 2 Monitoring Methods

The LUP Type 2 or 3 discharger's project M&RP shall include a description of the following items:

1. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.

- Sampling locations, and sample collection and handling procedures. This shall include detailed procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained. Dischargers shall attach to the monitoring program a copy of the Chain of Custody form used when handling and shipping samples.

- Identification of the analytical methods and related method detection limits (if applicable) for pH and turbidity.

2. SCE will ensure that all sampling and sample preservation be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a discharger's own field instruments for measuring pH and turbidity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses shall be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. The LUP discharger shall conduct its own field analysis of pH and may conduct its own field analysis of turbidity if the discharger has sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform the field analysis.

8.2.8 LUP Type 2 Analytical Methods

Refer to Table 10 above for test Methods, detection Limits, and reporting Units for pH and turbidity.

- **pH**: SCE will perform pH analysis on-site with a calibrated pH meter or pH test kit. The LUP discharger shall record pH monitoring results on paper and retain these records in accordance with Section M.4.o, below.

- **Turbidity**: SCE will perform turbidity\ analysis using a calibrated turbidity meter (turbidimeter), either onsite or at an accredited lab. Acceptable test methods include Standard Method 2130 or USEPA Method 180.1. The results shall be recorded in the site log book in Nephelometric Turbidity Units (NTU).

8.2.9 LUP Type 2 NAL Exceedance Report

In the event that any effluent sample exceeds an applicable NAL, the Regional Water Boards may require SCE to submit NAL Exceedance Reports. Each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity. SCE will retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three years after the date the exceedance report is filed.

SCE will include in the NAL Exceedance Report:

1. The analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit")

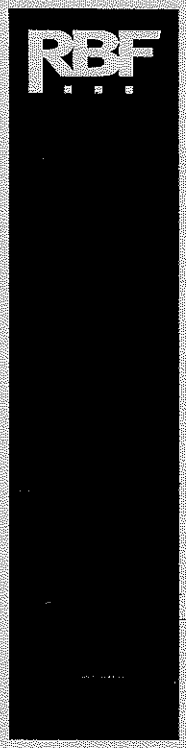
2. The date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitation

3. Description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken

8.2.10 LUP Type 2 Monitoring Records

SCE will ensure that records of all storm water monitoring information and copies of all reports (including Annual Reports) required by this General Permit be retained for a period of at least three years. SCE may retain records off-site and make them available upon request. These records shall include:

1. The date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge);
2. The individual(s) who performed the facility inspections, sampling, visual observation (inspections), and or measurements;
3. The date and approximate time of analyses;
4. The individual(s) who performed the analyses;
5. A summary of all analytical results from the last three years, the method detection limits and reporting units, the analytical techniques or methods used, and all chain of custody forms;
6. Quality assurance/quality control records and results;
7. Non-storm water discharge inspections and visual observation (inspections) and storm water discharge visual observation records;
8. Visual observation and sample collection exception records; and
9. The records of any corrective actions and follow-up activities that resulted from analytical results, visual observation (inspections), or inspections.



APPENDIX A
CONSTRUCTION GENERAL
PERMIT

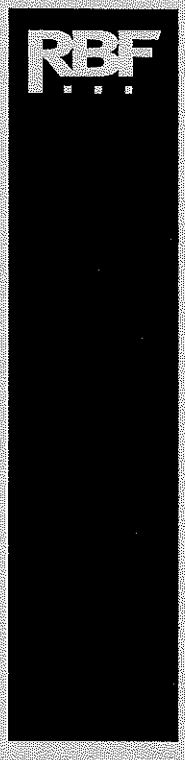
Appendix A

Construction General Permit

Order No. 2009-0009-DWG

The complete document can be found at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf



APPENDIX B
PERMIT REGISTRATION
DOCUMENTS

Appendix B

Submitted Permit Registration Documents (PRDs)

1. Notice of Intent (NOI)
2. Risk Documentation Worksheets
3. Site Map
4. Annual Fee
5. Signed Certification Statements
6. Any Amended PRDs (due to change of ownership or increased acreage)

State Water Resources Control Board

NOTICE OF INTENT

GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH CONSTRUCTION ACTIVITY
(WQ ORDER No. 2009-0009-DWQ)

WDID: **Risk Level:**

Property Owner Information

Type: Private Individual

Name: Southern California Edison Co
Address: 14005 S Benson Ave
Address 2:
City/State/Zip: Chino CA CA 91710

Contact Name: John Slayton
Title: Sr. Technical Specialist
Phone #: 909-548-7186
Email: John.Slayton@sce.com

Contractor/Developer Information

Name: Southern California Edison Co
Address: 14005 S Benson Ave
Address 2:
City/State/Zip: Chino CA CA 91710

Contact Name: John Slayton
Title: Sr. Technical Specialist
Phone #: 909-548-7186
Email: John.Slayton@sce.com

Construction Site Information

Site Name: Moorpark Newbury 66kV
Address: Linear Project
City/State/Zip: Moorpark CA 93012
County: Ventura
Latitude: 34.1501 Longitude: -118.5545

Contact Name: John Slayton
Title: Sr. Technical Specialist
Site Phone #: 909-548-7186
Email: John.Slayton@sce.com

Total Size of Construction Area: 7.5
Total Area to be Disturbed: 7.5

Construction Start: September 10, 1900
Complete Grading:
Final Stabilization: December 22, 2011

Type of Construction: *Above Ground*Below Ground*Electrical
Receiving Water: Celleguas Creek, Pacific Ocean
Qualified SWPPP Developer: Tanya Bilezikjian
Certification #:
RWQCB Jurisdiction: Region 4 - Los Angeles
Phone: 213-576-6600
Email: r4_stormwater@waterboards.ca.gov

Certification

Name
Title:
Date:

2.1.1 Vicinity Map

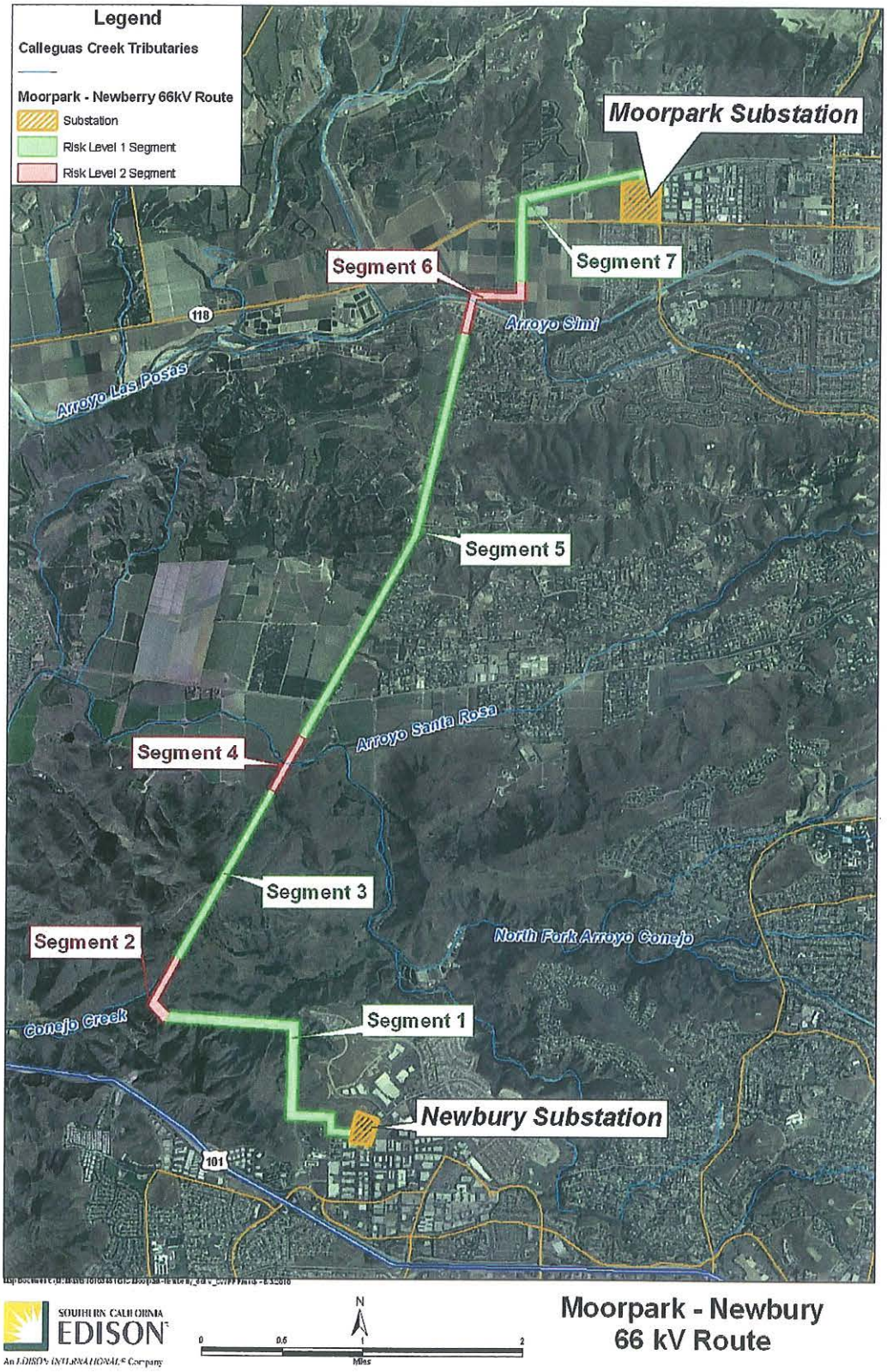


Figure 1: Vicinity Map

RBF CONSULTING

PLANNING ■ DESIGN ■ CONSTRUCTION

14725 Alton Pkwy, Irvine, CA 92618-2027
P.O. Box 57057, Irvine, CA 92619-7057
949.472.3505

WELLS FARGO BANK, N.A.
115 Hospital Drive, Van Wert, OH 45891
9600134149

176498

56-382/412

CHECK DATE August 3, 2010

PAY Five Hundred Twenty and 00/100 Dollars

AMOUNT $520.00

TO SWRCB
P.O. Box 1888
Sacramento CA 95812-1888

VOID AFTER 180 DAYS

Security Features Included Details on Back

⑈176498⑈ ⑆041203824⑆ 9600134149⑈

RBF CONSULTING

PLANNING ■ DESIGN ■ CONSTRUCTION

14725 Alton Pkwy, Irvine, CA 92618-2027
P.O. Box 57057, Irvine, CA 92619-7057
949.472.3505

176498

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
Fees	8/2/10	01154894	520.00	0.00	0.00	520.00
SWRCB WFDISBURSE 10	0000079688	Totals	520.00	0.00	0.00	520.00

RBF CONSULTING

State Water Resources Control Board

Division of Water Quality
1001 I Street • Sacramento, California 95814 • 1-866-563-3107
Mailing Address: P.O. Box 1977 • Sacramento, California • 95812-1977
FAX (916) 341-5543 • http://www.waterboards.ca.gov

nda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

July 19, 2010

Fee Statement
Reference # 405373

Facility/Site
Moorpark - Newbury 66kV
Linear Project
Moorpark CA 93012

Thank you for submitting the Permit Registration Documents (PRD) for the facility/site referenced above. Before a WDID number is assigned an Application Fee of $520.00 must be received by September 17, 2010 .If the Storm Water Section does not receive your application fee of $520.00 by September 17, 2010 your PRDs will be returned.

Please make checks payable to: SWRCB

Mail this Fee Statement with an original signature and $520.00 to:

Regular Mailing Address:
SWRCB
Storm Water Section
PO Box 1977
Sacramento, CA 95812-1977

Overnight Mailing Address:
SWRCB
Storm Water Section
1001 I Street – 15th Floor
Sacramento, CA 95814

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____

Printed Name - Title

_____

Signature

1.2 Certifications

1.2.1 Legally Responsible Person Certification

SWPPP Certification by a Legally Responsible Person (LRP)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Date: _____

Contact Signature: _____

Owner Name: Ed Antillon

Owner Title: Director of Transmission and Distribution Business Unit Technical Services

1.2.2 Certifications by Qualified SWPPP Developer

SCE will ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD).

RBF Consulting
Tanya Bilezikjian
14725 Alton Parkway
Irvine, California 92618-2027
949 472-3505

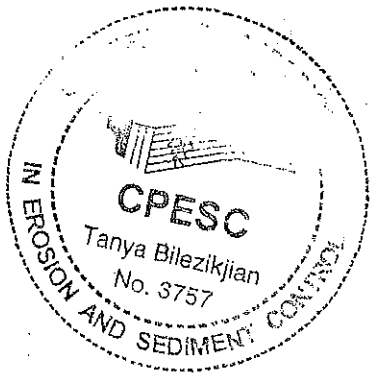
Qualifications: California registered civil engineer (No. 72119)
CPESC
CPSWQ

Date: August 17, 2010

QSD Signature: Tanya B

Print QSD Name: Tanya Bilezikjian

QSD Title: Project Manager



Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Facility Name: Moorpark Substation
Start Date: 09/07/2010
End Date: 12/31/2011
Latitude: 34.1652
Longitutde: -118.5411

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **68.76** HAS BEEN DETERMINED FOR THE CONSTRUCTIC PERIOD OF **09/07/2010 - 12/31/2011**.

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do not qualify for a waiver from NPDES permitting requirements.**

Start Over

U.S. ENVIRONMENTAL PROTECTION AGENCY

National Pollutant Discharge Elimination System (NPDES)

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Facility Name: Newberry Substation
Start Date: 09/07/2010
End Date: 12/31/2011
Latitude: 34.1145
Longitutde: -118.5551

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **70.09** HAS BEEN DETERMINED FOR THE CONSTRUCTIC PERIOD OF **09/07/2010 - 12/31/2011.**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do not qualify for a waiver from NPDES permitting requirements.**

Start Over

Basic Information
Municipal MS4s
Construction Activities
Industrial Activities
Road-Related MS4s
Menu of BMPs
Green Infrastructure
Urban BMP Tool

Stormwater Home

NPDES Topics Alphabetical Index Glossary About NPDES

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Facility Name: Segment 1
Start Date: 09/07/2010
End Date: 12/31/2011
Latitude: 34.1220
Longitutde: -118.5618

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **70.09** HAS BEEN DETERMINED FOR THE CONSTRUCTIC PERIOD OF **09/07/2010 - 12/31/2011**.

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do not qualify for a waiver from NPDES permitting requirements.**

Start Over

U.S. ENVIRONMENTAL PROTECTION AGENCY

National Pollutant Discharge Elimination System (NPDES)

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Facility Name: Segment 2
Start Date: 09/07/2010
End Date: 12/31/2011
Latitude: 34.2083
Longitutde: -118.9522

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **107.11** HAS BEEN DETERMINED FOR THE CONSTRUCTI PERIOD OF **09/07/2010 - 12/31/2011**.

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do not qualify for a waiver from NPDES permitting requirements.**

Start Over

U.S. ENVIRONMENTAL PROTECTION AGENCY

National Pollutant Discharge Elimination System (NPDES)

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Facility Name: Segment 3
Start Date: 09/07/2010
End Date: 12/31/2011
Latitude: 34.1226
Longitutde: -118.5711

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **67.44** HAS BEEN DETERMINED FOR THE CONSTRUCTIC PERIOD OF **09/07/2010 - 12/31/2011.**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do not qualify for a waiver from NPDES permitting requirements.**

Start Over

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Construction Activities

Industrial Activities

Road-Related MS4s

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Urban BMP Tool

Stormwater Home

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Facility Name: Segment 4
Start Date: 09/07/2010
End Date: 12/31/2011
Latitude: 34.1347
Longitutde: -118.5623

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **67.44** HAS BEEN DETERMINED FOR THE CONSTRUCTIC PERIOD OF **09/07/2010 - 12/31/2011.**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do not qualify for a waiver from NPDES permitting requirements.**

Start Over

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Facility Name: Newberry Substation
Start Date: 09/07/2010
End Date: 12/31/2011
Latitude: 34.1145
Longitutde: -118.5551

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **70.09** HAS BEEN DETERMINED FOR THE CONSTRUCTIC PERIOD OF **09/07/2010 - 12/31/2011.**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do not qualify for a waiver from NPDES permitting requirements.**

Start Over

U.S. ENVIRONMENTAL PROTECTION AGENCY

National Pollutant Discharge Elimination System (NPDES)

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Facility Name: Segment 5
Start Date: 09/07/2010
End Date: 12/31/2011
Latitude: 34.1507
Longitutde: -118.5536

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **68.76** HAS BEEN DETERMINED FOR THE CONSTRUCTIC PERIOD OF **09/07/2010 - 12/31/2011**.

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do not qualify for a waiver from NPDES permitting requirements.**

Start Over

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Facility Name: Segment 6
Start Date: 09/30/2010
End Date: 12/31/2011
Latitude: 34.1619
Longitutde: -118.5513

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **65.23** HAS BEEN DETERMINED FOR THE CONSTRUCTIC PERIOD OF **09/30/2010 - 12/31/2011.**

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do not qualify for a waiver from NPDES permitting requirements.**

Start Over

Rainfall Erosivity Factor Calculator for Small Construction Sites

Facility Information

Facility Name: Segment 7
Start Date: 09/07/2010
End Date: 12/31/2011
Latitude: 34.1650
Longitutde: -118.5456

Erosivity Index Calculator Results

AN EROSIVITY INDEX VALUE OF **67.44** HAS BEEN DETERMINED FOR THE CONSTRUCTIC PERIOD OF **09/07/2010 - 12/31/2011**.

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do not qualify for a waiver from NPDES permitting requirements.**

Start Over

	A	B	C
1	**Sediment Risk Factor Worksheet**		**Entry**
2	**A) R Factor**		
3	Analyses of data indicated that when factors other than rainfall are held constant, soil loss is directly proportional to a rainfall factor composed of total storm kinetic energy (E) times the maximum 30-min intensity (I30) (Wischmeier and Smith, 1958). The numerical value of R is the average annual sum of EI30 for storm events during a rainfall record of a least 22 years. "Isoerodent" maps were developed based on R values calculated for more than 1000 locations in the Western U.S. Refer to the link below to determine the R factor for the project site.		
4	http://cfpub.epa.gov/npdes/stormwater/LEW/lewCalculator.cfm		
5	**Average from all Seven Segments & the Two Substations - R Factor Valu**		68.22
6	**B) K Factor (weighted average, by area, for all site soils)**		
7	The soil-erodibility factor K represents: (1) susceptibility of soil or surface material to erosion, (2) transportability of the sediment, and (3) the amount and rate of runoff given a particular rainfall input, as measured under a standard condition. Fine-textured soils that are high in clay have low K values (about 0.05 to 0.15) because the particles are resistant to detachment. Coarse-textured soils, such as sandy soils, also have low K values (about 0.05 to 0.2) becaus of high infiltration resulting in low runoff even though these particles are easily detached. Medium-textured soils, such as a silt loam, have moderate K values (about 0.25 to 0.45) because they are moderately susceptible to particle detachment and they produce runoff at moderate rates. Soils having a high silt content are especially susceptible to erosion and have high K values, which can exceed 0.45 and can be as large as 0.65. Silt-size particles are easily detached and tend to crust, producing high rates and large volumes of runoff. Use Site-specific data must be submitte		
8	Site-specific K factor guidance		
9	**K Factor Value**		0.24
10	**C) LS Factor (weighted average, by area, for all slopes)**		
11	The effect of topography on erosion is accounted for by the LS factor, which combines the effects of a hillslope-length factor, L, and a hillslope-gradient factor, S. Generally speaking, as hillslope length and/or hillslope gradient increase, soil loss increases. As hillslope length increases, total soil loss and soil loss per unit area increase due to the progressive accumulation of runoff in the downslope direction. As the hillslope gradient increases, the velocity and erosivity of runoff increases. Use the LS table located in separate tab of this spreadsheet to determine LS factors. Estimate the weighted LS for the site prior to construction.		
12	LS Table		
13	**LS Factor Value**		0.23
14			
15	**Watershed Erosion Estimate (=RxKxLS) in tons/acr**		3.765744
16	**Site Sediment Risk Factor**		**Low**
17	Low Sediment Risk: < 15 tons/acr		
18	Medium Sediment Risk: >=15 and <75 tons/acr		
19	High Sediment Risk: >= 75 tons/acr		
20			

Receiving Water (RW) Risk Factor Worksheet	Entry	Score
A. Watershed Characteristics	**yes/no**	
A.1. Does the disturbed area discharge (either directly or indirectly) to a **303(d)-listed waterbody impaired by sediment**? For help with impaired waterbodies please check the attached worksheet or visit the link below: 2006 Approved Sediment-impared WBs Worksheet http://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml **OR**	**yes**	**High**
A.2. Does the disturbed area discharge to a waterbody with designated beneficial uses of SPAWN & COLD & MIGRATORY? http://www.ice.ucdavis.edu/geowbs/asp/wbquse.asp		

Portions of the project are within 1,000' from drainage facilities that discharge to Calleguas Creek and will be Risk Level 2
Portions of the project are further than 1,000' from drainage facilities that discharge to Calleguas Creek and will be Risk Level 1

WBID	REGION NUMBER	REGION NAME	WATER BODY TYPE ABBR	WATER BODY TYPE	WATER BODY NAME	CALWATER WATERSHED	ESTIMATED SIZE AFFECTED	UNIT ABBR	UNIT	POLLUTANT CODE	POLLUTANT	SOURCE CODE	POTENTIAL SOURCES	PROPOSED TMDL COMPLETION	COMMENTS
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 2 (estuary to Potrero Rd- was Calleguas Creek Reaches 1 and 2 on 1998 303d list)	40312000	4.31213	M	Miles	1100	Sedimentation/Siltation	1000	Agriculture	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 2 (estuary to Potrero Rd- was Calleguas Creek Reaches 1 and 2 on 1998 303d list)	40312000	4.31213	M	Miles	1100	Sedimentation/Siltation	5600	Natural Sources	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 3 (Potrero Road upstream to confluence with Conejo Creek on 1998 303d list)	40312000	3.46697	M	Miles	1100	Sedimentation/Siltation	1000	Agriculture	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 3 (Potrero Road upstream to confluence with Conejo Creek on 1998 303d list)	40312000	3.46697	M	Miles	1100	Sedimentation/Siltation	5600	Natural Sources	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 4 (was Revolon Slough Main Branch: Mugu Lagoon to Central Avenue on 1998 303d list)	40311000	7.18751	M	Miles	1100	Sedimentation/Siltation	1000	Agriculture	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 4 (was Revolon Slough Main Branch: Mugu Lagoon to Central Avenue on 1998 303d list)	40311000	7.18751	M	Miles	1100	Sedimentation/Siltation	5600	Natural Sources	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 5 (was Beardsley Channel on 1998 303d list)	40311000	4.34068	M	Miles	1100	Sedimentation/Siltation	1000	Agriculture	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 5 (was Beardsley Channel on 1998 303d list)	40311000	4.34068	M	Miles	1100	Sedimentation/Siltation	5600	Natural Sources	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 6 (was Arroyo Las Posas Reaches 1 and 2 on 1998 303d list)	40362000	15.2966	M	Miles	1100	Sedimentation/Siltation	1000	Agriculture	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 6 (was Arroyo Las Posas Reaches 1 and 2 on 1998 303d list)	40362000	15.2966	M	Miles	1100	Sedimentation/Siltation	5600	Natural Sources	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 7 (was Arroyo Simi Reaches 1 and 2 on 1998 303d list)	40367000	13.9129	M	Miles	1100	Sedimentation/Siltation	1000	Agriculture	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 7 (was Arroyo Simi Reaches 1 and 2 on 1998 303d list)	40367000	13.9129	M	Miles	1100	Sedimentation/Siltation	5600	Natural Sources	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 8 (was Tapo Canyon Reach 1)	40366000	7.18869	M	Miles	1100	Sedimentation/Siltation	9100	Nonpoint Source	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 11 (Arroyo Santa Rosa, was part of Conejo Creek Reach 3 on 1998 303d list)	40365000	8.68888	M	Miles	1100	Sedimentation/Siltation	1000	Agriculture	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.
CAR4031	4	Los Angeles	R	Rivers/Streams	Calleguas Creek Reach 11 (Arroyo Santa Rosa, was part of Conejo Creek Reach 3 on 1998 303d list)	40365000	8.68888	M	Miles	1100	Sedimentation/Siltation	5600	Natural Sources	2005	For 2006, sedimentation/siltation was moved by USEPA from the being addressed list back to the 303(d) list pending completion and USEPA approval of a TMDL.

long as they comply with the provisions of sections C.3 and A.9 of the Order No. 99-08 DWQ, which state that these authorized non-storm discharges shall be:

(1) infeasible to eliminate
(2) comply with BMPs as described in the Storm Water Pollution Prevention Plan prepared by the permittee, and
(3) not cause or contribute to a violation of water quality standards, or comparable provisions in any successor order.

Unauthorized non-storm water flows are already prohibited by Order No. 99-08 DWQ.

Region 4 Calleguas Creek Metals TMDL – Resolution No. 2006-012 (Effective Date - March 26, 2007)

Interim Limits and Final WLAs for Total Recoverable Copper, Nickel, and Selenium

Interim limits and waste load allocations are applied to receiving water.

A. Interim Limits

Constituents	Calleguas and Conejo Creek			Revolon Slough		
	Dry CMC (ug/L)	Dry CCC (ug/L)	Wet CMC (ug/L)	Dry CMC (ug/L)	Dry CCC (ug/L)	Wet CMC (ug/L)
Copper*	23	19	204	23	19	204
Nickel	15	13	(a)	15	13	(a)
Selenium	(b)	(b)	(b)	14	13	(a)

(a) The current loads do not exceed the TMDL under wet conditions; interim limits are not required.
(b) Selenium allocations have not been developed for this reach as it is not on the 303(d) list.
(c) Attainment of interim limits will be evaluated in consideration of background loading data, if available.

B. Final WLAs for Total Recoverable Copper, Nickel, and Selenium

Dry-Weather WLAs in Water Column

Flow Range	Calleguas and Conejo Creek			Revolon Slough		
	Low Flow	Average Flow	Elevated Flow	Low Flow	Average Flow	Elevated Flow
Copper1 (lbs/day)	0.04*WER - 0.02	0.12*WER - 0.02	0.18*WER - 0.03	0.03*WER - 0.01	0.06*WER - 0.03	0.13*WER - 0.02
Nickel (lbs/day)	0.100	0.120	0.440	0.050	0.069	0.116
Selenium (lbs/day)	(a)	(a)	(a)	0.004	0.003	0.004

[1] If site-specific WERs are approved by the Regional Board, TMDL waste load allocations shall be implemented in accordance with the approved WERs using the equations set forth above. Regardless of the final WERs, total copper loading shall not exceed current loading.

(a) Selenium allocations have not been developed for this reach as it is not on the 303(d) list.

Wet-Weather WLAs in Water Column

Constituent	Calleguas Creek	Revolon Slough
Copper[1] (lbs/day)	(0.00054*Q^2*0.032*Q - 0.17)*WER - 0.06	(0.0002*Q2+0.0005*Q)*WER
Nickel[2] (lbs/day)	0.014*Q^2+0.82*Q	0.027*Q^2+0.47*Q
Selenium[2] (lbs/day)	(a)	0.027*Q^2+0.47*Q

[1] If site-specific WERs are approved by the Regional Board, TMDL waste load allocations shall be implemented in accordance with the approved WERs using the equations set forth above. Regardless of the final WERs, total copper loading shall not exceed current loading.

[2] Current loads do not exceed loading capacity during wet weather. Sum of all loads cannot exceed loads presented in the table

(a) Selenium allocations have not been developed for this reach as it is not on the 303(d) list.

Q: Daily storm volume.

Interim Limits and Final WLAs for Mercury in Suspended Sediment

Flow Range	Calleguas Creek		Revolon Slough	
	Interim (lbs/yr)	Final (lbs/yr)	Interim (lbs/yr)	Final (lbs/yr)
0-15,000 MGY	3.3	0.4	1.7	0.1
15,000-25,000 MGY	10.5	1.6	4	0.7
Above 25,000 MGY	64.6	9.3	10.2	1.8

MGY: million gallons per year.

In accordance with current practice, a group concentration-based WLA has been developed for all permitted stormwater discharges, including municipal separate storm sewer systems (MS4s), Caltrans, general industrial and construction stormwater permits, and Naval Air Weapons Station Point Mugu. Dischargers will have a required 25%, 50% and 100% reduction in the difference between the current loadings and the load allocations at 5, 10 and 15 years after the effective date, respectively. Achievement of required reductions will be evaluated based on progress towards BMP implementation as outlined in the urban water quality management plans (UWQMPs). If the interim reductions are not met, the dischargers will submit a report to the Executive Officer detailing why the reductions were not met and the steps that will be taken to meet the required reductions.

Region 4 Calleguas Creek-OC Pesticides, PCBs, and Siltation (Resolution 2005-010)
Effective Date - March 24, 2006

Interim Requirements

Region 4 Calleguas Creek Source: Minor NPDES point sources/WDRs TMDL Completion Date: 3 24 2006 TMDL Type:Creek	**Pollutant Stressor**	**WLA Daily Max (µg/L)**	**WLA Monthly Ave (µg/L)**
	Chlordane	1.2	0.59
	4,4-DDD	1.7	0.84
	4,4-DDE	1.2	0.59
	4,4-DDT	1.2	0.59
	Dieldrin	0.28	0.14
	PCB's	0.34	0.17
	Toxaphene	0.33	0.16

Region 4 Calleguas Creek-Calleguas Creek Toxicicity (Resolution 2005-009)
Effective Date - March 24, 2006

Minor sources include NPDES permittees other than POTWs and MS4s, discharging to the Calleguas Creek Watershed. A wasteload of 1.0 TUc is allocated to the minor point sources discharging to the Calleguas Creek Watershed. Additionally, the following wasteloads for chlorpyrifos and diazinon are established. Final WLAs apply as of March 24, 2006.

Chlorpyrifos WLAs, ug/L
Final WLA
(4 day)
0.014
Diazinon WLAs, ug/L
Final WLA
Acute and Chronic
0.10

Region 4 Calleguas Creek-Salts (Resolution 2007-016)
Effective Date – December 2, 2008

Final Dry Weather Pollutant WLA (mg/L)					
Region 4 Calleaguas Creek Source Permitted Stormwater Dischargers TMDL Completion Date: 12 2 2008 TMDL Type:Creek	**Critical Condition Flow Rate (mgd)**	**Chloride (lb/day)**	**TDS (lb/day)**	**Sulfate (lb/day)**	**Boron (lb/day)**
Simi	1.39	1738	9849	2897	12
Las Posas	0.13	157	887	261	N/A
Conejo	1.26	1576	8931	2627	N/A
Camarillo	0.06	72	406	119	N/A
Pleasant Valley (Calleguas)	0.12	150	850	250	N/A
Pleasant Valley (Revolon)	0.25	314	1778	523	2
Dry Weather Interim Pollutant WLA (mg/L)					
	Chloride (mg/L)	**TDS (mg/L)**	**Sulfate (mg/L)**	**Boron (mg/L)**	

Simi	230.0	1720.0	1289.0	1.3
Las Posas	230	1720	1289	1.3
Conejo	230	1720	1289	1.3
Camarillo	230	1720	1289	1.3
Pleasant Valley (Calleguas)	230	1720	1289	1.3
Pleasant Valley (Revolon)	230	1720	1289	1.3

- Dry- weather waste load allocations apply in the receiving water at the base of each subwatershed. Dry weather allocations apply when instream flow rates are below the 86th percentile flow and there has been no measurable precipitation in the previous 24 hours.
- Because wet weather flows transport a large mass of salts at low concentrations, these dischargers meet water quality objectives during wet weather. No wet weather allocations are assigned.

Ballona Creek Toxic Pollutants (Resolution No. 2005-008)
Effective Date - January 11, 2006

Each storm water permittee enrolled under the general construction or industrial storm water permits will receive an individual waste load allocation on a per acre basis, based on the acreage of their facility.

Metals per Acre WLAs for Individual General Construction or Industrial Storm Water Permittees (g/yr/ac)

Cadmium	Copper	Lead	Silver	Zinc
0.1	3	4	0.1	13

Organics per Acre WLAs for Individual General Construction or Industrial Storm Water Permittees (mg/yr/ac)

Chlordane	DDTs	Total PCBs	Total PAHs
0.04	0.14	2	350

Waste load allocations will be incorporated into the State Board general permit upon renewal or into a watershed specific general construction storm water permit developed by the Regional Board.

Within seven years of the effective date of the TMDL, the construction industry will submit the results of BMP effectiveness studies to determine BMPs that will achieve compliance with the waste load allocations assigned to construction storm water permittees. Regional Board staff will bring the recommended BMPs before the Regional Board for consideration within eight years of the

Table 2-1. Beneficial Uses of Inland Surface Waters (Continued).

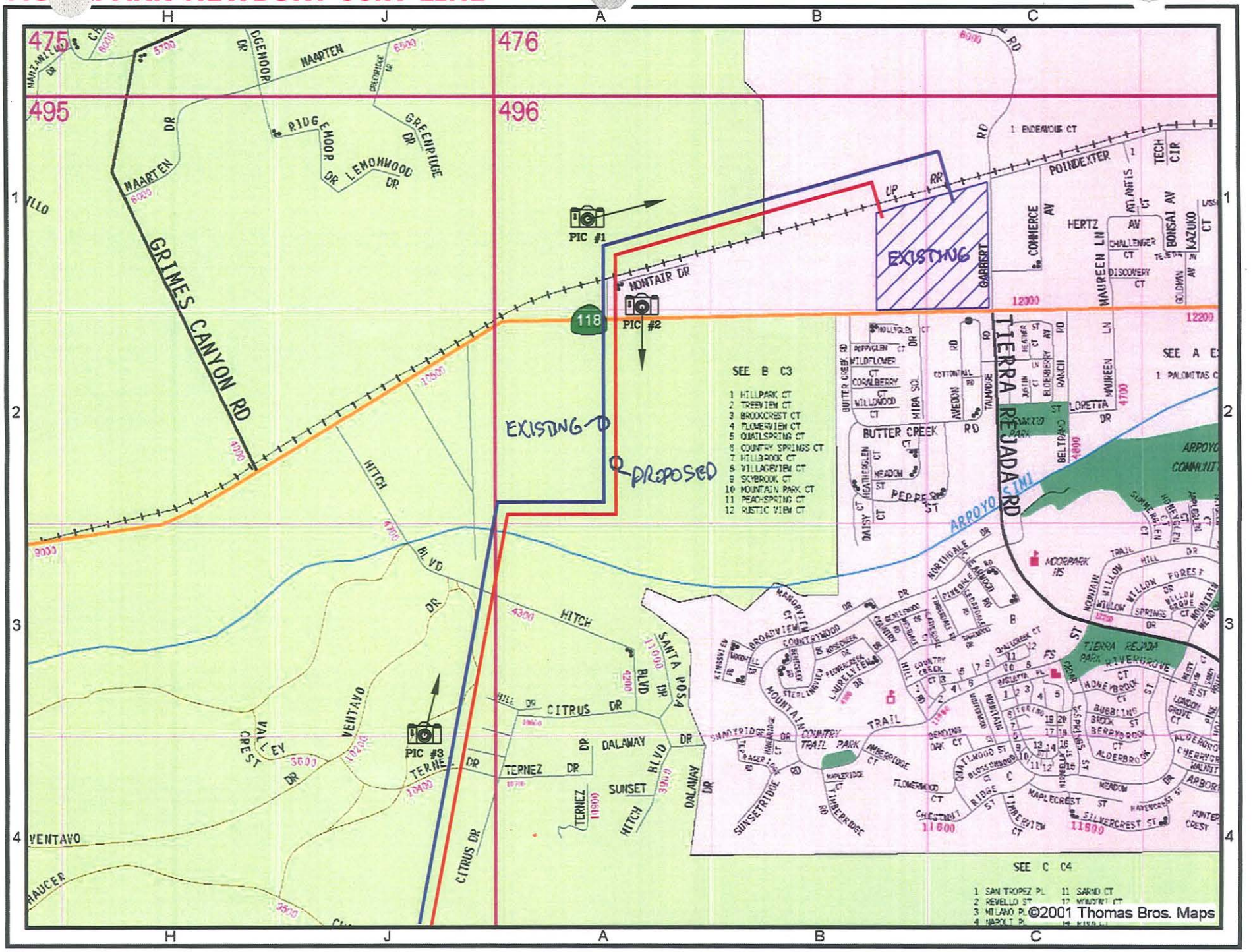
WATERSHED[a]	Hydro. Unit No.	MUN	IND	PROC	AGR	GWR	FRSH	NAV	POW	REC1	REC2	COMM	AQUA	WARM	COLD	SAL	EST	MAR	WILD	BIOL	RARE	MIGR	SPWN	SHELL	WET[b]
SANTA CLARA RIVER WATERSHED (CONT)																									
Mint Canyon Creek	403.51	I	I	I	I	I	I			Im	I			I					E						
Agua Dulce Canyon Creek	403.55	I*			I	I	I			I	I			I					E						
Aliso Canyon Creek	403.55	P*			P	E				E	E			E					E						E
Lake Hughes	403.51	P	P	P	P	P	P			E	E			E					E		E				
Munz Lake	403.51	P	P	P	P	E	P			E	E			E					E						
Lake Elizabeth	403.51	P	P	P	P	P	P			E	E			E					E		E				
CALLEGUAS-CONEJO CREEK WATERSHED																									
Mugu Lagoon c	403.11							E		Pn	E	Ed					E	E	Eo	E	Ee,p	Ef	Ef	Ed	E
Calleguas Creek Estuary c	403.11							P		Pn	E	E					E		E		Ee,p	Ef	Ef		E
Calleguas Creek	403.11	P*	P	P	E	E	E			E	E			E	E				E		E				E
Calleguas Creek	403.12	P*	P	P	E	E				Eq	E			E					E						
Revolon Slough	403.11	P*	P		E	E				Eq	E			E					E						E
Beardsley Wash	403.61	P*					E			E	E			E					E						
Conejo Creek	403.12	P*	E	E	E	E				Eq	E			E					E						
Conejo Creek	403.63																		E						
Arroyo Conejo	403.64	P*				I	I			I	I			I					E		E				
Arroyo Conejo	403.68	P*				I	I			I	I			I					E						
Arroyo Santa Rosa	403.61	P*								I	I			I					E						
Arroyo Santa Rosa	403.62																		E						
North Fork Arroyo Conejo	403.64	P*			E	E				E	E			E					E				E		
Arroyo Las Posas	403.12	P*	P	P	P	E				E	E			E	P				E						
Arroyo Las Posas	403.62	P*	P	P	P	E	E			E	E			E					E						
Arroyo Simi	403.67																								
Arroyo Simi	403.67	I*	I			I	I			I	I			I					E						
Tapo Canyon Creek	403.66	I*		P	P	I				I	I			I					E						
Tapo Canyon Creek	403.61																		E						
Gillibrand Canyon Creek	403.67	P*				I				I	I			I					E						
Lake Bard (Wood Ranch Reservoir)	403.67	E	E	E	E	P				Pr	Er			E					E						
LOS ANGELES COUNTY COASTAL STREAMS																									
Arroyo Sequit	404.44	P*				I				E	E			E	E				E		E	E	E		E
Escondido Canyon Creek	404.43																								

E: Existing beneficial use
P: Potential beneficial use
I: Intermittent beneficial use
E, P, and I shall be protected as required
* Asterixed MUN designations are designated under SB 88-63 and RB 89-03. Some designations may be considered for exemptions at a later date. (See pages 2-3,4 for more details).

Footnotes are consistent on all beneficial use tables.

a Waterbodies are listed multiple times if they cross hydrologic area or subarea boundaries. Beneficial use designations apply to all tributaries to the indicated waterbody, if not listed separately.
b Waterbodies designated as WET may have wetlands habitat associated with only a portion of the waterbody. Any regulatory action would require a detailed analysis of the area.
c Coastal waterbodies which are also listed in Coastal Features Table (2-3) or in Wetlands Table (2-4).
d Limited public access precludes full utilization.
e One or more rare species utilize all ocean, bays, estuaries, and coastal wetlands for foraging and/or nesting.
f Aquatic organisms utilize all bays, estuaries, lagoons and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas which are heavily influenced by freshwater inputs
m Access prohibited by Los Angeles County DPW in the concrete-channelized areas.
n Area is currently under control of the Navy: swimming is prohibited.
o Marine habitats of the Channel Islands and Mugu Lagoon serve as pinniped haul-out areas for one or more species (i.e., sea lions).
p Habitat of the Clapper Rail.
q Whenever flow conditions are suitable.
r Public access prohibited by Calleguas MWD.

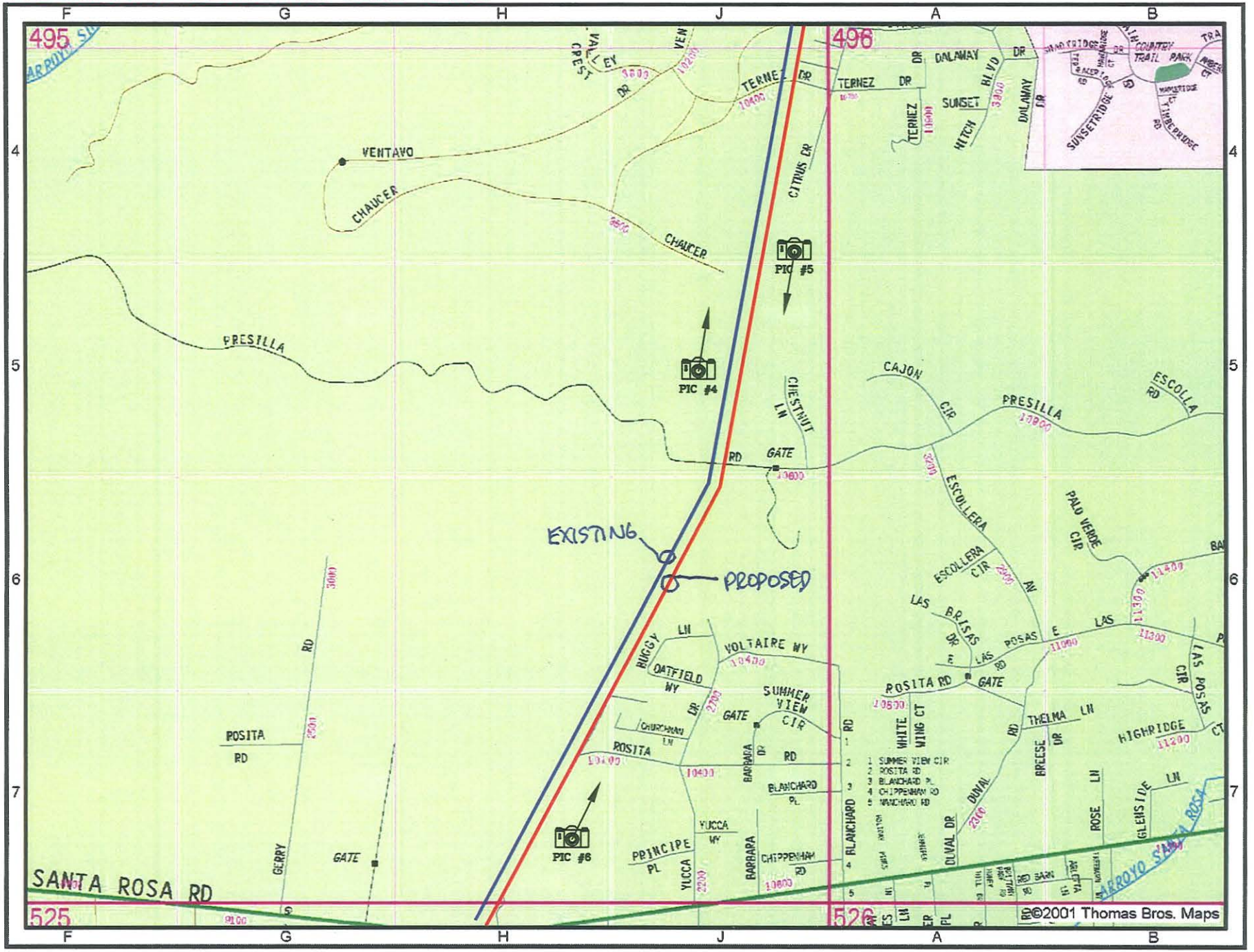
MOORPARK-NEWBURY 66kV LINE



PROPOSED TRANSMISSION LINE

EXISTING TRANSMISSION LINES AND SUBSTATIONS

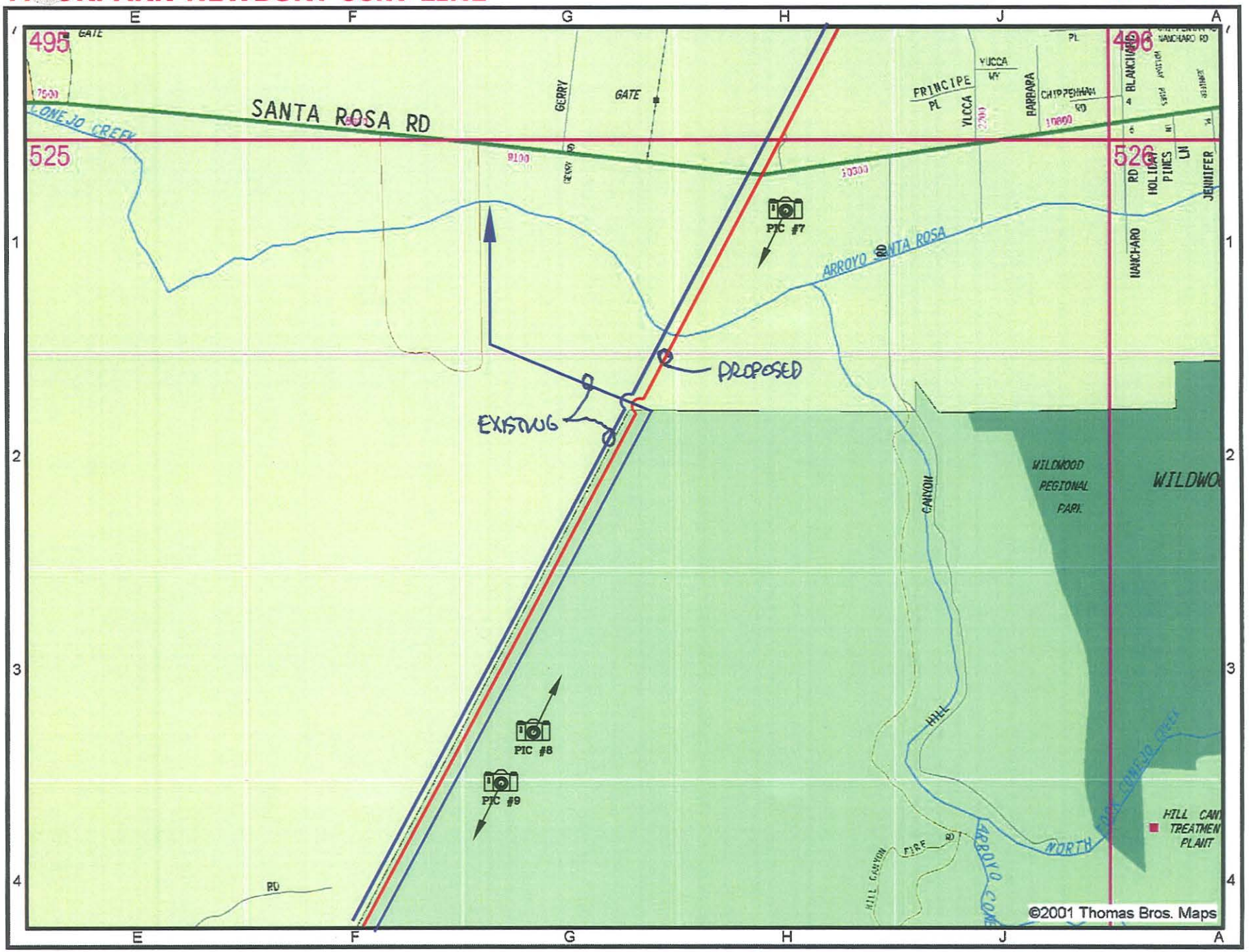
MOORPARK-NEWBURY 66kV LINE



PROPOSED TRANSMISSION LINE

EXISTING TRANSMISSION LINES AND SUBSTATIONS

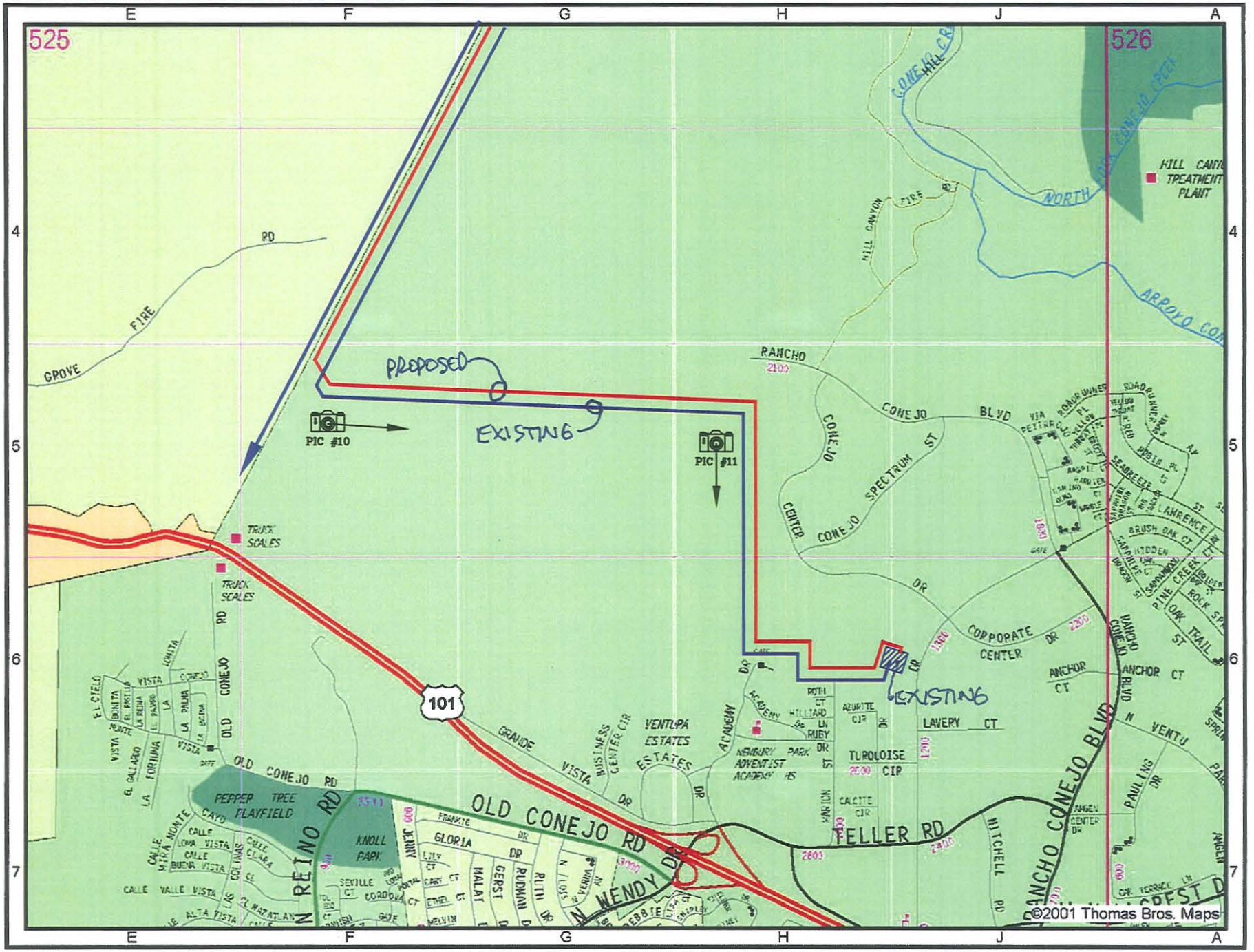
M ORPARK-NEWBURY 66kV LINE



PROPOSED TRANSMISSION LINE

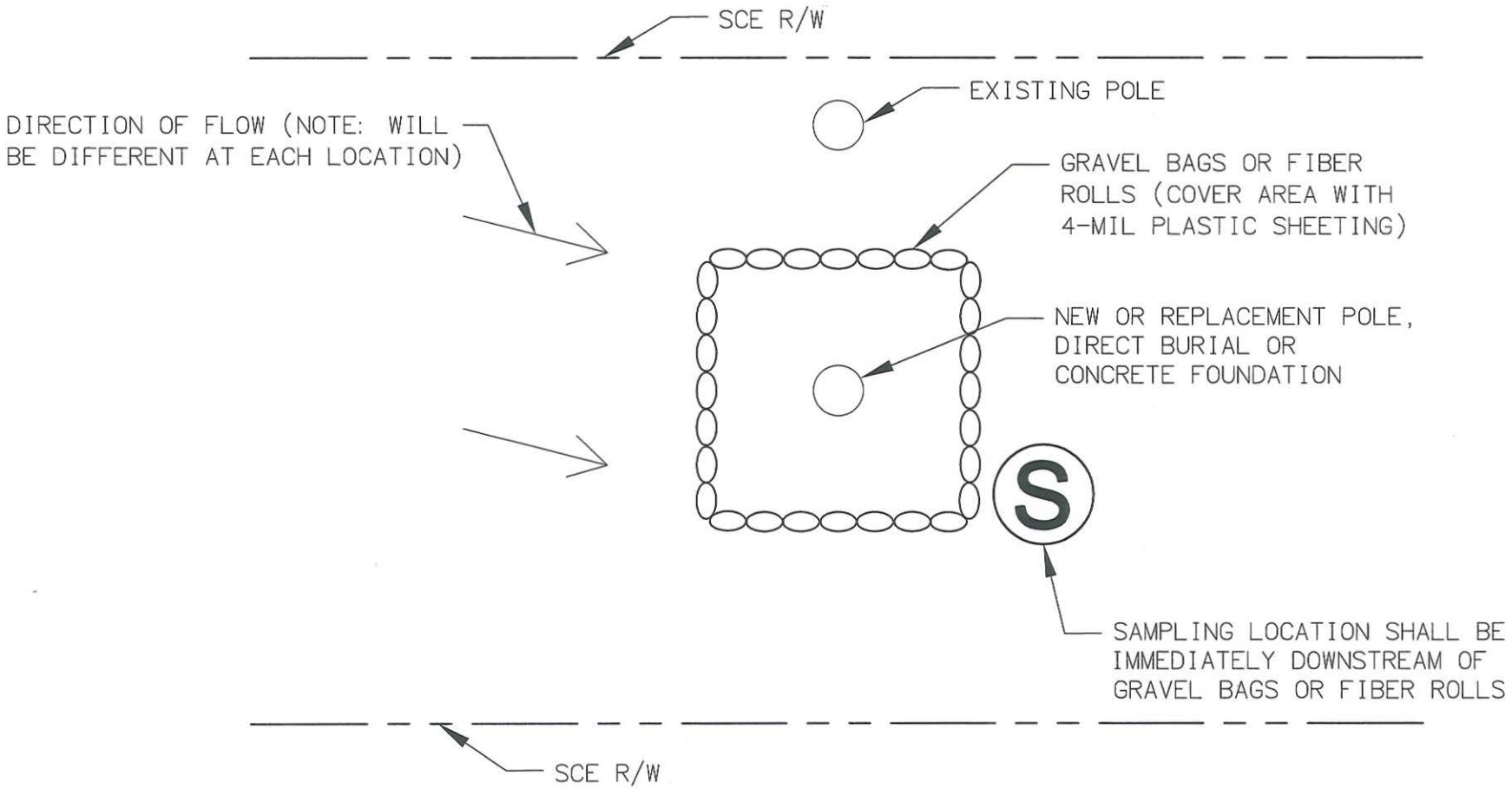
EXISTING TRANSMISSION LINES AND SUBSTATIONS

MOORPARK-NEWBURY 66kV LINE



PROPOSED TRANSMISSION LINE

EXISTING TRANSMISSION LINES AND SUBSTATIONS



NOTE: ALL SPOILS TO BE TRUCKED OFF-SITE OR USED TO REPAIR SERVICE ROAD

SCALE: 1"=5'

RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION
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MOORPARK-NEWBURY 66kV

SWPPP Map BMP Detail.
Generic detail for each pole location.
70 total pole locations.

SHEET 1 OF 1 SHTS.


Photo #1


Photo #2


Photo #3

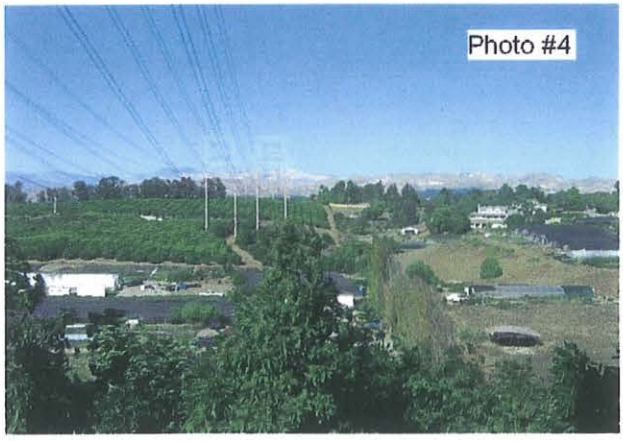
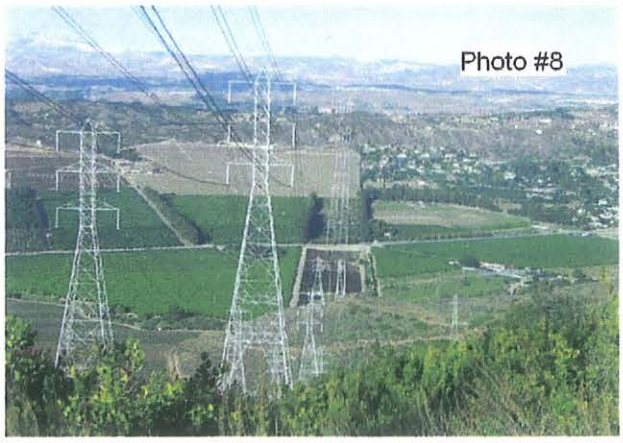


Photo #4


Photo #5


Photo #6


Photo #7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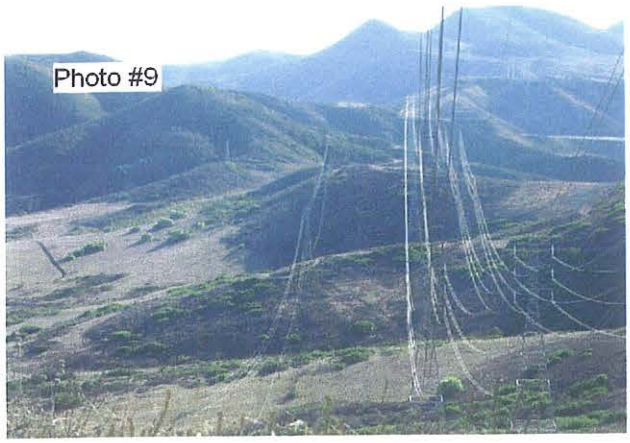


Photo #9


Photo #10


Photo #11

APPENDIX C
SWPPP AMENDMENT LOG

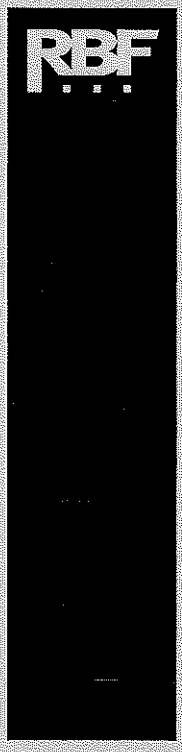
Appendix C

SWPPP Amendment Log

SWPPP AMENDMENT LOG

Project Name: Moorpark-Newbury 66 kV

Amendment No.	Prepared by QSD	Description	Date



APPENDIX D
SUBMITTED CHANGES

Appendix D

Submitted Changes to PRDs
(due to change in ownership, contacts, or acreage)

APPENDIX E
CONSTRUCTION SCHEDULE

Appendix E

Construction Schedule

Construction Schedule (or replace with contractor provided schedule)

Detailed schedule by each pole location will be provided by contractor and updated as project schedule changes

Estimated Dates	Event or Construction Phase
September 2010	Start of Project
December 2011	Project Completion

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APPENDIX F
CONSTRUCTION ACTIVITIES

Appendix F

Construction Activities, Materials Used and Associated Pollutants

(Included under Section 2.5 of the text)

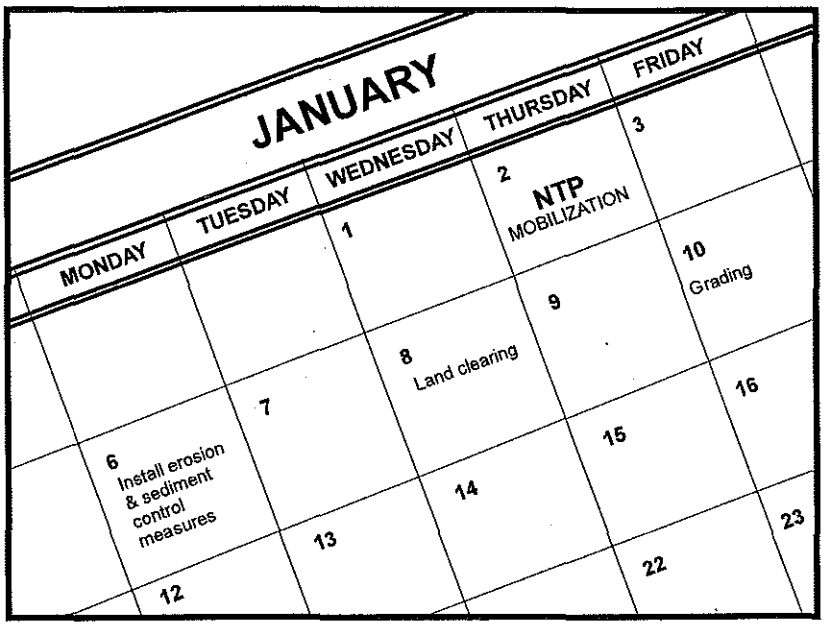
APPENDIX G
CASQA BMP FACT SHEETS

Appendix G

CASQA BMP Handbook Fact Sheets

Construction "Fact Sheets" Including Erosion and Sediment Controls

Scheduling EC-1



Categories

EC	Erosion Control	☑
SE	Sediment Control	☒
TC	Tracking Control	☒
WE	Wind Erosion Control	☒
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None

Description and Purpose

Scheduling is the development of a written plan that includes sequencing of construction activities and the implementation of BMPs such as erosion control and sediment control while taking local climate (rainfall, wind, etc.) into consideration. The purpose is to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff, and vehicle tracking, and to perform the construction activities and control practices in accordance with the planned schedule.

Suitable Applications

Proper sequencing of construction activities to reduce erosion potential should be incorporated into the schedule of every construction project especially during rainy season. Use of other, more costly yet less effective, erosion and sediment control BMPs may often be reduced through proper construction sequencing.

Limitations

- Environmental constraints such as nesting season prohibitions reduce the full capabilities of this BMP.

Implementation

- Avoid rainy periods. Schedule major grading operations during dry months when practical. Allow enough time before rainfall begins to stabilize the soil with vegetation or physical means or to install sediment trapping devices.
- Plan the project and develop a schedule showing each phase

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of construction. Clearly show how the rainy season relates to soil disturbing and re-stabilization activities. Incorporate the construction schedule into the SWPPP.

- Include on the schedule, details on the rainy season implementation and deployment of:
  - Erosion control BMPs
  - Sediment control BMPs
  - Tracking control BMPs
  - Wind erosion control BMPs
  - Non-stormwater BMPs
  - Waste management and materials pollution control BMPs
- Include dates for activities that may require non-stormwater discharges such as dewatering, sawcutting, grinding, drilling, boring, crushing, blasting, painting, hydro-demolition, mortar mixing, pavement cleaning, etc.
- Work out the sequencing and timetable for the start and completion of each item such as site clearing and grubbing, grading, excavation, paving, foundation pouring utilities installation, etc., to minimize the active construction area during the rainy season.
  - Sequence trenching activities so that most open portions are closed before new trenching begins.
  - Incorporate staged seeding and re-vegetation of graded slopes as work progresses.
  - Schedule establishment of permanent vegetation during appropriate planting time for specified vegetation.
- Non-active areas should be stabilized as soon as practical after the cessation of soil disturbing activities or one day prior to the onset of precipitation.
- Monitor the weather forecast for rainfall.
- When rainfall is predicted, adjust the construction schedule to allow the implementation of soil stabilization and sediment treatment controls on all disturbed areas prior to the onset of rain.
- Be prepared year round to deploy erosion control and sediment control BMPs. Erosion may be caused during dry seasons by un-seasonal rainfall, wind, and vehicle tracking. Keep the site stabilized year round, and retain and maintain rainy season sediment trapping devices in operational condition.
- Apply permanent erosion control to areas deemed substantially complete during the project's defined seeding window.

Costs

Construction scheduling to reduce erosion may increase other construction costs due to reduced economies of scale in performing site grading. The cost effectiveness of scheduling techniques should be compared with the other less effective erosion and sedimentation controls to achieve a cost effective balance.

Inspection and Maintenance

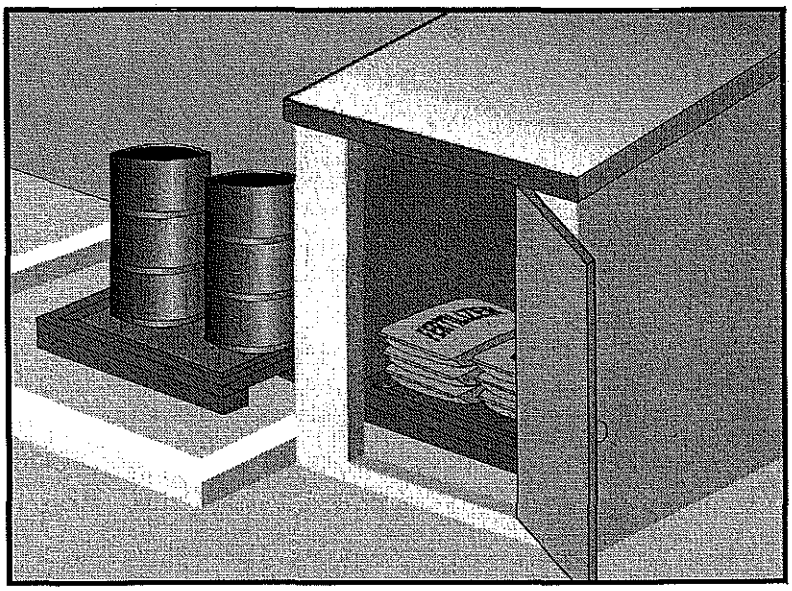
- Verify that work is progressing in accordance with the schedule. If progress deviates, take corrective actions.
- Amend the schedule when changes are warranted.
- Amend the schedule prior to the rainy season to show updated information on the deployment and implementation of construction site BMPs.

References

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities Developing Pollution Prevention Plans and Best Management Practices (EPA 832-R-92-005), U.S. Environmental Protection Agency, Office of Water, September 1992.

Material Delivery and Storage WM-1



Categories		
EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents	
Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Prevent, reduce, or eliminate the discharge of pollutants from material delivery and storage to the stormwater system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in watertight containers and/or a completely enclosed designated area, installing secondary containment, conducting regular inspections, and training employees and subcontractors.

This best management practice covers only material delivery and storage. For other information on materials, see WM-2, Material Use, or WM-4, Spill Prevention and Control. For information on wastes, see the waste management BMPs in this section.

Suitable Applications

These procedures are suitable for use at all construction sites with delivery and storage of the following materials:

- Soil stabilizers and binders
- Pesticides and herbicides
- Fertilizers
- Detergents
- Plaster
- Petroleum products such as fuel, oil, and grease

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- Asphalt and concrete components
- Hazardous chemicals such as acids, lime, glues, adhesives, paints, solvents, and curing compounds
- Concrete compounds
- Other materials that may be detrimental if released to the environment

Limitations

- Space limitation may preclude indoor storage.
- Storage sheds often must meet building and fire code requirements.

Implementation

The following steps should be taken to minimize risk:

- Chemicals must be stored in water tight containers with appropriate secondary containment or in a storage shed.
- When a material storage area is located on bare soil, the area should be lined and bermed.
- Use containment pallets or other practical and available solutions, such as storing materials within newly constructed buildings or garages, to meet material storage requirements.
- Stack erodible landscape material on pallets and cover when not in use.
- Contain all fertilizers and other landscape materials when not in use.
- Temporary storage areas should be located away from vehicular traffic.
- Material Safety Data Sheets (MSDS) should be available on-site for all materials stored that have the potential to effect water quality.
- Construction site areas should be designated for material delivery and storage.
- Material delivery and storage areas should be located away from waterways, if possible.
  - Avoid transport near drainage paths or waterways.
  - Surround with earth berms or other appropriate containment BMP. See EC-9, Earth Dikes and Drainage Swales.
  - Place in an area that will be paved.
- Storage of reactive, ignitable, or flammable liquids must comply with the fire codes of your area. Contact the local Fire Marshal to review site materials, quantities, and proposed storage area to determine specific requirements. See the Flammable and Combustible Liquid Code, NFPA30.
- An up to date inventory of materials delivered and stored onsite should be kept.

- Hazardous materials storage onsite should be minimized.
- Hazardous materials should be handled as infrequently as possible.
- Keep ample spill cleanup supplies appropriate for the materials being stored. Ensure that cleanup supplies are in a conspicuous, labeled area.
- Employees and subcontractors should be trained on the proper material delivery and storage practices.
- Employees trained in emergency spill cleanup procedures must be present when dangerous materials or liquid chemicals are unloaded.
- If significant residual materials remain on the ground after construction is complete, properly remove and dispose of materials and any contaminated soil. See WM-7, Contaminated Soil Management. If the area is to be paved, pave as soon as materials are removed to stabilize the soil.

Material Storage Areas and Practices

- Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 should be stored in approved containers and drums and should not be overfilled. Containers and drums should be placed in temporary containment facilities for storage.
- A temporary containment facility should provide for a spill containment volume able to contain precipitation from a 25 year storm event, plus the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest container within its boundary, whichever is greater.
- A temporary containment facility should be impervious to the materials stored therein for a minimum contact time of 72 hours.
- A temporary containment facility should be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills should be collected and placed into drums. These liquids should be handled as a hazardous waste unless testing determines them to be non-hazardous. All collected liquids or non-hazardous liquids should be sent to an approved disposal site.
- Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.
- Incompatible materials, such as chlorine and ammonia, should not be stored in the same temporary containment facility.
- Materials should be covered prior to, and during rain events.
- Materials should be stored in their original containers and the original product labels should be maintained in place in a legible condition. Damaged or otherwise illegible labels should be replaced immediately.

- Bagged and boxed materials should be stored on pallets and should not be allowed to accumulate on the ground. To provide protection from wind and rain throughout the rainy season, bagged and boxed materials should be covered during non-working days and prior to and during rain events.
- Stockpiles should be protected in accordance with WM-3, Stockpile Management.
- Materials should be stored indoors within existing structures or completely enclosed storage sheds when available.
- Proper storage instructions should be posted at all times in an open and conspicuous location.
- An ample supply of appropriate spill clean up material should be kept near storage areas.
- Also see WM-6, Hazardous Waste Management, for storing of hazardous wastes.

Material Delivery Practices

- Keep an accurate, up-to-date inventory of material delivered and stored onsite.
- Arrange for employees trained in emergency spill cleanup procedures to be present when dangerous materials or liquid chemicals are unloaded.

Spill Cleanup

- Contain and clean up any spill immediately.
- Properly remove and dispose of any hazardous materials or contaminated soil if significant residual materials remain on the ground after construction is complete. See WM-7, Contaminated Soil Management.
- See WM-4, Spill Prevention and Control, for spills of chemicals and/or hazardous materials.
- If spills or leaks of materials occur that are not contained and could discharge to surface waters, non-visible sampling of site discharge may be required. Refer to the General Permit or to your project specific Construction Site Monitoring Plan to determine if and where sampling is required.

Cost

- The largest cost of implementation may be in the construction of a materials storage area that is covered and provides secondary containment.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Keep storage areas clean and well organized, including a current list of all materials onsite.
- Inspect labels on containers for legibility and accuracy.

- Repair or replace perimeter controls, containment structures, covers, and liners as needed to maintain proper function.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

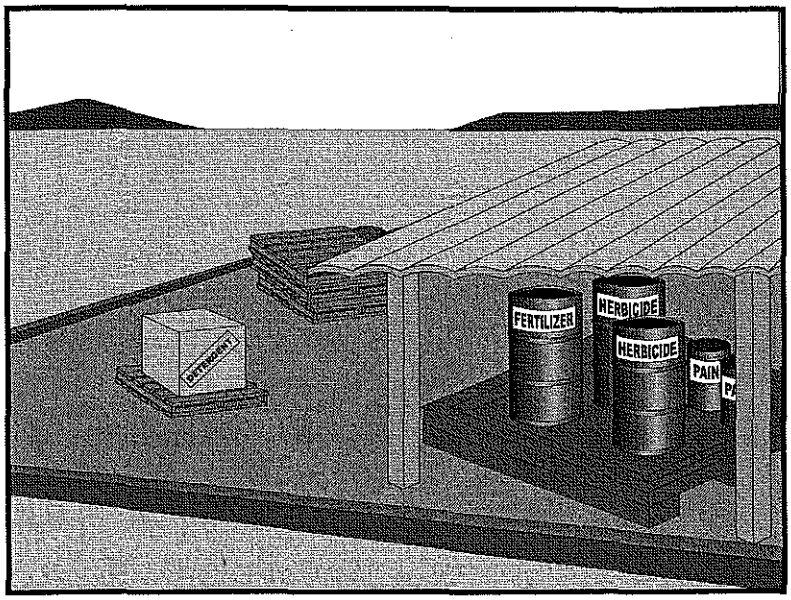
Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance, Working Group Working Paper; USEPA, April 1992.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Material Use

WM-2



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Prevent or reduce the discharge of pollutants to the storm drain system or watercourses from material use by using alternative products, minimizing hazardous material use onsite, and training employees and subcontractors.

Suitable Applications

This BMP is suitable for use at all construction projects. These procedures apply when the following materials are used or prepared onsite:

- Pesticides and herbicides
- Fertilizers
- Detergents
- Petroleum products such as fuel, oil, and grease
- Asphalt and other concrete components
- Other hazardous chemicals such as acids, lime, glues, adhesives, paints, solvents, and curing compounds
- Other materials that may be detrimental if released to the environment

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Limitations

Safer alternative building and construction products may not be available or suitable in every instance.

Implementation

The following steps should be taken to minimize risk:

- Minimize use of hazardous materials onsite.
- Follow manufacturer instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals.
- Train personnel who use pesticides. The California Department of Pesticide Regulation and county agricultural commissioners license pesticide dealers, certify pesticide applicators, and conduct onsite inspections.
- The preferred method of termiticide application is soil injection near the existing or proposed structure foundation/slab; however, if not feasible, soil drench application of termiticides should follow EPA label guidelines and the following recommendations (most of which are applicable to most pesticide applications):
  - Do not treat soil that is water-saturated or frozen.
  - Application shall not commence within 24-hours of a predicted precipitation event with a 40% or greater probability. Weather tracking must be performed on a daily basis prior to termiticide application and during the period of termiticide application.
  - Do not allow treatment chemicals to runoff from the target area. Apply proper quantity to prevent excess runoff. Provide containment for and divert stormwater from application areas using berms or diversion ditches during application.
  - Dry season: Do not apply within 10 feet of storm drains. Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or ponds; estuaries; and commercial fish farm ponds).
  - Wet season: Do not apply within 50 feet of storm drains or aquatic habitats (such as, but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or ponds; estuaries; and commercial fish farm ponds) unless a vegetative buffer is present (if so, refer to dry season requirements).
  - Do not make on-grade applications when sustained wind speeds are above 10 mph (at application site) at nozzle end height.
  - Cover treatment site prior to a rain event in order to prevent run-off of the pesticide into non-target areas. The treated area should be limited to a size that can be backfilled and/or covered by the end of the work shift. Backfilling or covering of the treated area shall be done by the end of the same work shift in which the application is made.
  - The applicator must either cover the soil him/herself or provide written notification of the above requirement to the contractor on site and to the person commissioning the

application (if different than the contractor). If notice is provided to the contractor or the person commissioning the application, then they are responsible under the Federal Insecticide Fungicide, and Rodenticide Act (FIFRA) to ensure that: 1) if the concrete slab cannot be poured over the treated soil within 24 hours of application, the treated soil is covered with a waterproof covering (such as polyethylene sheeting), and 2) the treated soil is covered if precipitation is predicted to occur before the concrete slab is scheduled to be poured.

- Do not over-apply fertilizers, herbicides, and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over-application is expensive and environmentally harmful. Unless on steep slopes, till fertilizers into the soil rather than hydraulic application. Apply surface dressings in several smaller applications, as opposed to one large application, to allow time for infiltration and to avoid excess material being carried offsite by runoff. Do not apply these chemicals before predicted rainfall.
- Train employees and subcontractors in proper material use.
- Supply Material Safety Data Sheets (MSDS) for all materials.
- Dispose of latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths, when thoroughly dry and are no longer hazardous, with other construction debris.
- Do not remove the original product label; it contains important safety and disposal information. Use the entire product before disposing of the container.
- Mix paint indoors or in a containment area. Never clean paintbrushes or rinse paint containers into a street, gutter, storm drain, or watercourse. Dispose of any paint thinners, residue, and sludge(s) that cannot be recycled, as hazardous waste.
- For water-based paint, clean brushes to the extent practicable, and rinse to a drain leading to a sanitary sewer where permitted, or contain for proper disposal off site. For oil-based paints, clean brushes to the extent practicable, and filter and reuse thinners and solvents.
- Use recycled and less hazardous products when practical. Recycle residual paints, solvents, non-treated lumber, and other materials.
- Use materials only where and when needed to complete the construction activity. Use safer alternative materials as much as possible. Reduce or eliminate use of hazardous materials onsite when practical.
- Document the location, time, chemicals applied, and applicator's name and qualifications.
- Keep an ample supply of spill clean up material near use areas. Train employees in spill clean up procedures.
- Avoid exposing applied materials to rainfall and runoff unless sufficient time has been allowed for them to dry.
- Discontinue use of erodible landscape material within 2 days prior to a forecasted rain event and materials should be covered and/or bermed.

- Provide containment for material use areas such as masons' areas or paint mixing/preparation areas to prevent materials/pollutants from entering stormwater.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities.
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Ensure employees and subcontractors throughout the job are using appropriate practices.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

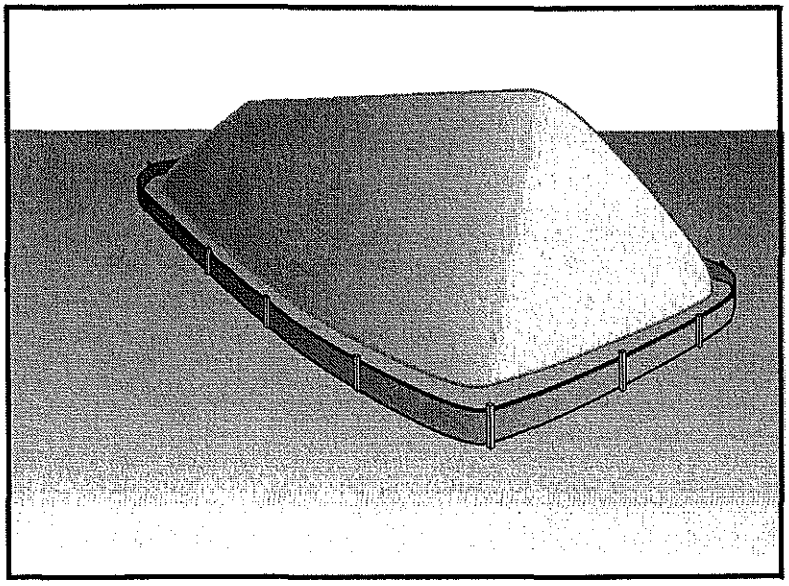
Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance, Working Group Working Paper; USEPA, April 1992.

Comments on Risk Assessments Risk Reduction Options for Cypermethrin: Docket No. OPP–2005–0293; California Stormwater Quality Association (CASQA) letter to USEPA, 2006.Environmental Hazard and General Labeling for Pyrethroid Non-Agricultural Outdoor Products, EPA-HQ-OPP-2008-0331-0021; USEPA, 2008.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Stockpile Management WM-3



Categories		
EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☒
WM	Waste Management and Materials Pollution Control	☑

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents	
Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Stockpile management procedures and practices are designed to reduce or eliminate air and stormwater pollution from stockpiles of soil, soil amendments, sand, paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate sub base or pre-mixed aggregate, asphalt minder (so called "cold mix" asphalt), and pressure treated wood.

Suitable Applications

Implement in all projects that stockpile soil and other loose materials.

Limitations

- Plastic sheeting as a stockpile protection is temporary and hard to manage in windy conditions. Where plastic is used, consider use of plastic tarps with nylon reinforcement which may be more durable than standard sheeting.
- Plastic sheeting can increase runoff volume due to lack of infiltration and potentially cause perimeter control failure.
- Plastic sheeting breaks down faster in sunlight.
- The use of Plastic materials and photodegradable plastics should be avoided.

Implementation

Protection of stockpiles is a year-round requirement. To properly manage stockpiles:

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- On larger sites, a minimum of 50 ft separation from concentrated flows of stormwater, drainage courses, and inlets is recommended.
- All stockpiles are required to be protected immediately if they are not scheduled to be used within 14 days.
- Protect all stockpiles from stormwater runon using temporary perimeter sediment barriers such as compost berms (SE-13), temporary silt dikes (SE-12), fiber rolls (SE-5), silt fences (SE-1), sandbags (SE-8), gravel bags (SE-6), or biofilter bags (SE-14). Refer to the individual fact sheet for each of these controls for installation information.
- Implement wind erosion control practices as appropriate on all stockpiled material. For specific information, see WE-1, Wind Erosion Control.
- Manage stockpiles of contaminated soil in accordance with WM-7, Contaminated Soil Management.
- Place bagged materials on pallets and under cover.
- Ensure that stockpile coverings are installed securely to protect from wind and rain.
- Some plastic covers withstand weather and sunlight better than others. Select cover materials or methods based on anticipated duration of use.

Protection of Non-Active Stockpiles

Non-active stockpiles of the identified materials should be protected further as follows:

Soil stockpiles

- Soil stockpiles should be covered or protected with soil stabilization measures and a temporary perimeter sediment barrier at all times.
- Temporary vegetation should be considered for topsoil piles that will be stockpiled for extended periods.

Stockpiles of Portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, or aggregate sub base

- Stockpiles should be covered and protected with a temporary perimeter sediment barrier at all times.

Stockpiles of "cold mix"

- Cold mix stockpiles should be placed on and covered with plastic sheeting or comparable material at all times and surrounded by a berm.

Stockpiles of fly ash, stucco, hydrated lime

- Stockpiles of materials that may raise the pH of runoff (i.e., basic materials) should be covered with plastic and surrounded by a berm.

Stockpiles/Storage of wood (Pressure treated with chromated copper arsenate or ammoniacal copper zinc arsenate

- Treated wood should be covered with plastic sheeting or comparable material at all times and surrounded by a berm.

Protection of Active Stockpiles

Active stockpiles of the identified materials should be protected as follows:

- All stockpiles should be covered and protected with a temporary linear sediment barrier prior to the onset of precipitation.
- Stockpiles of "cold mix" and treated wood, and basic materials should be placed on and covered with plastic sheeting or comparable material and surrounded by a berm prior to the onset of precipitation.
- The downstream perimeter of an active stockpile should be protected with a linear sediment barrier or berm and runoff should be diverted around or away from the stockpile on the upstream perimeter.

Costs

For cost information associated with stockpile protection refer to the individual erosion or sediment control BMP fact sheet considered for implementation (For example, refer to SE-1 Silt Fence for installation of silt fence around the perimeter of a stockpile.)

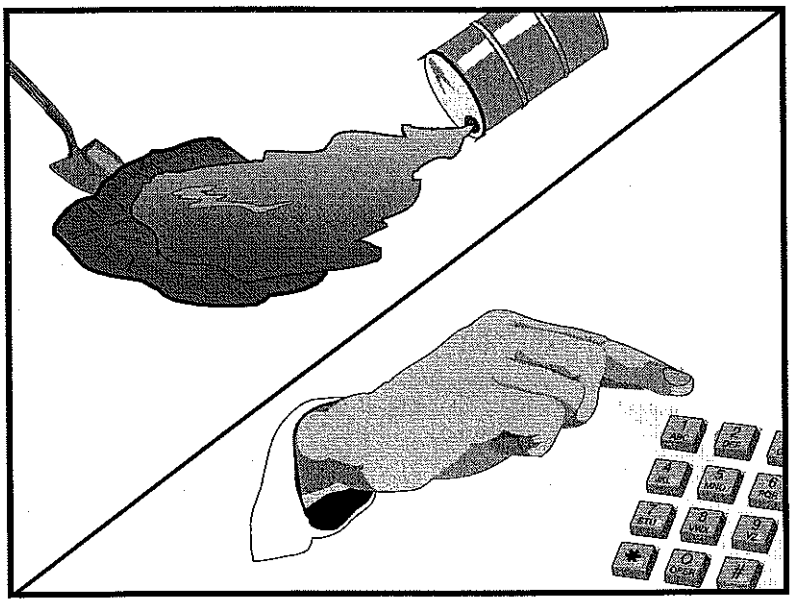
Inspection and Maintenance

- Stockpiles must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- It may be necessary to inspect stockpiles covered with plastic sheeting more frequently during certain conditions (for example, high winds or extreme heat).
- Repair and/or replace perimeter controls and covers as needed to keep them functioning properly.
- Sediment shall be removed when it reaches one-third of the barrier height.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Spill Prevention and Control WM-4



Categories		
EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:
☑ **Primary Objective**
☒ **Secondary Objective**

Targeted Constituents	
Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

This best management practice covers only spill prevention and control. However, WM-1, Materials Delivery and Storage, and WM-2, Material Use, also contain useful information, particularly on spill prevention. For information on wastes, see the waste management BMPs in this section.

Suitable Applications

This BMP is suitable for all construction projects. Spill control procedures are implemented anytime chemicals or hazardous substances are stored on the construction site, including the following materials:

- Soil stabilizers/binders
- Dust palliatives
- Herbicides
- Growth inhibitors
- Fertilizers
- Deicing/anti-icing chemicals

- Fuels
- Lubricants
- Other petroleum distillates

Limitations

- In some cases it may be necessary to use a private spill cleanup company.
- This BMP applies to spills caused by the contractor and subcontractors.
- Procedures and practices presented in this BMP are general. Contractor should identify appropriate practices for the specific materials used or stored onsite

Implementation

The following steps will help reduce the stormwater impacts of leaks and spills:

Education

- Be aware that different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills.
- Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
- Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees.
- Have contractor's superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

- To the extent that the work can be accomplished safely, spills of oil, petroleum products, substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- Store hazardous materials and wastes in covered containers and protect from vandalism.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Train employees in spill prevention and cleanup.
- Designate responsible individuals to oversee and enforce control measures.
- Spills should be covered and protected from stormwater runon during rainfall to the extent that it doesn't compromise clean up activities.
- Do not bury or wash spills with water.

- Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with WM-10, Liquid Waste Management.
- Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- Place proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

- Clean up leaks and spills immediately.
- Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to either a certified laundry (rags) or disposed of as hazardous waste.
- Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

- Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
- Use absorbent materials on small spills rather than hosing down or burying the spill.
- Absorbent materials should be promptly removed and disposed of properly.
- Follow the practice below for a minor spill:
  - Contain the spread of the spill.
  - Recover spilled materials.
  - Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

- Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.

- Spills should be cleaned up immediately:
  - Contain spread of the spill.
  - Notify the project foreman immediately.
  - If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
  - If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
  - If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

- For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, the following steps should be taken:
  - Notify the local emergency response by dialing 911. In addition to 911, the contractor will notify the proper county officials. It is the contractor's responsibility to have all emergency phone numbers at the construction site.
  - Notify the Governor's Office of Emergency Services Warning Center, (916) 845-8911.
  - For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor should notify the National Response Center at (800) 424-8802.
  - Notification should first be made by telephone and followed up with a written report.
  - The services of a spills contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
  - Other agencies which may need to be consulted include, but are not limited to, the Fire Department, the Public Works Department, the Coast Guard, the Highway Patrol, the City/County Police Department, Department of Toxic Substances, California Division of Oil and Gas, Cal/OSHA, etc.

Reporting

- Report significant spills to local agencies, such as the Fire Department; they can assist in cleanup.
- Federal regulations require that any significant oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hours).

Use the following measures related to specific activities:

Vehicle and Equipment Maintenance

- If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.
- Regularly inspect onsite vehicles and equipment for leaks and repair immediately
- Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Place drip pans or absorbent materials under paving equipment when not in use.
- Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around
- Oil filters disposed of in trashcans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask the oil supplier or recycler about recycling oil filters.
- Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

- If fueling must occur onsite, use designate areas, located away from drainage courses, to prevent the runon of stormwater and the runoff of spills.
- Discourage "topping off" of fuel tanks.
- Always use secondary containment, such as a drain pan, when fueling to catch spills/ leaks.

Costs

Prevention of leaks and spills is inexpensive. Treatment and/ or disposal of contaminated soil or water can be quite expensive.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.

- Keep ample supplies of spill control and cleanup materials onsite, near storage, unloading, and maintenance areas.
- Update your spill prevention and control plan and stock cleanup materials as changes occur in the types of chemicals onsite.

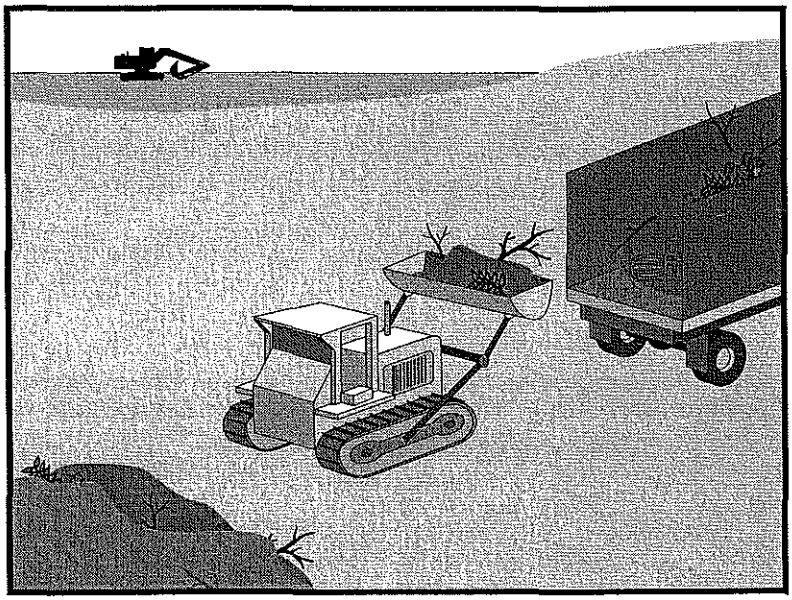
References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Solid Waste Management WM-5



Categories		
EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:
☑ **Primary Objective**
☒ **Secondary Objective**

Targeted Constituents	
Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Solid waste management procedures and practices are designed to prevent or reduce the discharge of pollutants to stormwater from solid or construction waste by providing designated waste collection areas and containers, arranging for regular disposal, and training employees and subcontractors.

Suitable Applications

This BMP is suitable for construction sites where the following wastes are generated or stored:

- Solid waste generated from trees and shrubs removed during land clearing, demolition of existing structures (rubble), and building construction
- Packaging materials including wood, paper, and plastic
- Scrap or surplus building materials including scrap metals, rubber, plastic, glass pieces and masonry products
- Domestic wastes including food containers such as beverage cans, coffee cups, paper bags, plastic wrappers, and cigarettes
- Construction wastes including brick, mortar, timber, steel and metal scraps, pipe and electrical cuttings, non-hazardous equipment parts, styrofoam and other materials used to transport and package construction materials
- Highway planting wastes, including vegetative material,

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plant containers, and packaging materials

Limitations

Temporary stockpiling of certain construction wastes may not necessitate stringent drainage related controls during the non-rainy season or in desert areas with low rainfall.

Implementation

The following steps will help keep a clean site and reduce stormwater pollution:

- Select designated waste collection areas onsite.
- Inform trash-hauling contractors that you will accept only watertight dumpsters for onsite use. Inspect dumpsters for leaks and repair any dumpster that is not watertight.
- Locate containers in a covered area or in a secondary containment.
- Provide an adequate number of containers with lids or covers that can be placed over the container to keep rain out or to prevent loss of wastes when it is windy.
- Plan for additional containers and more frequent pickup during the demolition phase of construction.
- Collect site trash daily, especially during rainy and windy conditions.
- Remove this solid waste promptly since erosion and sediment control devices tend to collect litter.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the trash hauling contractor.
- Arrange for regular waste collection before containers overflow.
- Clean up immediately if a container does spill.
- Make sure that construction waste is collected, removed, and disposed of only at authorized disposal areas.

Education

- Have the contractor's superintendent or representative oversee and enforce proper solid waste management procedures and practices.
- Instruct employees and subcontractors on identification of solid waste and hazardous waste.
- Educate employees and subcontractors on solid waste storage and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).

- Require that employees and subcontractors follow solid waste handling and storage procedures.
- Prohibit littering by employees, subcontractors, and visitors.
- Minimize production of solid waste materials wherever possible.

Collection, Storage, and Disposal

- Littering on the project site should be prohibited.
- To prevent clogging of the storm drainage system, litter and debris removal from drainage grates, trash racks, and ditch lines should be a priority.
- Trash receptacles should be provided in the contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.
- Litter from work areas within the construction limits of the project site should be collected and placed in watertight dumpsters at least weekly, regardless of whether the litter was generated by the contractor, the public, or others. Collected litter and debris should not be placed in or next to drain inlets, stormwater drainage systems, or watercourses.
- Dumpsters of sufficient size and number should be provided to contain the solid waste generated by the project.
- Full dumpsters should be removed from the project site and the contents should be disposed of by the trash hauling contractor.
- Construction debris and waste should be removed from the site biweekly or more frequently as needed.
- Construction material visible to the public should be stored or stacked in an orderly manner.
- Stormwater runon should be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measures to elevate waste from site surfaces.
- Solid waste storage areas should be located at least 50 ft from drainage facilities and watercourses and should not be located in areas prone to flooding or ponding.
- Except during fair weather, construction and highway planting waste not stored in watertight dumpsters should be securely covered from wind and rain by covering the waste with tarps or plastic.
- Segregate potentially hazardous waste from non-hazardous construction site waste.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- For disposal of hazardous waste, see WM-6, Hazardous Waste Management. Have hazardous waste hauled to an appropriate disposal and/or recycling facility.

- Salvage or recycle useful vegetation debris, packaging and surplus building materials when practical. For example, trees and shrubs from land clearing can be used as a brush barrier, or converted into wood chips, then used as mulch on graded areas. Wood pallets, cardboard boxes, and construction scraps can also be recycled.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur
- Inspect construction waste area regularly.
- Arrange for regular waste collection.

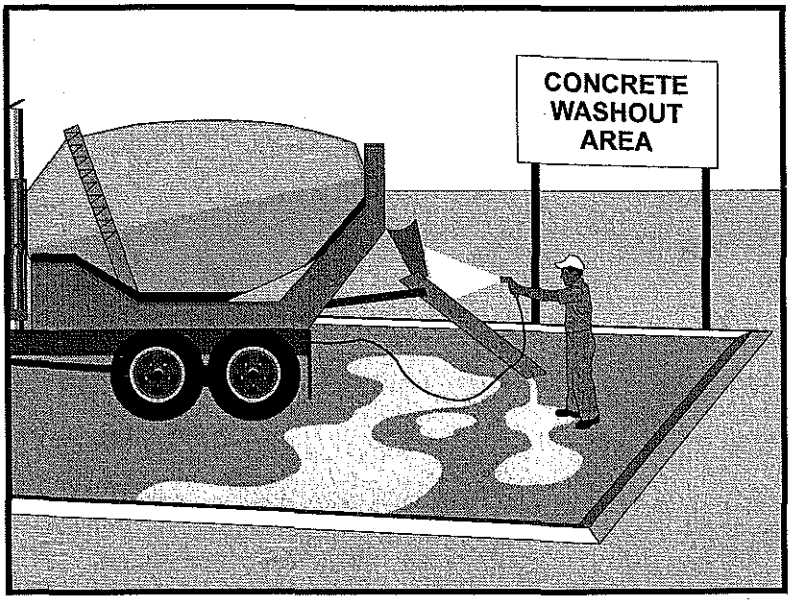
References

Processes, Procedures and Methods to Control Pollution Resulting from All Construction Activity, 430/9-73-007, USEPA, 1973.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Concrete Waste Management WM-8



Categories		
EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☒
WM	Waste Management and Materials Pollution Control	☑

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents	
Sediment	☑
Nutrients	
Trash	
Metals	☑
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None

Description and Purpose

Prevent the discharge of pollutants to stormwater from concrete waste by conducting washout onsite or offsite in a designated area, and by employee and subcontractor training.

The General Permit incorporates Numeric Effluent Limits (NEL) and Numeric Action Levels (NAL) for pH (see Section 2 of this handbook to determine your project's risk level and if you are subject to these requirements).

Many types of construction materials, including mortar, concrete, stucco, cement and block and their associated wastes have basic chemical properties that can raise pH levels outside of the permitted range. Additional care should be taken when managing these materials to prevent them from coming into contact with stormwater flows and raising pH to levels outside the accepted range.

Suitable Applications

Concrete waste management procedures and practices are implemented on construction projects where:

- Concrete is used as a construction material or where concrete dust and debris result from demolition activities.
- Slurries containing portland cement concrete (PCC) are generated, such as from saw cutting, coring, grinding, grooving, and hydro-concrete demolition.

- Concrete trucks and other concrete-coated equipment are washed onsite.
- Mortar-mixing stations exist.
- Stucco mixing and spraying .
- See also NS-8, Vehicle and Equipment Cleaning.

Limitations

- Offsite washout of concrete wastes may not always be possible.
- Multiple washouts may be needed to assure adequate capacity and to allow for evaporation.

Implementation

The following steps will help reduce stormwater pollution from concrete wastes:

- Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.
- Store dry and wet materials under cover, away from drainage areas. Refer to WM-1, Material Delivery and Storage for more information.
- Avoid mixing excess amounts of concrete.
- Perform washout of concrete trucks in designated areas only, where washout will not reach stormwater.
- Do not wash out concrete trucks into storm drains, open ditches, streets, streams or onto the ground. Trucks should always be washed out into designated facilities.
- Do not allow excess concrete to be dumped onsite, except in designated areas.
- For onsite washout:
  - On larger sites, it is recommended to locate washout areas at least 50 feet from storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
  - Washout wastes into the temporary washout where the concrete can set, be broken up, and then disposed properly.
  - Washout should be lined so there is no discharge into the underlying soil.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile or dispose in the trash.
- See typical concrete washout installation details at the end of this fact sheet.

Education

- Educate employees, subcontractors, and suppliers on the concrete waste management techniques described herein.

- Arrange for contractor's superintendent or representative to oversee and enforce concrete waste management procedures.
- Discuss the concrete management techniques described in this BMP (such as handling of concrete waste and washout) with the ready-mix concrete supplier before any deliveries are made.

Concrete Demolition Wastes

- Stockpile concrete demolition waste in accordance with BMP WM-3, Stockpile Management.
- Dispose of or recycle hardened concrete waste in accordance with applicable federal, state or local regulations.

Concrete Slurry Wastes

- PCC and AC waste should not be allowed to enter storm drains or watercourses.
- PCC and AC waste should be collected and disposed of or placed in a temporary concrete washout facility (as described in Onsite Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures, below).
- A foreman or construction supervisor should monitor onsite concrete working tasks, such as saw cutting, coring, grinding and grooving to ensure proper methods are implemented.
- Saw-cut concrete slurry should not be allowed to enter storm drains or watercourses. Residue from grinding operations should be picked up by means of a vacuum attachment to the grinding machine or by sweeping. Saw cutting residue should not be allowed to flow across the pavement and should not be left on the surface of the pavement. See also NS-3, Paving and Grinding Operations; and WM-10, Liquid Waste Management.
- Concrete slurry residue should be disposed in a temporary washout facility (as described in Onsite Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures, below) and allowed to dry. Dispose of dry slurry residue in accordance with WM-5, Solid Waste Management.

Onsite Temporary Concrete Washout Facility, Transit Truck Washout Procedures

- Temporary concrete washout facilities should be located a minimum of 50 ft from storm drain inlets, open drainage facilities, and watercourses. Each facility should be located away from construction traffic or access areas to prevent disturbance or tracking.
- A sign should be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.
- Temporary concrete washout facilities should be constructed above grade or below grade at the option of the contractor. Temporary concrete washout facilities should be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.

- Temporary washout facilities should have a temporary pit or bermed areas of sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures.
- Temporary washout facilities should be lined to prevent discharge to the underlying ground or surrounding area.
- Washout of concrete trucks should be performed in designated areas only.
- Only concrete from mixer truck chutes should be washed into concrete wash out.
- Concrete washout from concrete pumper bins can be washed into concrete pumper trucks and discharged into designated washout area or properly disposed of or recycled offsite.
- Once concrete wastes are washed into the designated area and allowed to harden, the concrete should be broken up, removed, and disposed of per WM-5, Solid Waste Management. Dispose of or recycle hardened concrete on a regular basis.
- Temporary Concrete Washout Facility (Type Above Grade)
  - Temporary concrete washout facility (type above grade) should be constructed as shown on the details at the end of this BMP, with a recommended minimum length and minimum width of 10 ft; however, smaller sites or jobs may only need a smaller washout facility. With any washout, always maintain a sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations.
  - Materials used to construct the washout area should conform to the provisions detailed in their respective BMPs (e.g., SE-8 Sandbag Barrier).
  - Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.
  - Alternatively, portable removable containers can be used as above grade concrete washouts. Also called a "roll-off"; this concrete washout facility should be properly sealed to prevent leakage, and should be removed from the site and replaced when the container reaches 75% capacity.
- Temporary Concrete Washout Facility (Type Below Grade)
  - Temporary concrete washout facilities (type below grade) should be constructed as shown on the details at the end of this BMP, with a recommended minimum length and minimum width of 10 ft. The quantity and volume should be sufficient to contain all liquid and concrete waste generated by washout operations.
  - Lath and flagging should be commercial type.
  - Plastic lining material should be a minimum of 10 mil polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.

- The base of a washout facility should be free of rock or debris that may damage a plastic liner.

Removal of Temporary Concrete Washout Facilities

- When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and properly disposed or recycled in accordance with federal, state or local regulations. Materials used to construct temporary concrete washout facilities should be removed from the site of the work and properly disposed or recycled in accordance with federal, state or local regulations..

- Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

Costs

All of the above are low cost measures. Roll-off concrete washout facilities can be more costly than other measures due to removal and replacement; however, provide a cleaner alternative to traditional washouts. The type of washout facility, size, and availability of materials will determine the cost of the washout.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

- Temporary concrete washout facilities should be maintained to provide adequate holding capacity with a minimum freeboard of 4 in. for above grade facilities and 12 in. for below grade facilities. Maintaining temporary concrete washout facilities should include removing and disposing of hardened concrete and returning the facilities to a functional condition. Hardened concrete materials should be removed and properly disposed or recycled in accordance with federal, state or local regulations.

- Washout facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75% full.

- Inspect washout facilities for damage (e.g. torn liner, evidence of leaks, signage, etc.). Repair all identified damage.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

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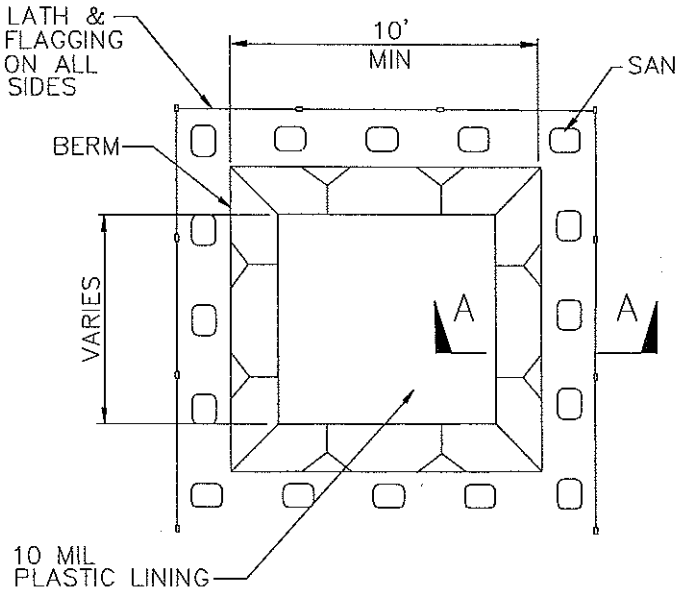
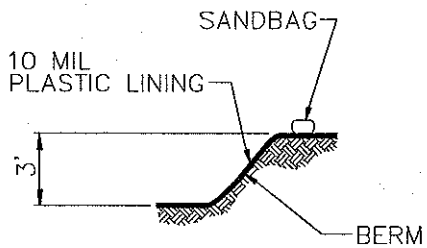
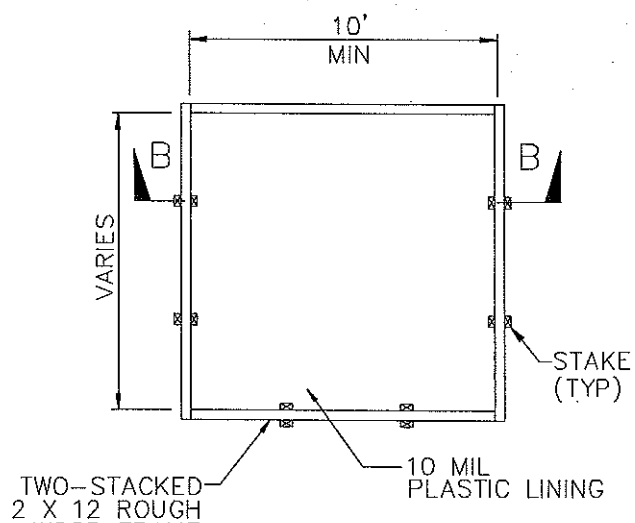
Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.



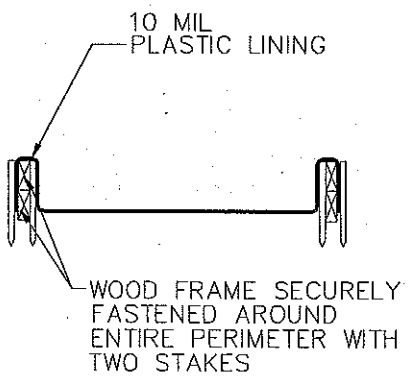
PLAN
NOT TO SCALE
TYPE "BELOW GRADE"



SECTION A–A
NOT TO SCALE



PLAN
NOT TO SCALE
TYPE "ABOVE GRADE"

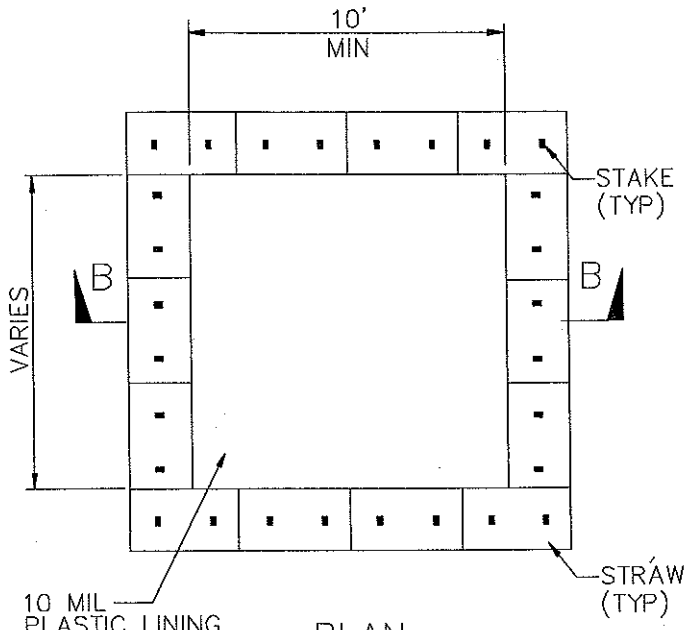


SECTION B–B
NOT TO SCALE

NOTES

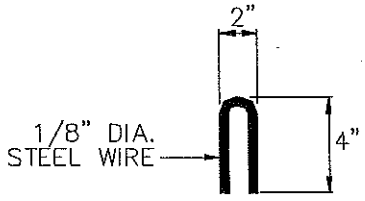
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

Concrete Waste Management WM-8

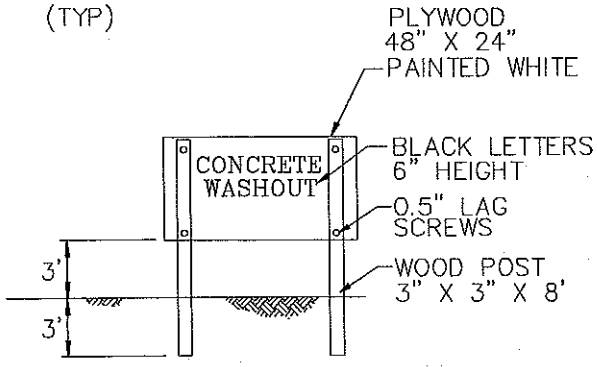


PLAN
NOT TO SCALE

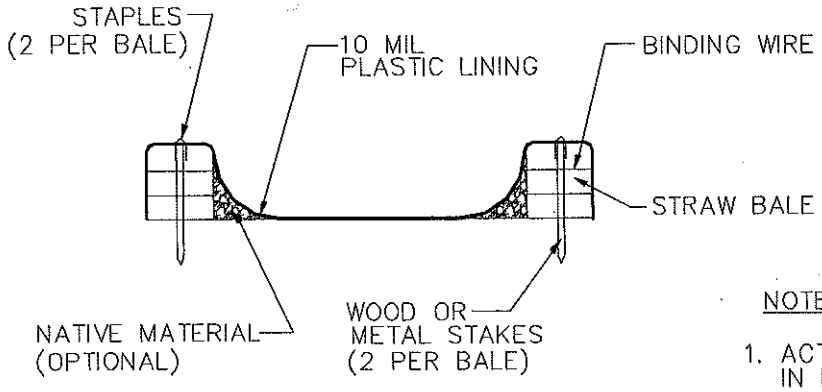
TYPE "ABOVE GRADE"
WITH STRAW BALES



STAPLE DETAIL



CONCRETE WASHOUT
SIGN DETAIL
(OR EQUIVALENT)

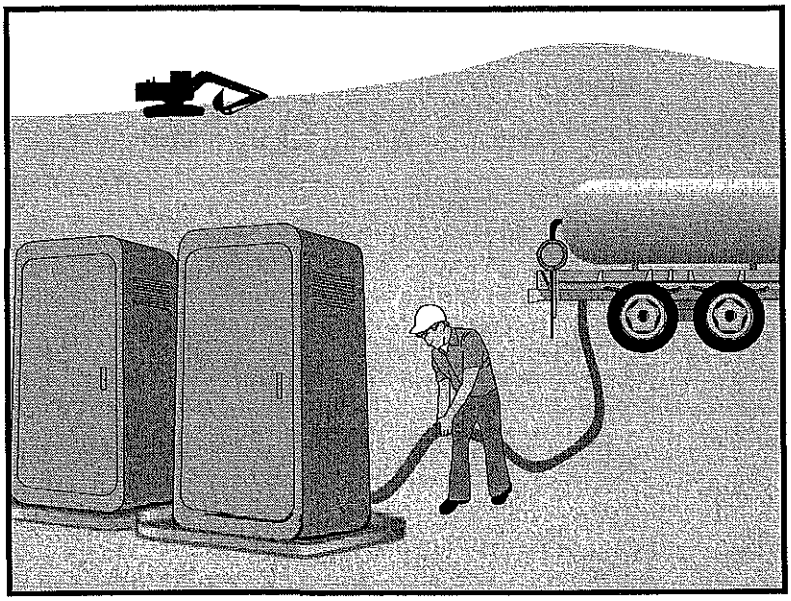


SECTION B-B
NOT TO SCALE

NOTES

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

Sanitary/Septic Waste Management WM-9



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	
Nutrients	☑
Trash	☑
Metals	
Bacteria	☑
Oil and Grease	
Organics	☑

Potential Alternatives

None

Description and Purpose

Proper sanitary and septic waste management prevent the discharge of pollutants to stormwater from sanitary and septic waste by providing convenient, well-maintained facilities, and arranging for regular service and disposal.

Suitable Applications

Sanitary septic waste management practices are suitable for use at all construction sites that use temporary or portable sanitary and septic waste systems.

Limitations

None identified.

Implementation

Sanitary or septic wastes should be treated or disposed of in accordance with state and local requirements. In many cases, one contract with a local facility supplier will be all that it takes to make sure sanitary wastes are properly disposed.

Storage and Disposal Procedures

- Temporary sanitary facilities should be located away from drainage facilities, watercourses, and from traffic circulation. If site conditions allow, place portable facilities a minimum of 50 feet from drainage conveyances and traffic areas. When subjected to high winds or risk of high winds, temporary sanitary facilities should be secured to prevent overturning.

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- Temporary sanitary facilities must be equipped with containment to prevent discharge of pollutants to the stormwater drainage system of the receiving water.
- Consider safety as well as environmental implications before placing temporary sanitary facilities.
- Wastewater should not be discharged or buried within the project site.
- Sanitary and septic systems that discharge directly into sanitary sewer systems, where permissible, should comply with the local health agency, city, county, and sewer district requirements.
- Only reputable, licensed sanitary and septic waste haulers should be used.
- Sanitary facilities should be located in a convenient location.
- Temporary septic systems should treat wastes to appropriate levels before discharging.
- If using an onsite disposal system (OSDS), such as a septic system, local health agency requirements must be followed.
- Temporary sanitary facilities that discharge to the sanitary sewer system should be properly connected to avoid illicit discharges.
- Sanitary and septic facilities should be maintained in good working order by a licensed service.
- Regular waste collection by a licensed hauler should be arranged before facilities overflow.
- If a spill does occur from a temporary sanitary facility, follow federal, state and local regulations for containment and clean-up.

Education

- Educate employees, subcontractors, and suppliers on sanitary and septic waste storage and disposal procedures.
- Educate employees, subcontractors, and suppliers of potential dangers to humans and the environment from sanitary and septic wastes.
- Instruct employees, subcontractors, and suppliers in identification of sanitary and septic waste.
- Hold regular meetings to discuss and reinforce the use of sanitary facilities (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees.

Costs

All of the above are low cost measures.

Sanitary/Septic Waste Management WM-9

Inspection and Maintenance

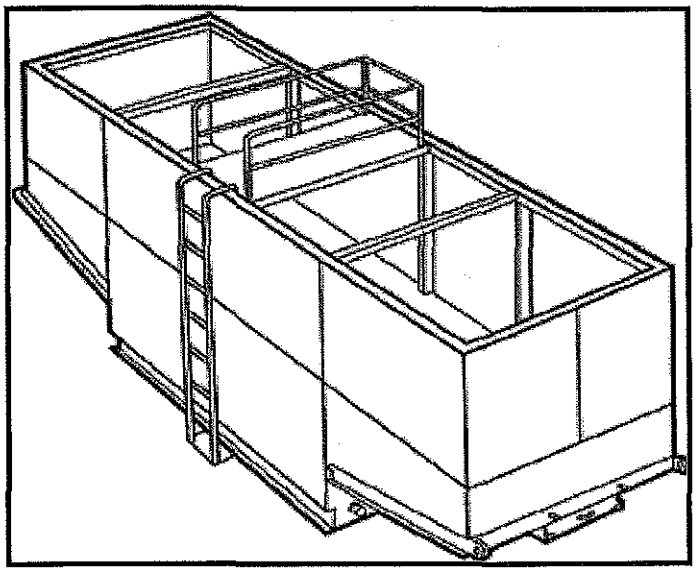
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Arrange for regular waste collection.
- If high winds are expected, portable sanitary facilities must be secured with spikes or weighed down to prevent over turning.
- If spills or leaks from sanitary or septic facilities occur that are not contained and discharge from the site, non-visible sampling of site discharge may be required. Refer to the General Permit or to your project specific Construction Site Monitoring Plan to determine if and where sampling is required.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.

Dewatering Operations NS-2



Categories		
EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Description and Purpose

Dewatering operations are practices that manage the discharge of pollutants when non-stormwater and accumulated precipitation (stormwater) must be removed from a work location to proceed with construction work or to provide vector control.

The General Permit incorporates Numeric Effluent Limits (NEL) and Numeric Action Levels (NAL) for turbidity (see Section 2 of this handbook to determine your project's risk level and if you are subject to these requirements).

Discharges from dewatering operations can contain high levels of fine sediment that, if not properly treated, could lead to exceedences of the General Permit requirements.

Suitable Applications

These practices are implemented for discharges of non-stormwater from construction sites. Non-stormwaters include, but are not limited to, groundwater, water from cofferdams, water diversions, and waters used during construction activities that must be removed from a work area to facilitate construction.

Practices identified in this section are also appropriate for implementation when managing the removal of accumulated precipitation (stormwater) from depressed areas at a construction site.

Stormwater mixed with non-stormwater should be managed as non-stormwater.

Targeted Constituents	
Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

SE-5: Fiber Roll

SE-6: Gravel Bag Berm

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Limitations

- Dewatering operations will require, and should comply with applicable local and project-specific permits and regulations. In some areas, all dewatering activities, regardless of the discharge volume, require a dewatering permit.
- Site conditions will dictate design and use of dewatering operations.
- The controls discussed in this fact sheet primarily address sediment. Other secondary pollutant removal benefits are discussed where applicable.
- The controls detailed in this fact sheet only allow for minimal settling time for sediment particles. Use only when site conditions restrict the use of the other control methods.
- Avoid dewatering discharges where possible by using the water for dust control.

Implementation

- A Construction Site Monitoring Plan (CSMP) should be included in the project Stormwater Pollution Prevention Plan (SWPPP).
- Regional Water Quality Control Board (RWQCB) Regions may require notification and approval prior to any discharge of water from construction sites.
- The destination of discharge from dewatering activities will typically determine the type of permit required by the discharger. For example, when discharging to a water of the U.S., a groundwater extraction permit will be required through the site's governing RWQCB. When discharging to a sanitary sewer or Municipal Separate Storm Sewer System (MS4), a permit may need to be obtained through the owner of the sanitary sewer or MS4 in addition to obtaining an RWQCB dewatering permit. Additional permits or permissions from other agencies may be required for dewatering cofferdams or diversions.
- Dewatering discharges should not cause erosion at the discharge point. Appropriate BMPs should be implemented to maintain compliance with all applicable permits.
- Maintain dewatering records in accordance with all local and project-specific permits and regulations.

Sediment Treatment

A variety of methods can be used to treat water during dewatering operations. Several devices are presented below and provide options to achieve sediment removal. The sediment particle size and permit or receiving water limitations on sediment are key considerations for selecting sediment treatment option(s); in some cases, the use of multiple devices may be appropriate. Use of other enhanced treatment methods (i.e., introduction of chemicals or electric current to enhance flocculation and removal of sediment) must comply with: 1) for storm drain or surface water discharges, the requirements for Active Treatment Systems (SE-11); or 2) for sanitary sewer discharges, the requirements of applicable sanitary sewer discharge permits.

Sediment Basin (see also SE-2)

Description:

- A sediment basin is a temporary basin with a controlled release structure that is formed by excavation or construction of an embankment to detain sediment-laden runoff and allow sediment to settle out before discharging. Sediment basins are generally larger than Sediment Traps (SE-3) and have a designed outlet structure.

Appropriate Applications:

- Effective for the removal of trash, gravel, sand, silt, some metals that settle out with the sediment.

Implementation:

- Excavation and construction of related facilities is required.
- Temporary sediment basins should be fenced if safety is a concern.
- Outlet protection is required to prevent erosion at the outfall location.

Maintenance:

- Maintenance is required for safety fencing, vegetation, embankment, inlet and outlet, as well as other features.
- Removal of sediment is required when the storage volume is reduced by one-third.

Sediment Trap (See also SE-3)

Description:

- A sediment trap is a temporary basin formed by excavation and/or construction of an earthen embankment across a waterway or low drainage area to detain sediment-laden runoff and allow sediment to settle out before discharging. Sediment traps are generally smaller than Sediment Basins (SE-2) and do not have a designed outlet (but do have a spillway or overflow).

Appropriate Applications:

Effective for the removal of large and medium sized particles (sand and gravel) and some metals that settle out with the sediment.

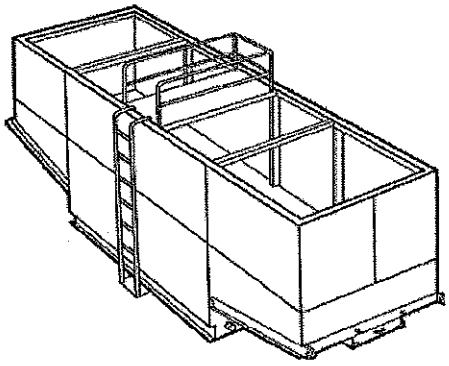
Implementation:

- Excavation and construction of related facilities is required.
- Trap inlets should be located to maximize the travel distance to the trap outlet.
- Use rock or vegetation to protect the trap outlets against erosion.

Maintenance:

- Maintenance is required for vegetation, embankment, inlet and outfall structures, as well as other features.
- Removal of sediment is required when the storage volume is reduced by one-third.

Weir Tanks



Description:

- A weir tank separates water and waste by using weirs. The configuration of the weirs (over and under weirs) maximizes the residence time in the tank and determines the waste to be removed from the water, such as oil, grease, and sediments.

Appropriate Applications:

- The tank removes trash, some settleable solids (gravel, sand, and silt), some visible oil and grease, and some metals (removed with sediment). To achieve high levels of flow, multiple tanks can be used in parallel. If additional treatment is desired, the tanks can be placed in series or as pre-treatment for other methods.

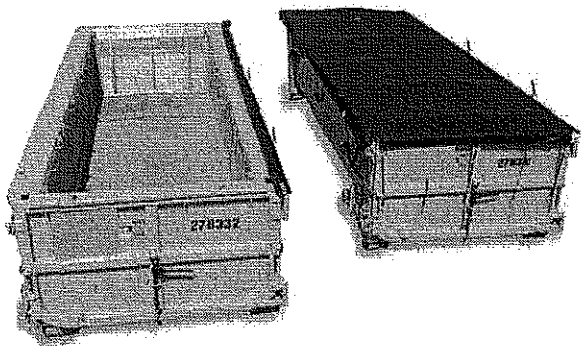
Implementation:

- Tanks are delivered to the site by the vendor, who can provide assistance with set-up and operation.
- Tank size will depend on flow volume, constituents of concern, and residency period required. Vendors should be consulted to appropriately size tank.
- Treatment capacity (i.e., volume and number of tanks) should provide at a minimum the required volume for discrete particle settling for treatment design flows.

Maintenance:

- Periodic cleaning is required based on visual inspection or reduced flow.
- Oil and grease disposal should be conducted by a licensed waste disposal company.

Dewatering Tanks



Description:

- A dewatering tank removes debris and sediment. Flow enters the tank through the top, passes through a fabric filter, and is discharged through the bottom of the tank. The filter separates the solids from the liquids.

Appropriate Applications:

- The tank removes trash, gravel, sand, and silt, some visible oil and grease, and some metals (removed with sediment). To achieve high levels of flow, multiple tanks can be used in parallel. If additional treatment is desired, the tanks can be placed in series or as pre-treatment for other methods.

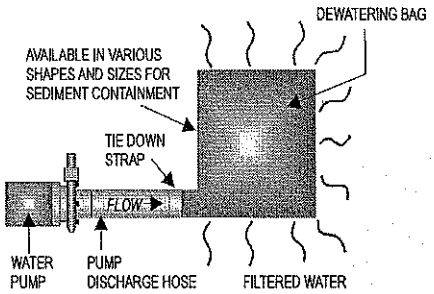
Implementation:

- Tanks are delivered to the site by the vendor, who can provide assistance with set-up and operation.
- Tank size will depend on flow volume, constituents of concern, and residency period required. Vendors should be consulted to appropriately size tank.

Maintenance:

- Periodic cleaning is required based on visual inspection or reduced flow.
- Oil and grease disposal should be conducted by licensed waste disposal company.

Gravity Bag Filter



Description:

- A gravity bag filter, also referred to as a dewatering bag, is a square or rectangular bag made of non-woven geotextile fabric that collects gravel, sand, silt, and fines.

Appropriate Applications:

- Effective for the removal of sediments (gravel, sand, silt, and fines). Some metals are removed with the sediment.

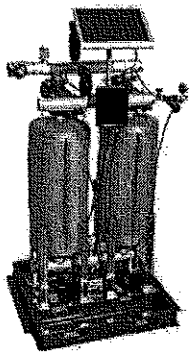
Implementation:

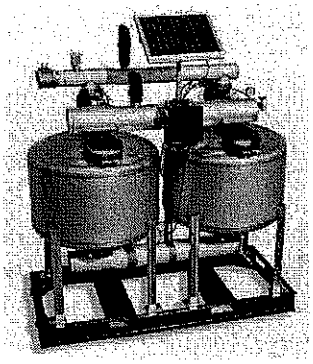
- Water is pumped into one side of the bag and seeps through the top, bottom, and sides of the bag.
- Place filter bag on pavement or a gravel bed or paved surface. Avoid placing a dewatering bag on unprotected bare soil. If placing the bag on bare soil is unavoidable, a secondary barrier should be used, such as a rock filter bed placed beneath and beyond the edges of the bag to, prevent erosion and capture sediments that escape the bag.
- Perimeter control around the downstream end of the bag should be implemented. Secondary sediment controls are important especially in the initial stages of discharge, which tend to allow fines to pass through the bag.

Maintenance:

- Inspection of the flow conditions, bag condition, bag capacity, and the secondary barrier (as applicable) is required.
- Replace the bag when it no longer filters sediment or passes water at a reasonable rate.
- Caution should be taken when removing and disposing of the bag, to prevent the release of captured sediment
- Properly dispose of the bag offsite. If sediment is removed from the bag prior to disposal (bags can potentially be reused depending upon their condition), dispose of sediment in accordance with the general maintenance procedures described at the end of this BMP Fact Sheet.

Sand Media Particulate Filter





Description:

- Water is treated by passing it through canisters filled with sand media. Generally, sand filters provide a final level of treatment. They are often used as a secondary or higher level of treatment after a significant amount of sediment and other pollutants have been removed using other methods.

Appropriate Applications:

- Effective for the removal of trash, gravel, sand, and silt and some metals, as well as the reduction of biochemical oxygen demand (BOD) and turbidity.
- Sand filters can be used for stand-alone treatment or in conjunction with bag and cartridge filtration if further treatment is required.
- Sand filters can also be used to provide additional treatment to water treated via settling or basic filtration.

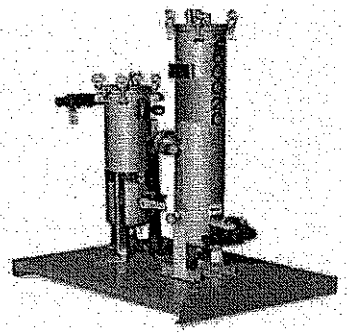
Implementation:

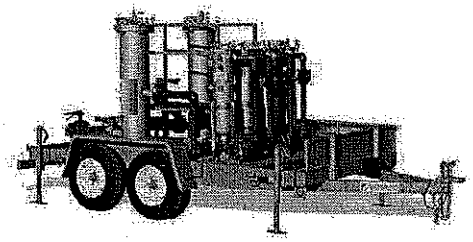
- The filters require delivery to the site and initial set up. The vendor can provide assistance with installation and operation.

Maintenance:

- The filters require regular service to monitor and maintain the level of the sand media. If subjected to high loading rates, filters can plug quickly.
- Venders generally provide data on maximum head loss through the filter. The filter should be monitored daily while in use, and cleaned when head loss reaches target levels.
- If cleaned by backwashing, the backwash water may need to be hauled away for disposal, or returned to the upper end of the treatment train for another pass through the series of dewatering BMPs.

Pressurized Bag Filter





Description:

- A pressurized bag filter is a unit composed of single filter bags made from polyester felt material. The water filters through the unit and is discharged through a header. Vendors provide bag filters in a variety of configurations. Some units include a combination of bag filters and cartridge filters for enhanced contaminant removal.

Appropriate Applications:

- Effective for the removal of sediment (sand and silt) and some metals, as well as the reduction of BOD, turbidity, and hydrocarbons. Oil absorbent bags are available for hydrocarbon removal.
- Filters can be used to provide secondary treatment to water treated via settling or basic filtration.

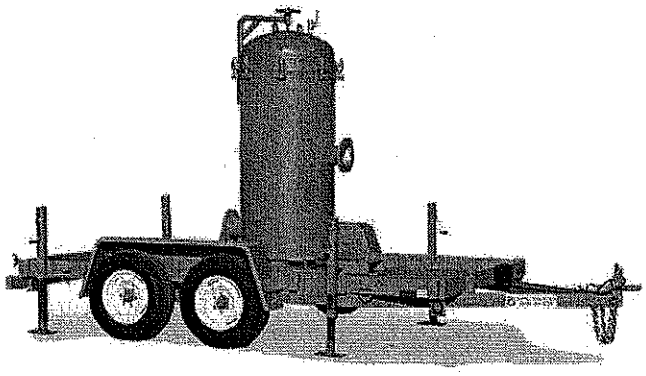
Implementation:

- The filters require delivery to the site and initial set up. The vendor can provide assistance with installation and operation.

Maintenance:

- The filter bags require replacement when the pressure differential equals or exceeds the manufacturer's recommendation.

Cartridge Filter



Description:

- Cartridge filters provide a high degree of pollutant removal by utilizing a number of individual cartridges as part of a larger filtering unit. They are often used as a secondary or higher (polishing) level of treatment after a significant amount of sediment and other pollutants are removed. Units come with various cartridge configurations (for use in series with bag filters) or with a larger single cartridge filtration unit (with multiple filters within).

Appropriate Applications:

- Effective for the removal of sediment (sand, silt, and some clays) and metals, as well as the reduction of BOD, turbidity, and hydrocarbons. Hydrocarbons can effectively be removed with special resin cartridges.
- Filters can be used to provide secondary treatment to water treated via settling or basic filtration.

Implementation:

- The filters require delivery to the site and initial set up. The vendor can provide assistance.

Maintenance:

- The cartridges require replacement when the pressure differential equals or exceeds the manufacturer's recommendation.

Costs

- Sediment control costs vary considerably depending on the dewatering and sediment treatment system that is selected. Pressurized filters tend to be more expensive than gravity settling, but are often more effective. Simple tanks are generally rented on a long-term basis (one or more months) and can range from $360 per month for a 1,000 gallon tank to $2,660 per month for a 10,000 gallon tank. Mobilization and demobilization costs vary considerably.

Inspection and Maintenance

- Inspect and verify that dewatering BMPs are in place and functioning prior to the commencement of activities requiring dewatering.
- Inspect dewatering BMPs daily while dewatering activities are being conducted.

- Inspect all equipment before use. Monitor dewatering operations to ensure they do not cause offsite discharge or erosion.
- Sample dewatering discharges as required by the General Permit.
- Unit-specific maintenance requirements are included with the description of each unit.
- Sediment removed during the maintenance of a dewatering device may be either spread onsite and stabilized, or disposed of at a disposal site as approved by the owner.
- Sediment that is commingled with other pollutants should be disposed of in accordance with all applicable laws and regulations and as approved by the owner.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

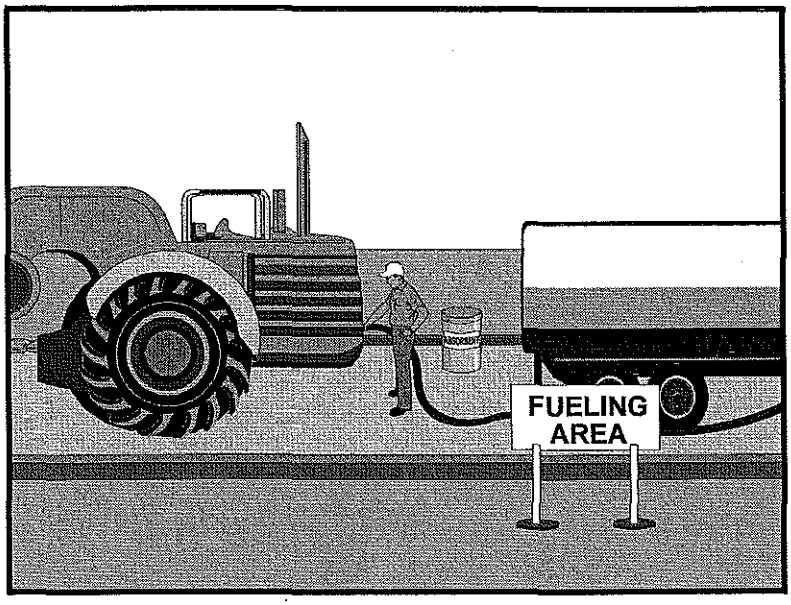
Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003; Updated March 2004.

Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.

Labor Surcharge & Equipment Rental Rates, April 1, 2002 through March 31, 2003, California Department of Transportation (Caltrans).

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.

Vehicle and Equipment Fueling NS-9



Categories		
EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Objective**
☒ **Secondary Objective**

Targeted Constituents	
Sediment	
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

None

Description and Purpose

Vehicle equipment fueling procedures and practices are designed to prevent fuel spills and leaks, and reduce or eliminate contamination of stormwater. This can be accomplished by using offsite facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors in proper fueling procedures.

Suitable Applications

These procedures are suitable on all construction sites where vehicle and equipment fueling takes place.

Limitations

Onsite vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment offsite for fueling. Sending vehicles and equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/ Exit.

Implementation

- Use offsite fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate fueling area at a site.
- Discourage "topping-off" of fuel tanks.
- Absorbent spill cleanup materials and spill kits should be available in fueling areas and on fueling trucks, and should

be disposed of properly after use.

- Drip pans or absorbent pads should be used during vehicle and equipment fueling, unless the fueling is performed over an impermeable surface in a dedicated fueling area.
- Use absorbent materials on small spills. Do not hose down or bury the spill. Remove the adsorbent materials promptly and dispose of properly.
- Avoid mobile fueling of mobile construction equipment around the site; rather, transport the equipment to designated fueling areas. With the exception of tracked equipment such as bulldozers and large excavators, most vehicles should be able to travel to a designated area with little lost time.
- Train employees and subcontractors in proper fueling and cleanup procedures.
- When fueling must take place onsite, designate an area away from drainage courses to be used. Fueling areas should be identified in the SWPPP.
- Dedicated fueling areas should be protected from stormwater runon and runoff, and should be located at least 50 ft away from downstream drainage facilities and watercourses. Fueling must be performed on level-grade areas.
- Protect fueling areas with berms and dikes to prevent runon, runoff, and to contain spills.
- Nozzles used in vehicle and equipment fueling should be equipped with an automatic shutoff to control drips. Fueling operations should not be left unattended.
- Use vapor recovery nozzles to help control drips as well as air pollution where required by Air Quality Management Districts (AQMD).
- Federal, state, and local requirements should be observed for any stationary above ground storage tanks.

Costs

- All of the above measures are low cost except for the capital costs of above ground tanks that meet all local environmental, zoning, and fire codes.

Inspection and Maintenance

- Vehicles and equipment should be inspected each day of use for leaks. Leaks should be repaired immediately or problem vehicles or equipment should be removed from the project site.
- Keep ample supplies of spill cleanup materials onsite.
- Immediately clean up spills and properly dispose of contaminated soil and cleanup materials.

References

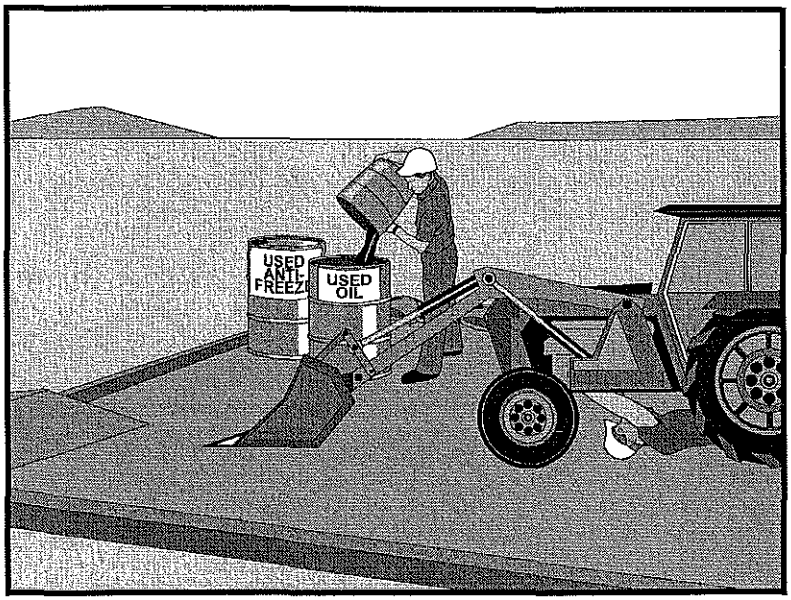
Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance, Working Group Working Paper; USEPA, April 1992.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.

Vehicle & Equipment Maintenance NS-10



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	
Nutrients	☑
Trash	☑
Metals	
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Prevent or reduce the contamination of stormwater resulting from vehicle and equipment maintenance by running a "dry and clean site". The best option would be to perform maintenance activities at an offsite facility. If this option is not available then work should be performed in designated areas only, while providing cover for materials stored outside, checking for leaks and spills, and containing and cleaning up spills immediately. Employees and subcontractors must be trained in proper procedures.

Suitable Applications

These procedures are suitable on all construction projects where an onsite yard area is necessary for storage and maintenance of heavy equipment and vehicles.

Limitations

Onsite vehicle and equipment maintenance should only be used where it is impractical to send vehicles and equipment offsite for maintenance and repair. Sending vehicles/equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/Exit.

Outdoor vehicle or equipment maintenance is a potentially significant source of stormwater pollution. Activities that can contaminate stormwater include engine repair and service, changing or replacement of fluids, and outdoor equipment storage and parking (engine fluid leaks). For further information on vehicle or equipment servicing, see NS-8, Vehicle and Equipment Cleaning, and NS-9, Vehicle and

Equipment Fueling.

Implementation

- Use offsite repair shops as much as possible. These businesses are better equipped to handle vehicle fluids and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate maintenance area.
- If maintenance must occur onsite, use designated areas, located away from drainage courses. Dedicated maintenance areas should be protected from stormwater runon and runoff, and should be located at least 50 ft from downstream drainage facilities and watercourses.
- Drip pans or absorbent pads should be used during vehicle and equipment maintenance work that involves fluids, unless the maintenance work is performed over an impermeable surface in a dedicated maintenance area.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- All fueling trucks and fueling areas are required to have spill kits and/or use other spill protection devices.
- Use adsorbent materials on small spills. Remove the absorbent materials promptly and dispose of properly.
- Inspect onsite vehicles and equipment daily at startup for leaks, and repair immediately.
- Keep vehicles and equipment clean; do not allow excessive build-up of oil and grease.
- Segregate and recycle wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic and transmission fluids. Provide secondary containment and covers for these materials if stored onsite.
- Train employees and subcontractors in proper maintenance and spill cleanup procedures.
- Drip pans or plastic sheeting should be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than 1 hour.
- For long-term projects, consider using portable tents or covers over maintenance areas if maintenance cannot be performed offsite.
- Consider use of new, alternative greases and lubricants, such as adhesive greases, for chassis lubrication and fifth-wheel lubrication.
- Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.
- Do not place used oil in a dumpster or pour into a storm drain or watercourse.
- Properly dispose of or recycle used batteries.
- Do not bury used tires.

- Repair leaks of fluids and oil immediately.

Listed below is further information if you must perform vehicle or equipment maintenance onsite.

Safer Alternative Products

- Consider products that are less toxic or hazardous than regular products. These products are often sold under an "environmentally friendly" label.
- Consider use of grease substitutes for lubrication of truck fifth-wheels. Follow manufacturers label for details on specific uses.
- Consider use of plastic friction plates on truck fifth-wheels in lieu of grease. Follow manufacturers label for details on specific uses.

Waste Reduction

Parts are often cleaned using solvents such as trichloroethylene, trichloroethane, or methylene chloride. Many of these cleaners are listed in California Toxic Rule as priority pollutants. These materials are harmful and must not contaminate stormwater. They must be disposed of as a hazardous waste. Reducing the number of solvents makes recycling easier and reduces hazardous waste management costs. Often, one solvent can perform a job as well as two different solvents. Also, if possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous materials. For example, replace chlorinated organic solvents with non-chlorinated solvents. Non-chlorinated solvents like kerosene or mineral spirits are less toxic and less expensive to dispose of properly. Check the list of active ingredients to see whether it contains chlorinated solvents. The "chlor" term indicates that the solvent is chlorinated. Also, try substituting a wire brush for solvents to clean parts.

Recycling and Disposal

Separating wastes allows for easier recycling and may reduce disposal costs. Keep hazardous wastes separate, do not mix used oil solvents, and keep chlorinated solvents (like,-trichloroethane) separate from non-chlorinated solvents (like kerosene and mineral spirits). Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around. Provide cover and secondary containment until these materials can be removed from the site.

Oil filters can be recycled. Ask your oil supplier or recycler about recycling oil filters.

Do not dispose of extra paints and coatings by dumping liquid onto the ground or throwing it into dumpsters. Allow coatings to dry or harden before disposal into covered dumpsters.

Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries, even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Costs

All of the above are low cost measures. Higher costs are incurred to setup and maintain onsite maintenance areas.

Vehicle & Equipment Maintenance NS-10

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and at two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
- Keep ample supplies of spill cleanup materials onsite.
- Maintain waste fluid containers in leak proof condition.
- Vehicles and equipment should be inspected on each day of use. Leaks should be repaired immediately or the problem vehicle(s) or equipment should be removed from the project site.
- Inspect equipment for damaged hoses and leaky gaskets routinely. Repair or replace as needed.

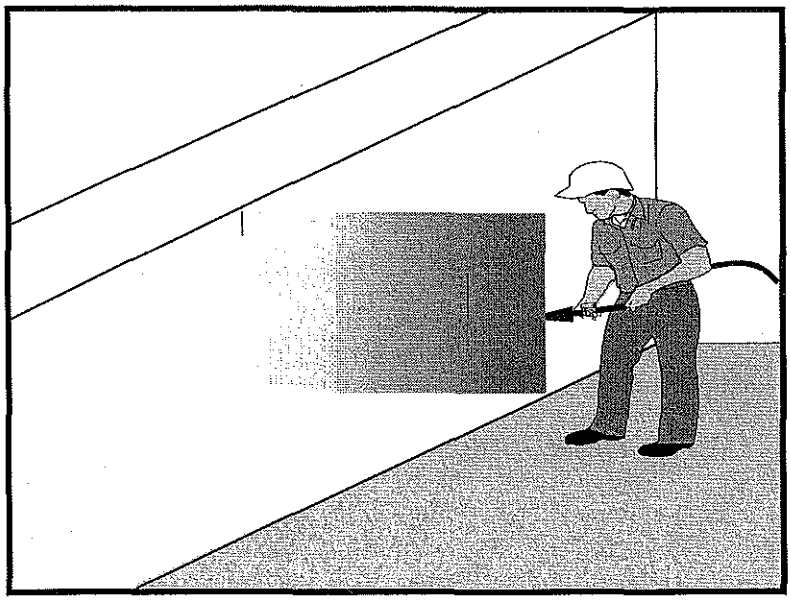
References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Coastal Nonpoint Pollution Control Program; Program Development and Approval Guidance, Working Group, Working Paper; USEPA, April 1992.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Concrete Curing NS-12



Categories

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NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	☑

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

None

Description and Purpose

Concrete curing is used in the construction of structures such as bridges, retaining walls, pump houses, large slabs, and structured foundations. Concrete curing includes the use of both chemical and water methods.

Concrete and its associated curing materials have basic chemical properties that can raise the pH of water to levels outside of the permitted range. Discharges of stormwater and non-stormwater exposed to concrete during curing may have a high pH and may contain chemicals, metals, and fines. The General Permit incorporates Numeric Effluent Limits (NEL) and Numeric Action Levels (NAL) for pH (see Section 2 of this handbook to determine your project's risk level and if you are subject to these requirements).

Proper procedures and care should be taken when managing concrete curing materials to prevent them from coming into contact with stormwater flows, which could result in a high pH discharge.

Suitable Applications

Suitable applications include all projects where Portland Cement Concrete (PCC) and concrete curing chemicals are placed where they can be exposed to rainfall, runoff from other areas, or where runoff from the PCC will leave the site.

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Limitations

- Runoff contact with concrete waste can raise pH levels in the water to environmentally harmful levels and trigger permit violations.

Implementation

Chemical Curing

- Avoid over spray of curing compounds.
- Minimize the drift by applying the curing compound close to the concrete surface. Apply an amount of compound that covers the surface, but does not allow any runoff of the compound.
- Use proper storage and handling techniques for concrete curing compounds. Refer to WM-1, Material Delivery and Storage.
- Protect drain inlets prior to the application of curing compounds.
- Refer to WM-4, Spill Prevention and Control.

Water Curing for Bridge Decks, Retaining Walls, and other Structures

- Direct cure water away from inlets and watercourses to collection areas for evaporation or other means of removal in accordance with all applicable permits. See WM-8 Concrete Waste Management.
- Collect cure water at the top of slopes and transport to a concrete waste management area in a non-erosive manner. See EC-9 Earth Dikes and Drainage Swales, EC-10, Velocity Dissipation Devices, and EC-11, Slope Drains.
- Utilize wet blankets or a similar method that maintains moisture while minimizing the use and possible discharge of water.

Education

- Educate employees, subcontractors, and suppliers on proper concrete curing techniques to prevent contact with discharge as described herein.
- Arrange for the QSP or the appropriately trained contractor's superintendent or representative to oversee and enforce concrete curing procedures.

Costs

All of the above measures are generally low cost.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities.
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.

- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
- Sample non-stormwater discharges and stormwater runoff that contacts uncured and partially cured concrete as required by the General Permit.
- Ensure that employees and subcontractors implement appropriate measures for storage, handling, and use of curing compounds.
- Inspect cure containers and spraying equipment for leaks.

References

Blue Print for a Clean Bay-Construction-Related Industries: Best Management Practices for Stormwater Pollution Prevention; Santa Clara Valley Non Point Source Pollution Control Program, 1992.

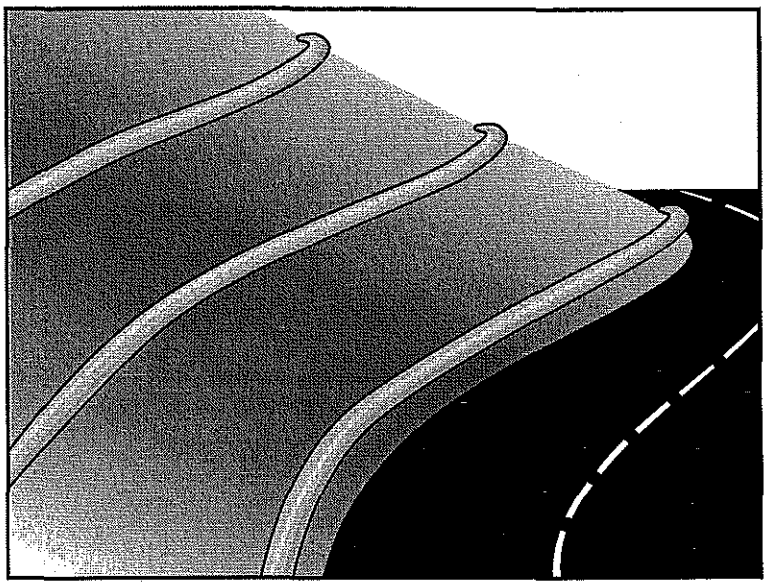
Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.

Fiber Rolls

SE-5



Categories

EC	Erosion Control	☒
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Description and Purpose

A fiber roll consists of straw, coir, or other biodegradable materials bound into a tight tubular roll wrapped by netting, which can be photodegradable or natural. Additionally, gravel core fiber rolls are available, which contain an imbedded ballast material such as gravel or sand for additional weight when staking the rolls are not feasible (such as use as inlet protection). When fiber rolls are placed at the toe and on the face of slopes along the contours, they intercept runoff, reduce its flow velocity, release the runoff as sheet flow, and provide removal of sediment from the runoff (through sedimentation). By interrupting the length of a slope, fiber rolls can also reduce sheet and rill erosion until vegetation is established.

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-1 Silt Fence

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-14 Biofilter Bags

Suitable Applications

Fiber rolls may be suitable:

- Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- At the end of a downward slope where it transitions to a steeper slope.
- Along the perimeter of a project.
- As check dams in unlined ditches with minimal grade.
- Down-slope of exposed soil areas.
- At operational storm drains as a form of inlet protection.

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- Around temporary stockpiles.

Limitations

- Fiber rolls are not effective unless trenched in and staked.
- Not intended for use in high flow situations.
- Difficult to move once saturated.
- If not properly staked and trenched in, fiber rolls could be transported by high flows.
- Fiber rolls have a very limited sediment capture zone.
- Fiber rolls should not be used on slopes subject to creep, slumping, or landslide.
- Rolls typically function for 12-24 months depending upon local conditions.

Implementation

Fiber Roll Materials

- Fiber rolls should be prefabricated.
- Fiber rolls may come manufactured containing polyacrylamide (PAM), a flocculating agent within the roll. Fiber rolls impregnated with PAM provide additional sediment removal capabilities and should be used in areas with fine, clayey or silty soils to provide additional sediment removal capabilities. Monitoring may be required for these installations.
- Fiber rolls are made from weed free rice straw, flax, or a similar agricultural material bound into a tight tubular roll by netting.
- Typical fiber rolls vary in diameter from 9 in. to 20 in. Larger diameter rolls are available as well.

Installation

- Locate fiber rolls on level contours spaced as follows:
  - Slope inclination of 4:1 (H:V) or flatter: Fiber rolls should be placed at a maximum interval of 20 ft.
  - Slope inclination between 4:1 and 2:1 (H:V): Fiber Rolls should be placed at a maximum interval of 15 ft. (a closer spacing is more effective).
  - Slope inclination 2:1 (H:V) or greater: Fiber Rolls should be placed at a maximum interval of 10 ft. (a closer spacing is more effective).
- Prepare the slope before beginning installation.
- Dig small trenches across the slope on the contour. The trench depth should be ¼ to 1/3 of the thickness of the roll, and the width should equal the roll diameter, in order to provide area to backfill the trench.

- It is critical that rolls are installed perpendicular to water movement, and parallel to the slope contour.
- Start building trenches and installing rolls from the bottom of the slope and work up.
- It is recommended that pilot holes be driven through the fiber roll. Use a straight bar to drive holes through the roll and into the soil for the wooden stakes.
- Turn the ends of the fiber roll up slope to prevent runoff from going around the roll.
- Stake fiber rolls into the trench.
  - Drive stakes at the end of each fiber roll and spaced 4 ft maximum on center.
  - Use wood stakes with a nominal classification of 0.75 by 0.75 in. and minimum length of 24 in.
- If more than one fiber roll is placed in a row, the rolls should be overlapped, not abutted.
- See typical fiber roll installation details at the end of this fact sheet.

Removal

- Fiber rolls can be left in place or removed depending on the type of fiber roll and application (temporary vs. permanent installation). Typically, fiber rolls encased with plastic netting are used for a temporary application because the netting does not biodegrade. Fiber rolls used in a permanent application are typically encased with a biodegradeable material and are left in place. Removal of a fiber roll used in a permanent application can result in greater disturbance.
- Temporary installations should only be removed when up gradient areas are stabilized per General Permit requirements, and/or pollutant sources no longer present a hazard. But, they should also be removed before vegetation becomes too mature so that the removal process does not disturb more soil and vegetation than is necessary.

Costs

Material costs for regular fiber rolls range from $20 - $30 per 25 ft roll.

Material costs for PAM impregnated fiber rolls range between 7.00-$9.00 per linear foot, based upon vendor research.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Repair or replace split, torn, unraveling, or slumping fiber rolls.
- If the fiber roll is used as a sediment capture device, or as an erosion control device to maintain sheet flows, sediment that accumulates in the BMP should be periodically removed

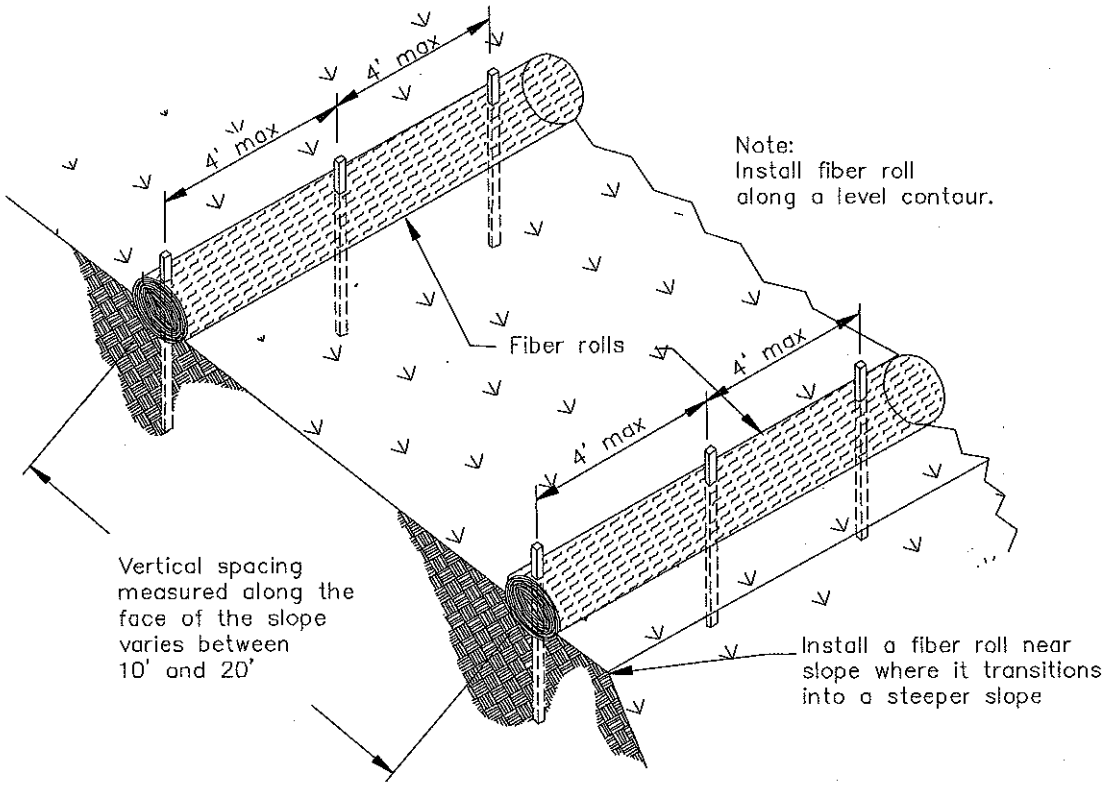
in order to maintain BMP effectiveness. Sediment should be removed when sediment accumulation reaches one-third the designated sediment storage depth.

- If fiber rolls are used for erosion control, such as in a check dam, sediment removal should not be required as long as the system continues to control the grade. Sediment control BMPs will likely be required in conjunction with this type of application.
- Repair any rills or gullies promptly.

References

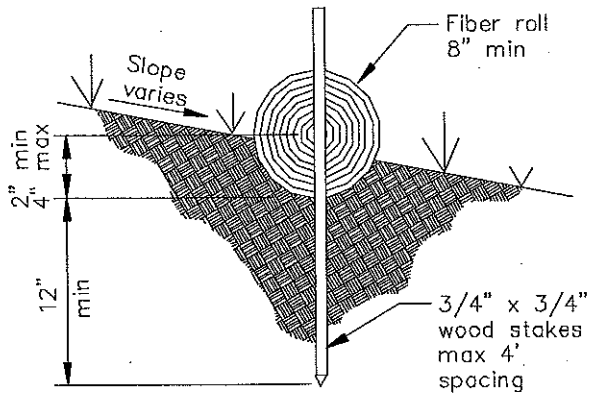
Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.



TYPICAL FIBER ROLL INSTALLATION

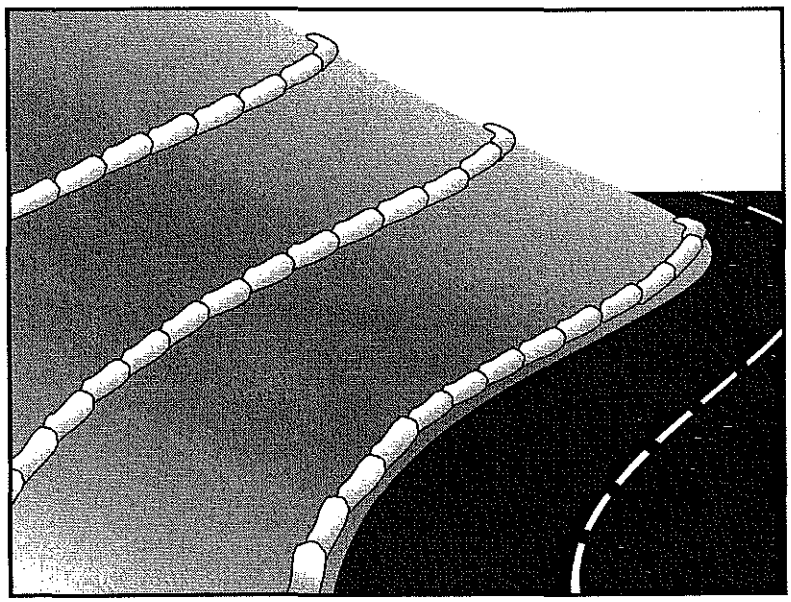
N.T.S.



ENTRENCHMENT DETAIL

N.T.S.

Gravel Bag Berm SE-6



Description and Purpose

A gravel bag berm is a series of gravel-filled bags placed on a level contour to intercept sheet flows. Gravel bags pond sheet flow runoff, allowing sediment to settle out, and release runoff slowly as sheet flow, preventing erosion.

Suitable Applications

Gravel bag berms may be suitable:

- As a linear sediment control measure:
  - Below the toe of slopes and erodible slopes
  - As sediment traps at culvert/pipe outlets
  - Below other small cleared areas
  - Along the perimeter of a site
  - Down slope of exposed soil areas
  - Around temporary stockpiles and spoil areas
  - Parallel to a roadway to keep sediment off paved areas
  - Along streams and channels
- As a linear erosion control measure:
  - Along the face and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.

Categories

EC	Erosion Control	☒
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-1 Silt Fence

SE-5 Fiber Roll

SE-8 Sandbag Barrier

SE-14 Biofilter Bags

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- At the top of slopes to divert runoff away from disturbed slopes.
- As chevrons (small check dams) across mildly sloped construction roads. For use check dam use in channels, see SE-4, Check Dams.

Limitations

- Gravel berms may be difficult to remove.
- Removal problems limit their usefulness in landscaped areas.
- Gravel bag berm may not be appropriate for drainage areas greater than 5 acres.
- Runoff will pond upstream of the berm, possibly causing flooding if sufficient space does not exist.
- Degraded gravel bags may rupture when removed, spilling contents.
- Installation can be labor intensive.
- Durability of gravel bags is somewhat limited and bags may need to be replaced when installation is required for longer than 6 months.
- Easily damaged by construction equipment.
- When used to detain concentrated flows, maintenance requirements increase.

Implementation

General

A gravel bag berm consists of a row of open graded gravel-filled bags placed on a level contour. When appropriately placed, a gravel bag berm intercepts and slows sheet flow runoff, causing temporary ponding. The temporary ponding allows sediment to settle. The open graded gravel in the bags is porous, which allows the ponded runoff to flow slowly through the bags, releasing the runoff as sheet flows. Gravel bag berms also interrupt the slope length and thereby reduce erosion by reducing the tendency of sheet flows to concentrate into rivulets, which erode rills, and ultimately gullies, into disturbed, sloped soils. Gravel bag berms are similar to sand bag barriers, but are more porous. Generally, gravel bag berms should be used in conjunction with temporary soil stabilization controls up slope to provide effective erosion and sediment control.

Design and Layout

- Locate gravel bag berms on level contours.
- When used for slope interruption, the following slope/sheet flow length combinations apply:
  - Slope inclination of 4:1 (H:V) or flatter: Gravel bags should be placed at a maximum interval of 20 ft, with the first row near the slope toe.
  - Slope inclination between 4:1 and 2:1 (H:V): Gravel bags should be placed at a maximum interval of 15 ft. (a closer spacing is more effective), with the first row near the slope toe.

Slope inclination 2:1 (H:V) or greater: Gravel bags should be placed at a maximum interval of 10 ft. (a closer spacing is more effective), with the first row near the slope toe.

- Turn the ends of the gravel bag barriers up slope to prevent runoff from going around the berm.
- Allow sufficient space up slope from the gravel bag berm to allow ponding, and to provide room for sediment storage.
- For installation near the toe of the slope, gravel bag barriers should be set back from the slope toe to facilitate cleaning. Where specific site conditions do not allow for a set-back, the gravel bag barrier may be constructed on the toe of the slope. To prevent flows behind the barrier, bags can be placed perpendicular to a berm to serve as cross barriers.
- Drainage area should not exceed 5 acres.
- In Non-Traffic Areas:
  - Height = 18 in. maximum
  - Top width = 24 in. minimum for three or more layer construction
  - Top width = 12 in. minimum for one or two layer construction
  - Side slopes = 2:1 (H:V) or flatter
- In Construction Traffic Areas:
  - Height = 12 in. maximum
  - Top width = 24 in. minimum for three or more layer construction.
  - Top width = 12 in. minimum for one or two layer construction.
  - Side slopes = 2:1 (H:V) or flatter.
- Butt ends of bags tightly.
- On multiple row, or multiple layer construction, overlap butt joints of adjacent row and row beneath.
- Use a pyramid approach when stacking bags.

Materials

- ***Bag Material:*** Bags should be woven polypropylene, polyethylene or polyamide fabric or burlap, minimum unit weight of 4 ounces/yd^2, Mullen burst strength exceeding 300 lb/in^2 in conformance with the requirements in ASTM designation D3786, and ultraviolet stability exceeding 70% in conformance with the requirements in ASTM designation D4355.

- ***Bag Size:*** Each gravel-filled bag should have a length of 18 in., width of 12 in., thickness of 3 in., and mass of approximately 33 lbs. Bag dimensions are nominal, and may vary based on locally available materials.
- ***Fill Material:*** Fill material should be 0.5 to 1 in. crushed rock, clean and free from clay, organic matter, and other deleterious material, or other suitable open graded, non-cohesive, porous gravel.

Costs

Material costs for gravel bags are average and are dependent upon material availability. $2.50-3.00 per filled gravel bag is standard based upon vendor research.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Gravel bags exposed to sunlight will need to be replaced every two to three months due to degrading of the bags.
- Reshape or replace gravel bags as needed.
- Repair washouts or other damage as needed.
- Sediment that accumulates in the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height.
- Remove gravel bag berms when no longer needed and recycle gravel fill whenever possible and properly dispose of bag material. Remove sediment accumulation and clean, re-grade, and stabilize the area.

References

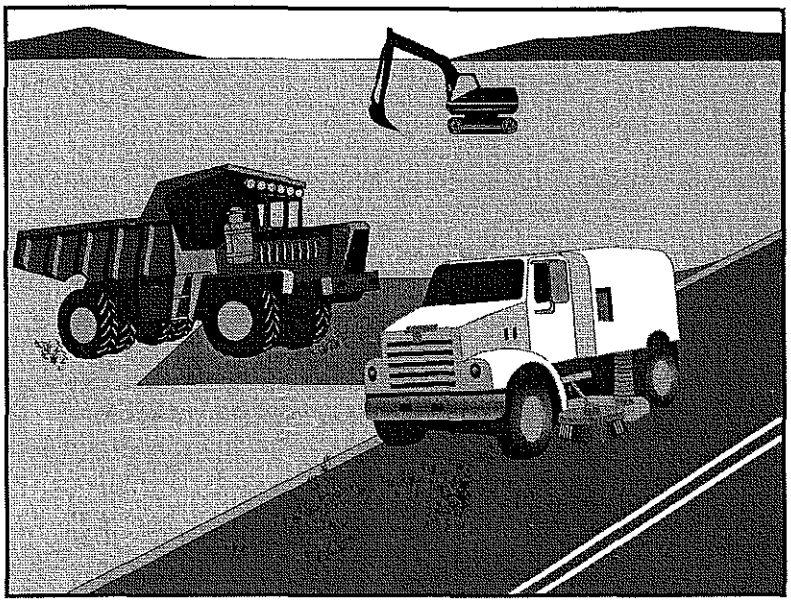
Handbook of Steel Drainage and Highway Construction, American Iron and Steel Institute, 1983.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stormwater Pollution Plan Handbook, First Edition, State of California, Department of Transportation Division of New Technology, Materials and Research, October 1992.

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.

Street Sweeping and Vacuuming SE-7



Categories		
EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	☑
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Objective**
☒ **Secondary Objective**

Targeted Constituents	
Sediment	☑
Nutrients	
Trash	☑
Metals	
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

None

Description and Purpose

Street sweeping and vacuuming includes use of self-propelled and walk-behind equipment to remove sediment from streets and roadways, and to clean paved surfaces in preparation for final paving. Sweeping and vacuuming prevents sediment from the project site from entering storm drains or receiving waters.

Suitable Applications

Sweeping and vacuuming are suitable anywhere sediment is tracked from the project site onto public or private paved streets and roads, typically at points of egress. Sweeping and vacuuming are also applicable during preparation of paved surfaces for final paving.

Limitations

Sweeping and vacuuming may not be effective when sediment is wet or when tracked soil is caked (caked soil may need to be scraped loose).

Implementation

- Controlling the number of points where vehicles can leave the site will allow sweeping and vacuuming efforts to be focused, and perhaps save money.
- Inspect potential sediment tracking locations daily.
- Visible sediment tracking should be swept or vacuumed on a daily basis.
- Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.

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- If not mixed with debris or trash, consider incorporating the removed sediment back into the project

Costs

Rental rates for self-propelled sweepers vary depending on hopper size and duration of rental. Expect rental rates from $58/hour (3 yd^3 hopper) to $88/hour (9 yd^3 hopper), plus operator costs. Hourly production rates vary with the amount of area to be swept and amount of sediment. Match the hopper size to the area and expect sediment load to minimize time spent dumping.

Inspection and Maintenance

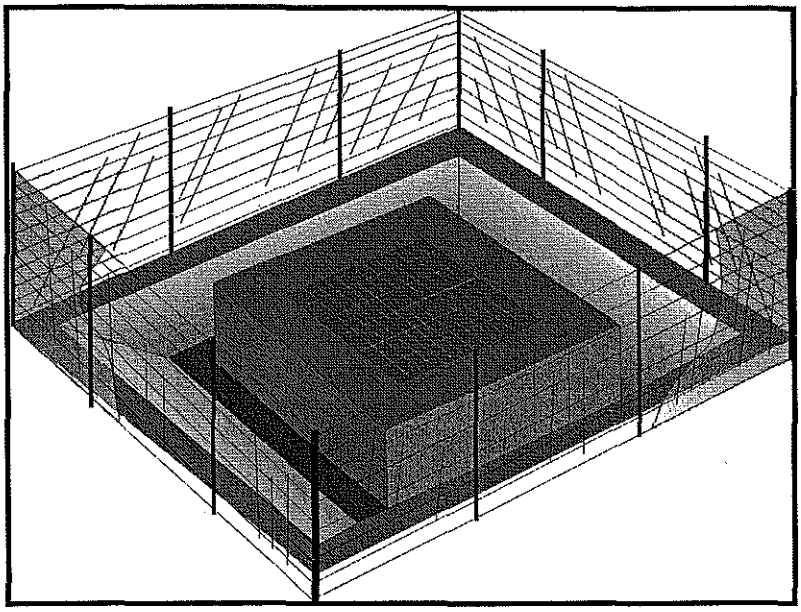
- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- When actively in use, points of ingress and egress must be inspected daily.
- When tracked or spilled sediment is observed outside the construction limits, it must be removed at least daily. More frequent removal, even continuous removal, may be required in some jurisdictions.
- Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Labor Surcharge and Equipment Rental Rates, State of California Department of Transportation (Caltrans), April 1, 2002 – March 31, 2003.

Storm Drain Inlet Protection SE-10



Categories

EC	Erosion Control	
SE	Sediment Control	☑
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Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☒
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-1 Silt Fence

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-14 Biofilter Bags

Description and Purpose

Storm drain inlet protection consists of a sediment filter or an impounding area in, around or upstream of a storm drain, drop inlet, or curb inlet. Storm drain inlet protection measures temporarily pond runoff before it enters the storm drain, allowing sediment to settle. Some filter configurations also remove sediment by filtering, but usually the ponding action results in the greatest sediment reduction. Temporary geotextile storm drain inserts attach underneath storm drain grates to capture and filter storm water.

Suitable Applications

Every storm drain inlet receiving runoff from unstabilized or otherwise active work areas should be protected. Inlet protection should be used in conjunction with other erosion and sediment controls to prevent sediment-laden stormwater and non-stormwater discharges from entering the storm drain system.

Limitations

- Drainage area should not exceed 1 acre.
- In general straw bales should not be used as inlet protection.
- Requires an adequate area for water to pond without encroaching into portions of the roadway subject to traffic.

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- Sediment removal may be inadequate to prevent sediment discharges in high flow conditions or if runoff is heavily sediment laden. If high flow conditions are expected, use other onsite sediment trapping techniques in conjunction with inlet protection.
- Frequent maintenance is required.
- Limit drainage area to 1 acre maximum. For drainage areas larger than 1 acre, runoff should be routed to a sediment-trapping device designed for larger flows. See BMPs SE-2, Sediment Basin, and SE-3, Sediment Traps.
- Excavated drop inlet sediment traps are appropriate where relatively heavy flows are expected, and overflow capability is needed.

Implementation

General

Inlet control measures presented in this handbook should not be used for inlets draining more than one acre. Runoff from larger disturbed areas should be first routed through SE-2, Sediment Basin or SE-3, Sediment Trap and/or used in conjunction with other drainage control, erosion control, and sediment control BMPs to protect the site. Different types of inlet protection are appropriate for different applications depending on site conditions and the type of inlet. Alternative methods are available in addition to the methods described/shown herein such as prefabricated inlet insert devices, or gutter protection devices.

Design and Layout

Identify existing and planned storm drain inlets that have the potential to receive sediment-laden surface runoff. Determine if storm drain inlet protection is needed and which method to use.

- The key to successful and safe use of storm drain inlet protection devices is to know where runoff that is directed toward the inlet to be protected will pond or be diverted as a result of installing the protection device.
  - Determine the acceptable location and extent of ponding in the vicinity of the drain inlet. The acceptable location and extent of ponding will influence the type and design of the storm drain inlet protection device.
  - Determine the extent of potential runoff diversion caused by the storm drain inlet protection device. Runoff ponded by inlet protection devices may flow around the device and towards the next downstream inlet. In some cases, this is acceptable; in other cases, serious erosion or downstream property damage can be caused by these diversions. The possibility of runoff diversions will influence whether or not storm drain inlet protection is suitable; and, if suitable, the type and design of the device.
- The location and extent of ponding, and the extent of diversion, can usually be controlled through appropriate placement of the inlet protection device. In some cases, moving the inlet protection device a short distance upstream of the actual inlet can provide more efficient sediment control, limit ponding to desired areas, and prevent or control diversions.

Storm Drain Inlet Protection SE-10

- Six types of inlet protection are presented below. However, it is recognized that other effective methods and proprietary devices exist and may be selected.
  - Silt Fence: Appropriate for drainage basins with less than a 5% slope, sheet flows, and flows under 0.5 cfs.
  - Excavated Drop Inlet Sediment Trap: An excavated area around the inlet to trap sediment (SE-3).
  - Gravel bag barrier: Used to create a small sediment trap upstream of inlets on sloped, paved streets. Appropriate for sheet flow or when concentrated flow may exceed 0.5 cfs, and where overtopping is required to prevent flooding.
  - Block and Gravel Filter: Appropriate for flows greater than 0.5 cfs.
  - Temporary Geotextile Storm drain Inserts: Different products provide different features. Refer to manufacturer details for targeted pollutants and additional features.
  - Biofilter Bag Barrier: Used to create a small retention area upstream of inlets and can be located on pavement or soil. Biofilter bags slowly filter runoff allowing sediment to settle out. Appropriate for flows under 0.5 cfs.
- Select the appropriate type of inlet protection and design as referred to or as described in this fact sheet.
- Provide area around the inlet for water to pond without flooding structures and property.
- Grates and spaces around all inlets should be sealed to prevent seepage of sediment-laden water.
- Excavate sediment sumps (where needed) 1 to 2 ft with 2:1 side slopes around the inlet.

Installation

- ***DI Protection Type 1 - Silt Fence*** - Similar to constructing a silt fence; see BMP SE-1, Silt Fence. Do not place fabric underneath the inlet grate since the collected sediment may fall into the drain inlet when the fabric is removed or replaced and water flow through the grate will be blocked resulting in flooding. See typical Type 1 installation details at the end of this fact sheet.

  1. Excavate a trench approximately 6 in. wide and 6 in. deep along the line of the silt fence inlet protection device.
  2. Place 2 in. by 2 in. wooden stakes around the perimeter of the inlet a maximum of 3 ft apart and drive them at least 18 in. into the ground or 12 in. below the bottom of the trench. The stakes should be at least 48 in.
  3. Lay fabric along bottom of trench, up side of trench, and then up stakes. See SE-1, Silt Fence, for details. The maximum silt fence height around the inlet is 24 in.
  4. Staple the filter fabric (for materials and specifications, see SE-1, Silt Fence) to wooden stakes. Use heavy-duty wire staples at least 1 in. in length.

5. Backfill the trench with gravel or compacted earth all the way around.

- ***DI Protection Type 2 - Excavated Drop Inlet Sediment Trap*** - Install filter fabric fence in accordance with DI Protection Type 1. Size excavated trap to provide a minimum storage capacity calculated at the rate 67 yd^3/acre of drainage area. See typical Type 2 installation details at the end of this fact sheet.

- ***DI Protection Type 3 - Gravel bag*** - Flow from a severe storm should not overtop the curb. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Construct gravel bags in accordance with SE-6, Gravel Bag Berm. Gravel bags should be used due to their high permeability. See typical Type 3 installation details at the end of this fact sheet.

  1. Construct on gently sloping street.
  2. Leave room upstream of barrier for water to pond and sediment to settle.
  3. Place several layers of gravel bags – overlapping the bags and packing them tightly together.
  4. Leave gap of one bag on the top row to serve as a spillway. Flow from a severe storm (e.g., 10 year storm) should not overtop the curb.

- ***DI Protection Type 4 – Block and Gravel Filter*** - Block and gravel filters are suitable for curb inlets commonly used in residential, commercial, and industrial construction. See typical Type 4 installation details at the end of this fact sheet.

  1. Place hardware cloth or comparable wire mesh with 0.5 in. openings over the drop inlet so that the wire extends a minimum of 1 ft beyond each side of the inlet structure. If more than one strip is necessary, overlap the strips. Place woven geotextile over the wire mesh.
  2. Place concrete blocks lengthwise on their sides in a single row around the perimeter of the inlet, so that the open ends face outward, not upward. The ends of adjacent blocks should abut. The height of the barrier can be varied, depending on design needs, by stacking combinations of blocks that are 4 in., 8 in., and 12 in. wide. The row of blocks should be at least 12 in. but no greater than 24 in. high.
  3. Place wire mesh over the outside vertical face (open end) of the concrete blocks to prevent stone from being washed through the blocks. Use hardware cloth or comparable wire mesh with 0.5 in. opening.
  4. Pile washed stone against the wire mesh to the top of the blocks. Use 0.75 to 3 in.

- ***DI Protection Type 5 – Temporary Geotextile Insert (proprietary)*** – Many types of temporary inserts are available. Most inserts fit underneath the grate of a drop inlet or inside of a curb inlet and are fastened to the outside of the grate or curb. These inserts are removable and many can be cleaned and reused. Installation of these inserts differs between manufacturers. Please refer to manufacturer instruction for installation of proprietary devices.

- ***DI Protection Type 6 - Biofilter bags*** – Biofilter bags may be used as a substitute for gravel bags in low-flow situations. Biofilter bags should conform to specifications detailed in SE-14, Biofilter bags.

  1. Construct in a gently sloping area.
  2. Biofilter bags should be placed around inlets to intercept runoff flows.
  3. All bag joints should overlap by 6 in.
  4. Leave room upstream for water to pond and for sediment to settle out.
  5. Stake bags to the ground as described in the following detail. Stakes may be omitted if bags are placed on a paved surface.

Costs

- Average annual cost for installation and maintenance of DI Type 1-4 and 6 (one year useful life) is $200 per inlet.
- Temporary geotextile inserts are proprietary and cost varies by region. These inserts can often be reused and may have greater than 1 year of use if maintained and kept undamaged. Average cost per insert ranges from $50-75 plus installation, but costs can exceed $100. This cost does not include maintenance.

Inspection and Maintenance

- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Silt Fences. If the fabric becomes clogged, torn, or degrades, it should be replaced. Make sure the stakes are securely driven in the ground and are in good shape (i.e., not bent, cracked, or splintered, and are reasonably perpendicular to the ground). Replace damaged stakes. At a minimum, remove the sediment behind the fabric fence when accumulation reaches one-third the height of the fence or barrier height.
- Gravel Filters. If the gravel becomes clogged with sediment, it should be carefully removed from the inlet and either cleaned or replaced. Since cleaning gravel at a construction site may be difficult, consider using the sediment-laden stone as fill material and put fresh stone around the inlet. Inspect bags for holes, gashes, and snags, and replace bags as needed. Check gravel bags for proper arrangement and displacement.
- Sediment that accumulates in the BMP should be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height.
- Inspect and maintain temporary geotextile insert devices according to manufacturer's specifications.
- Remove storm drain inlet protection once the drainage area is stabilized.

- Clean and regrade area around the inlet and clean the inside of the storm drain inlet, as it should be free of sediment and debris at the time of final inspection.

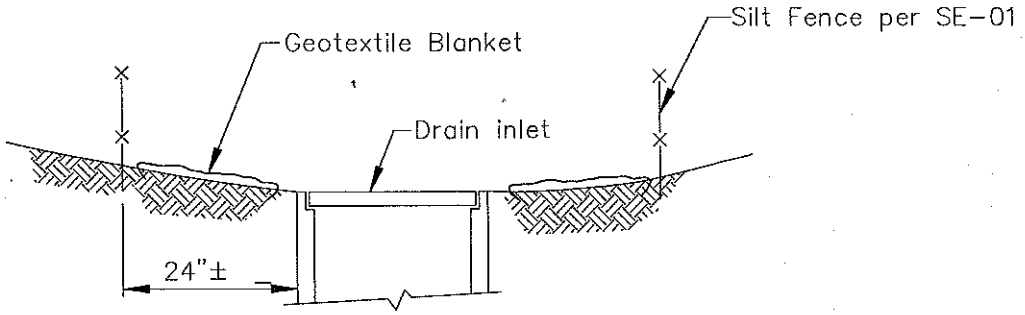
References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

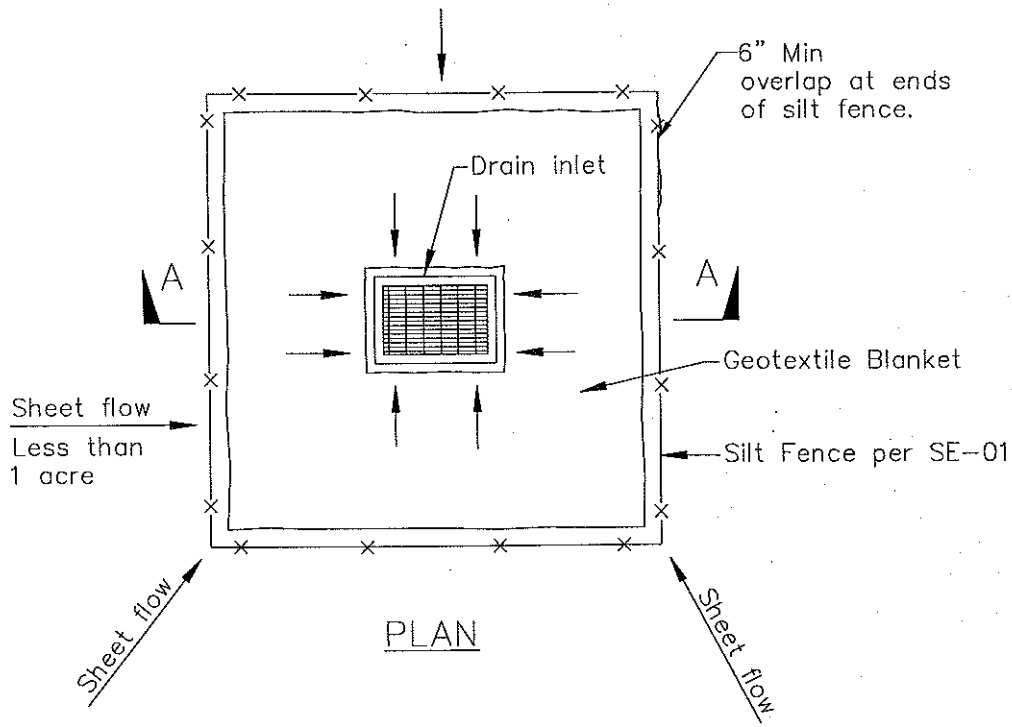
Stormwater Management Manual for The Puget Sound Basin, Washington State Department of Ecology, Public Review Draft, 1991.

Erosion and Sediment Control Manual, Oregon Department of Environmental Quality, February 2005.

Storm Drain Inlet Protection SE-10



SECTION A–A



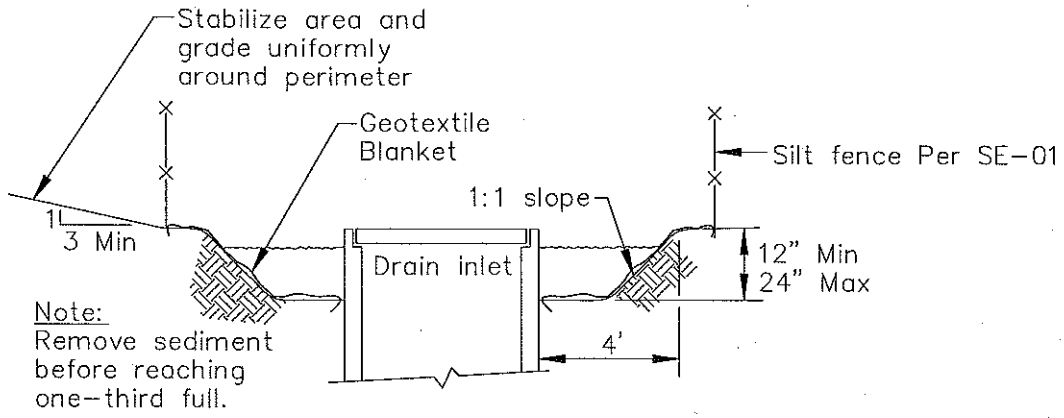
PLAN

DI PROTECTION TYPE 1
NOT TO SCALE

NOTES:

1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.

Storm Drain Inlet Protection SE-10



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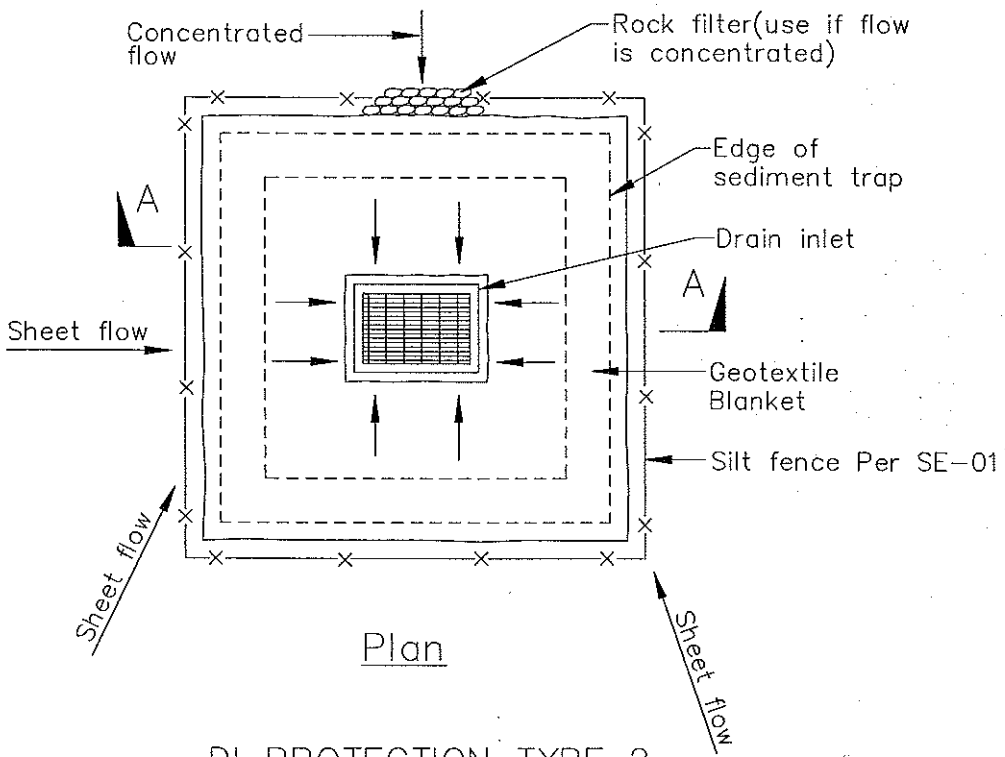
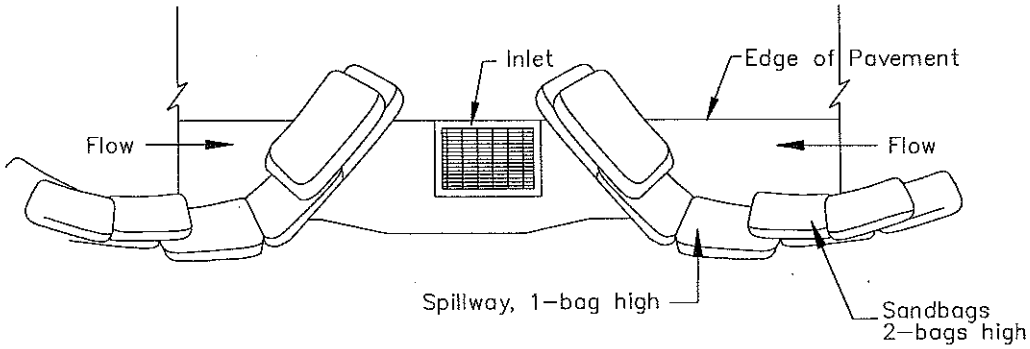


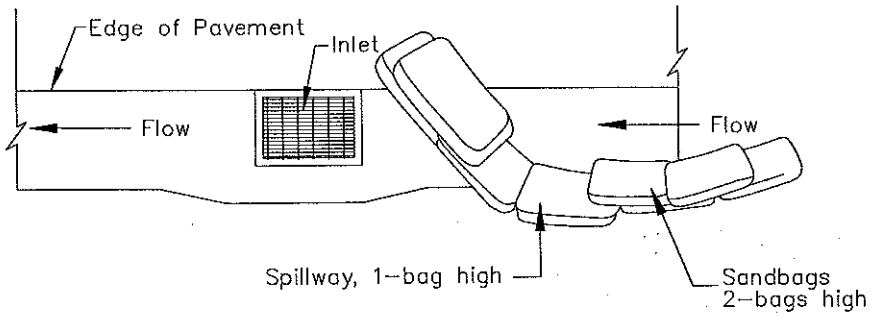
Plan

DI PROTECTION TYPE 2
NOT TO SCALE

Notes
1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.



TYPICAL PROTECTION FOR INLET ON SUMP

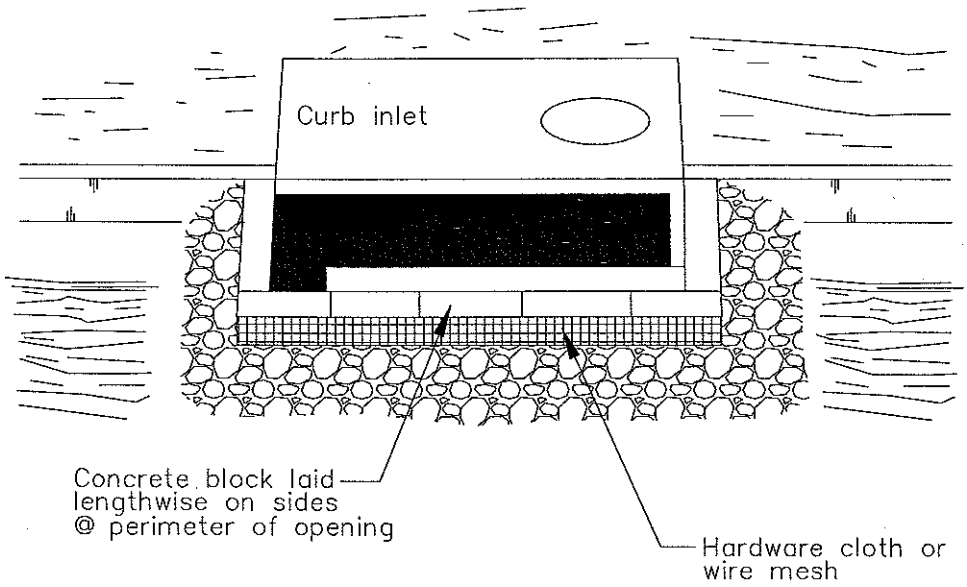


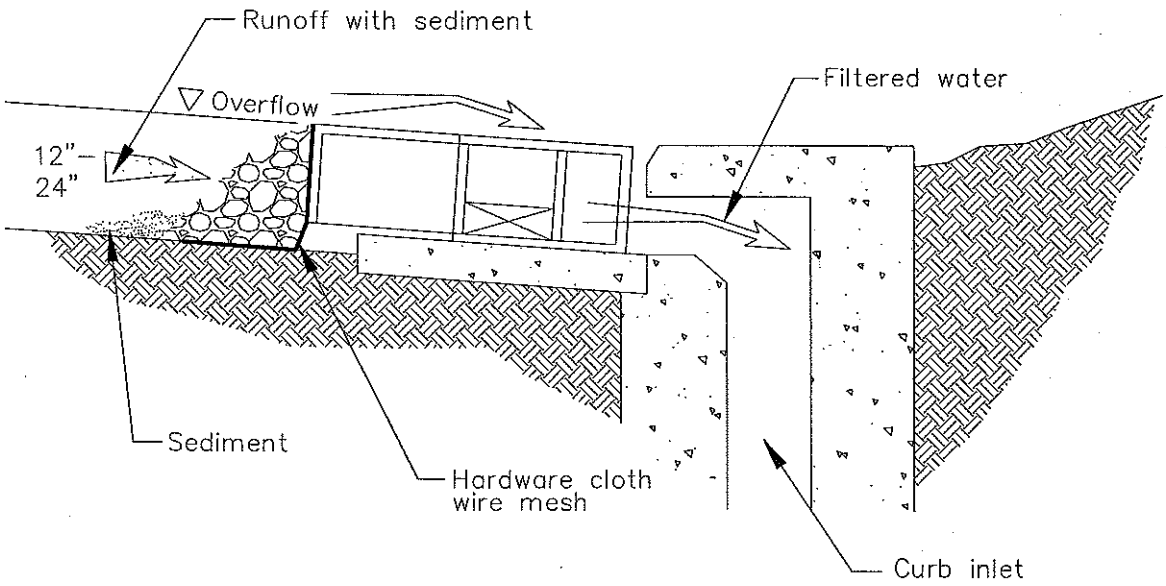
TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:

1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

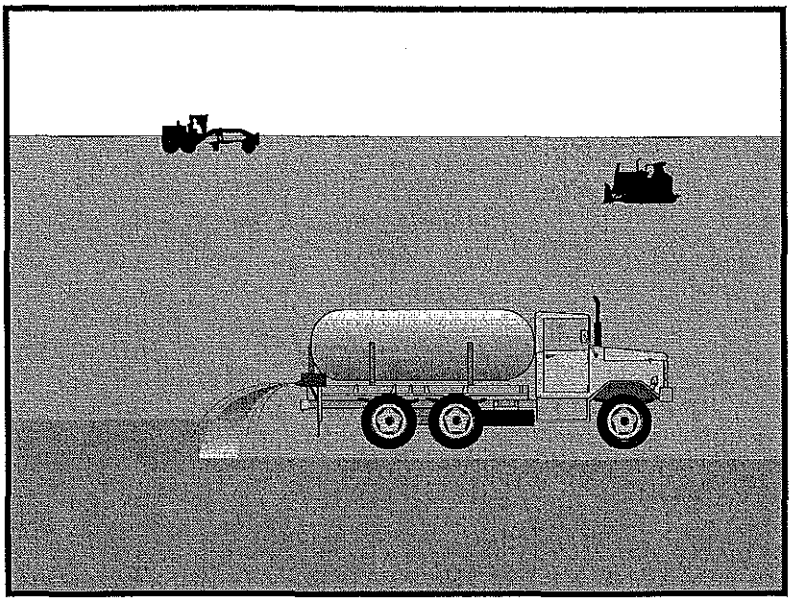
DI PROTECTION TYPE 3
NOT TO SCALE





DI PROTECTION – TYPE 4
NOT TO SCALE

Wind Erosion Control WE-1



Categories

EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	
WE	Wind Erosion Control	☑
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

EC-5 Soil Binders

Description and Purpose

Wind erosion or dust control consists of applying water or other chemical dust suppressants as necessary to prevent or alleviate dust nuisance generated by construction activities. Covering small stockpiles or areas is an alternative to applying water or other dust palliatives.

California's Mediterranean climate, with a short "wet" season and a typically long, hot "dry" season, allows the soils to thoroughly dry out. During the dry season, construction activities are at their peak, and disturbed and exposed areas are increasingly subject to wind erosion, sediment tracking and dust generated by construction equipment. Site conditions and climate can make dust control more of an erosion problem than water based erosion. Additionally, many local agencies, including Air Quality Management Districts, require dust control and/or dust control permits in order to comply with local nuisance laws, opacity laws (visibility impairment) and the requirements of the Clean Air Act. Wind erosion control is required to be implemented at all construction sites greater than 1 acre by the General Permit.

Suitable Applications

Most BMPs that provide protection against water-based erosion will also protect against wind-based erosion and dust control requirements required by other agencies will generally meet wind erosion control requirements for water quality protection. Wind erosion control BMPs are suitable during the following construction activities:

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- Construction vehicle traffic on unpaved roads
- Drilling and blasting activities
- Soils and debris storage piles
- Batch drop from front-end loaders
- Areas with unstabilized soil
- Final grading/site stabilization

Limitations

- Watering prevents dust only for a short period (generally less than a few hours) and should be applied daily (or more often) to be effective.
- Over watering may cause erosion and track-out.
- Oil or oil-treated subgrade should not be used for dust control because the oil may migrate into drainageways and/or seep into the soil.
- Chemical dust suppression agents may have potential environmental impacts. Selected chemical dust control agents should be environmentally benign.
- Effectiveness of controls depends on soil, temperature, humidity, wind velocity and traffic.
- Chemical dust suppression agents should not be used within 100 feet of wetlands or water bodies.
- Chemically treated subgrades may make the soil water repellant, interfering with long-term infiltration and the vegetation/re-vegetation of the site. Some chemical dust suppressants may be subject to freezing and may contain solvents and should be handled properly.
- In compacted areas, watering and other liquid dust control measures may wash sediment or other constituents into the drainage system.
- If the soil surface has minimal natural moisture, the affected area may need to be pre-wetted so that chemical dust control agents can uniformly penetrate the soil surface.

Implementation

Dust Control Practices

Dust control BMPs generally stabilize exposed surfaces and minimize activities that suspend or track dust particles. The following table presents dust control practices that can be applied to varying site conditions that could potentially cause dust. For heavily traveled and disturbed areas, wet suppression (watering), chemical dust suppression, gravel asphalt surfacing, temporary gravel construction entrances, equipment wash-out areas, and haul truck covers can be employed as dust control applications. Permanent or temporary vegetation and mulching can be employed for areas of occasional or no construction traffic. Preventive measures include minimizing surface areas to be disturbed, limiting onsite vehicle traffic to 15 mph or less, and controlling the number and activity of vehicles on a site at any given time.

Chemical dust suppressants include: mulch and fiber based dust palliatives (e.g. paper mulch with gypsum binder), salts and brines (e.g. calcium chloride, magnesium chloride), non-petroleum based organics (e.g. vegetable oil, lignosulfonate), petroleum based organics (e.g. asphalt emulsion, dust oils, petroleum resins), synthetic polymers (e.g. polyvinyl acetate, vinyls, acrylic), clay additives (e.g. bentonite, montimorillonite) and electrochemical products (e.g. enzymes, ionic products).

Site Condition	Dust Control Practices							
	Permanent Vegetation	Mulching	Wet Suppression (Watering)	Chemical Dust Suppression	Gravel or Asphalt	Temporary Gravel Construction Entrances/Equipment Wash Down	Synthetic Covers	Minimize Extent of Disturbed Area
Disturbed Areas not Subject to Traffic	x	x	x	x	x			x
Disturbed Areas Subject to Traffic			x	x	x	x		x
Material Stockpiles		x	x	x			x	x
Demolition			x			x	x	
Clearing/ Excavation			x	x				x
Truck Traffic on Unpaved Roads			x	x	x	x	x	
Tracking					x	x		

Additional preventive measures include:

- Schedule construction activities to minimize exposed area (see EC-1, Scheduling).
- Quickly treat exposed soils using water, mulching, chemical dust suppressants, or stone/gravel layering.
- Identify and stabilize key access points prior to commencement of construction.
- Minimize the impact of dust by anticipating the direction of prevailing winds.
- Restrict construction traffic to stabilized roadways within the project site, as practicable.
- Water should be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses and nozzles that will ensure even distribution.
- All distribution equipment should be equipped with a positive means of shutoff.
- Unless water is applied by means of pipelines, at least one mobile unit should be available at all times to apply water or dust palliative to the project.
- If reclaimed waste water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Water Quality

Control Board (RWQCB) requirements. Non-potable water should not be conveyed in tanks or drain pipes that will be used to convey potable water and there should be no connection between potable and non-potable supplies. Non-potable tanks, pipes, and other conveyances should be marked, "NON-POTABLE WATER - DO NOT DRINK."

- Pave or chemically stabilize access points where unpaved traffic surfaces adjoin paved roads.
- Provide covers for haul trucks transporting materials that contribute to dust.
- Provide for rapid clean up of sediments deposited on paved roads. Furnish stabilized construction road entrances and wheel wash areas.
- Stabilize inactive areas of construction sites using temporary vegetation or chemical stabilization methods.

For chemical stabilization, there are many products available for chemically stabilizing gravel roadways and stockpiles. If chemical stabilization is used, the chemicals should not create any adverse effects on stormwater, plant life, or groundwater and should meet all applicable regulatory requirements.

Costs

Installation costs for water and chemical dust suppression vary based on the method used and the length of effectiveness. Annual costs may be high since some of these measures are effective for only a few hours to a few days.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities.
- BMPs must be inspected in accordance with General Permit requirements for the associated project type and risk level. It is recommended that at a minimum, BMPs be inspected weekly, prior to forecasted rain events, daily during extended rain events, and after the conclusion of rain events.
- Check areas protected to ensure coverage.
- Most water-based dust control measures require frequent application, often daily or even multiple times per day. Obtain vendor or independent information on longevity of chemical dust suppressants.

References

Best Management Practices and Erosion Control Manual for Construction Sites, Flood Control District of Maricopa County, Arizona, September 1992.

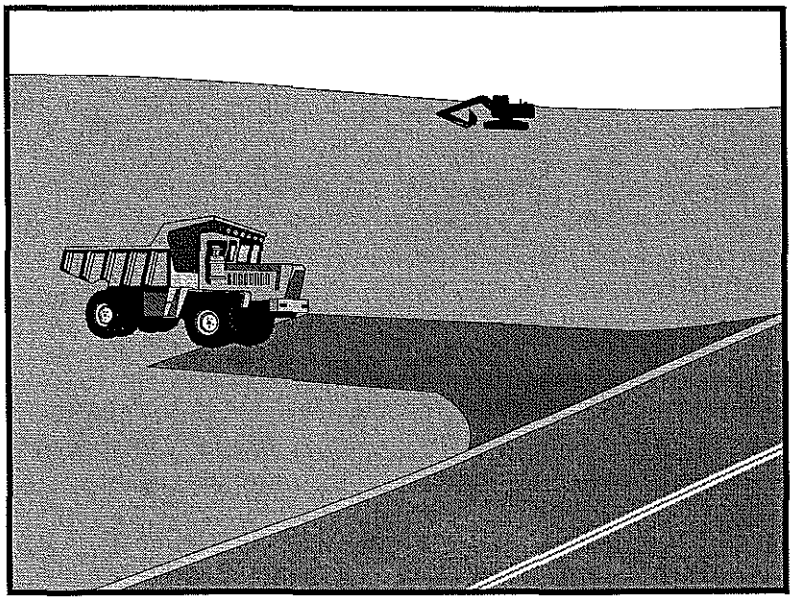
California Air Pollution Control Laws, California Air Resources Board, updated annually.

Construction Manual, Chapter 4, Section 10, "Dust Control"; Section 17, "Watering"; and Section 18, "Dust Palliative", California Department of Transportation (Caltrans), July 2001.

Prospects for Attaining the State Ambient Air Quality Standards for Suspended Particulate Matter (PM10), Visibility Reducing Particles, Sulfates, Lead, and Hydrogen Sulfide, California Air Resources Board, April 1991.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), March 2003.

Stabilized Construction Entrance/Exit TC-1



Categories

EC	Erosion Control	☒
SE	Sediment Control	☒
TC	Tracking Control	☑
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None

Description and Purpose

A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Suitable Applications

Use at construction sites:

- Where dirt or mud can be tracked onto public roads.
- Adjacent to water bodies.
- Where poor soils are encountered.
- Where dust is a problem during dry weather conditions.

Limitations

- Entrances and exits require periodic top dressing with additional stones.
- This BMP should be used in conjunction with street sweeping on adjacent public right of way.
- Entrances and exits should be constructed on level ground only.
- Stabilized construction entrances are rather expensive to construct and when a wash rack is included, a sediment trap of some kind must also be provided to collect wash water

runoff.

Implementation

General

A stabilized construction entrance is a pad of aggregate underlain with filter cloth located at any point where traffic will be entering or leaving a construction site to or from a public right of way, street, alley, sidewalk, or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights of way or streets. Reducing tracking of sediments and other pollutants onto paved roads helps prevent deposition of sediments into local storm drains and production of airborne dust.

Where traffic will be entering or leaving the construction site, a stabilized construction entrance should be used. NPDES permits require that appropriate measures be implemented to prevent tracking of sediments onto paved roadways, where a significant source of sediments is derived from mud and dirt carried out from unpaved roads and construction sites.

Stabilized construction entrances are moderately effective in removing sediment from equipment leaving a construction site. The entrance should be built on level ground. Advantages of the Stabilized Construction Entrance/Exit is that it does remove some sediment from equipment and serves to channel construction traffic in and out of the site at specified locations. Efficiency is greatly increased when a washing rack is included as part of a stabilized construction entrance/exit.

Design and Layout

- Construct on level ground where possible.
- Select 3 to 6 in. diameter stones.
- Use minimum depth of stones of 12 in. or as recommended by soils engineer.
- Construct length of 50 ft minimum, and 30 ft minimum width.
- Rumble racks constructed of steel panels with ridges and installed in the stabilized entrance/exit will help remove additional sediment and to keep adjacent streets clean.
- Provide ample turning radii as part of the entrance.
- Limit the points of entrance/exit to the construction site.
- Limit speed of vehicles to control dust.
- Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment trapping device before discharge.
- Design stabilized entrance/exit to support heaviest vehicles and equipment that will use it.

Stabilized Construction Entrance/Exit TC-1

- Select construction access stabilization (aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions. Do not use asphalt concrete (AC) grindings for stabilized construction access/roadway.
- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 12 in. depth, or place aggregate to a depth recommended by a geotechnical engineer. A crushed aggregate greater than 3 in. but smaller than 6 in. should be used.
- Designate combination or single purpose entrances and exits to the construction site.
- Require that all employees, subcontractors, and suppliers utilize the stabilized construction access.
- Implement SE-7, Street Sweeping and Vacuuming, as needed.
- All exit locations intended to be used for more than a two-week period should have stabilized construction entrance/exit BMPs.

Inspection and Maintenance

- Inspect and verify that activity–based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMPs are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect local roads adjacent to the site daily. Sweep or vacuum to remove visible accumulated sediment.
- Remove aggregate, separate and dispose of sediment if construction entrance/exit is clogged with sediment.
- Keep all temporary roadway ditches clear.
- Check for damage and repair as needed.
- Replace gravel material when surface voids are visible.
- Remove all sediment deposited on paved roadways within 24 hours.
- Remove gravel and filter fabric at completion of construction

Costs

Average annual cost for installation and maintenance may vary from $1,200 to $4,800 each, averaging $2,400 per entrance. Costs will increase with addition of washing rack, and sediment trap. With wash rack, costs range from $1,200 - $6,000 each, averaging $3,600 per entrance.

References

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas, USEPA Agency, 2002.

Proposed Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, Work Group Working Paper, USEPA, April 1992.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

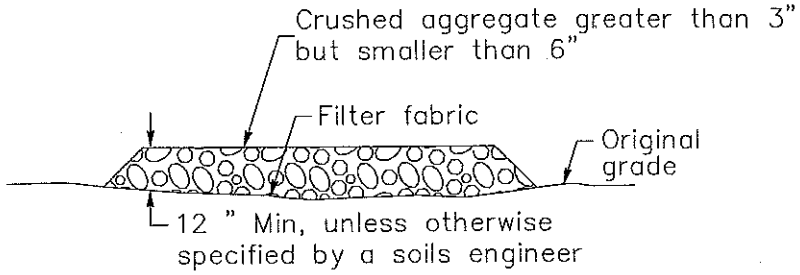
Stormwater Management of the Puget Sound Basin, Technical Manual, Publication #91-75, Washington State Department of Ecology, February 1992.

Virginia Erosion and Sedimentation Control Handbook, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation, 1991.

Guidance Specifying Management Measures for Nonpoint Pollution in Coastal Waters, EPA 840-B-9-002, USEPA, Office of Water, Washington, DC, 1993.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

Stabilized Construction Entrance/Exit TC-1



SECTION B–B
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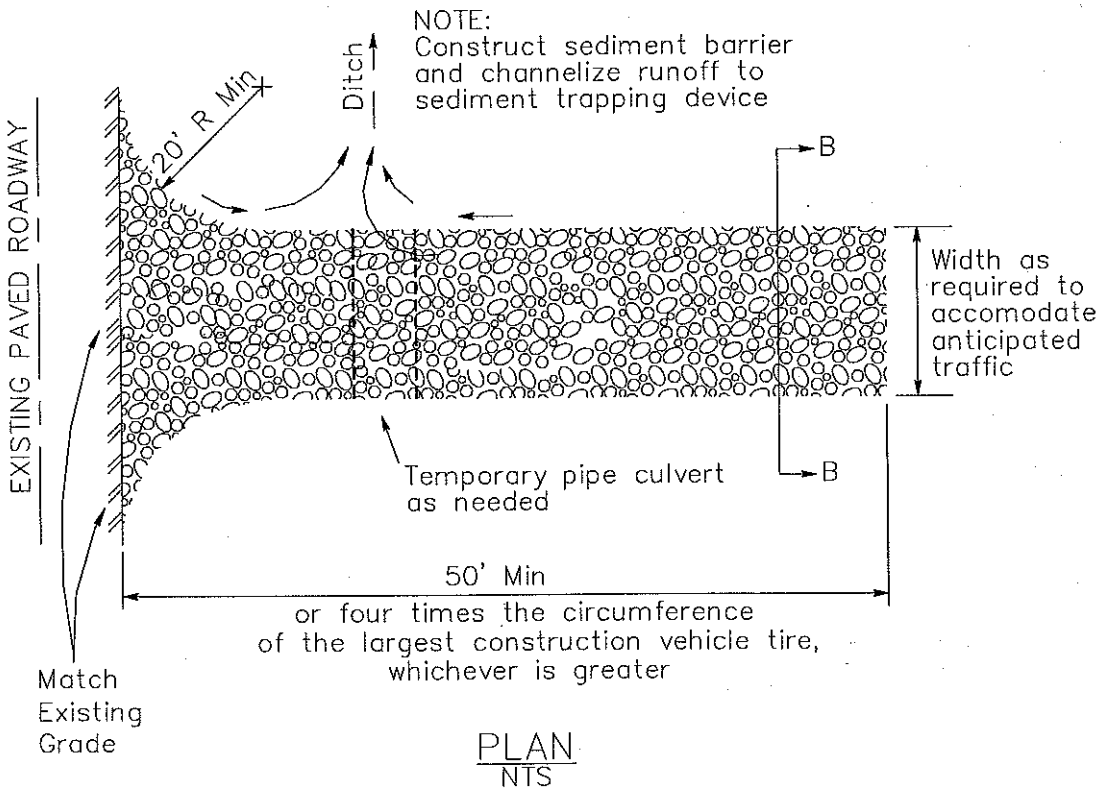

PLAN
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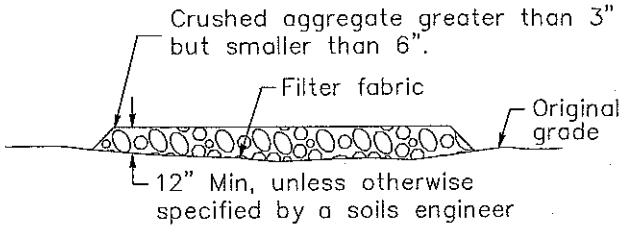
Stabilized Construction Entrance/Exit TC-1



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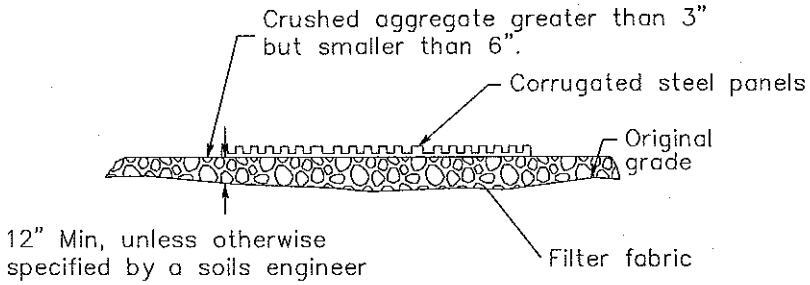

SECTION A–A
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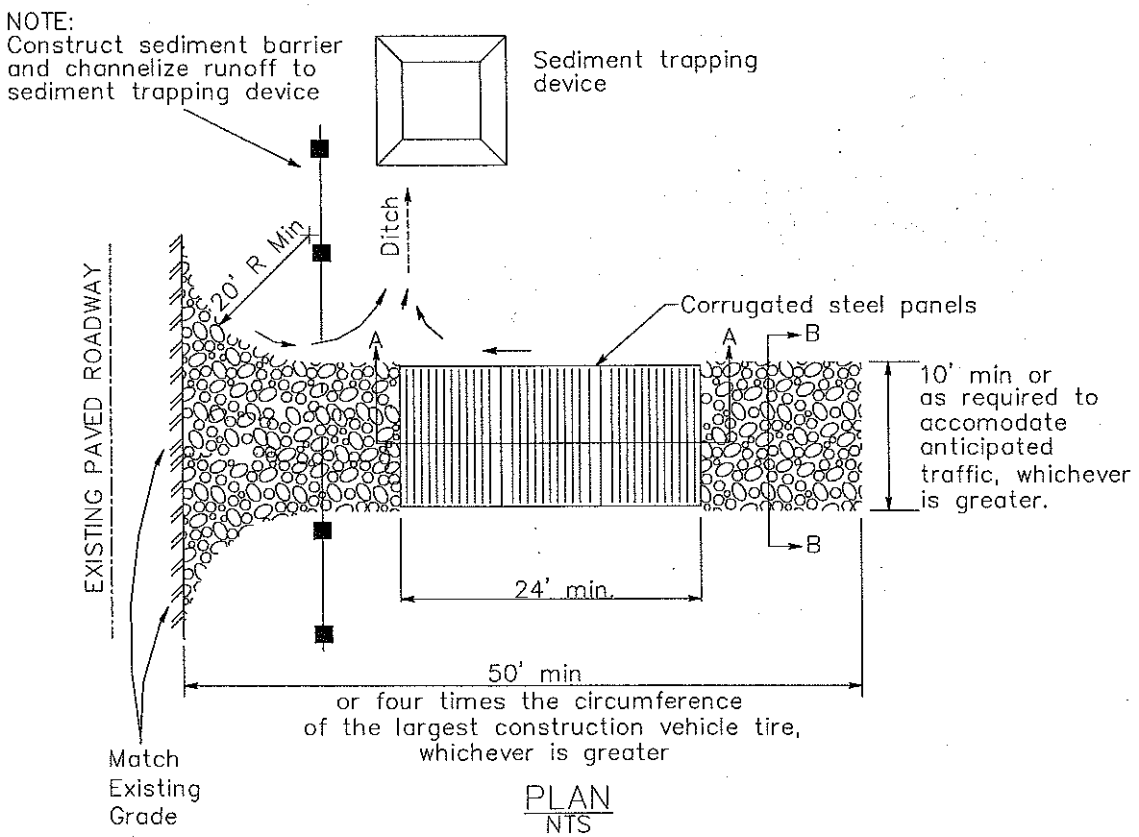

PLAN
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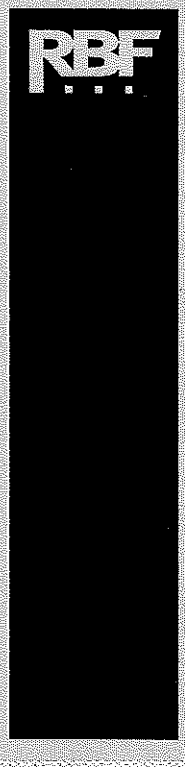


APPENDIX H
SITE INSPECTION REPORT
FORMS

Appendix H

Construction Site Inspection Report Forms

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Site Inspection Checklist

GENERAL INFORMATION				
Project Name				
Contractor				
Inspector's Name		Inspector's Title		
Pictures taken? How many?				
Date of Inspection		Date Inspection Report Written		
Inspection Type (Check Applicable)	☐ Weekly ☐ 24-hr intervals during extended rain ☐ Other _____		☐ Prior to forecast rain ☐ After a rain event	
Precipitation (Check Applicable)	Was it raining during the inspection?		☐ Yes	☐ No
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min. Hr. Days	Approximate Rainfall Amount (inches)	
Stage of Construction				
Activities Completed				
Approximate Exposed Site Area				

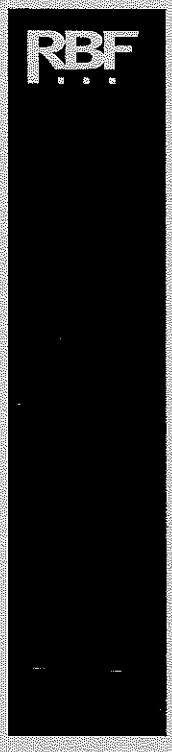
GENERAL INFORMATION		
Is the site in compliance with the SWPPP and the permit requirements?	☐ Yes	☐ No
If NO, indicate tasks necessary to bring the site into compliance in the area below. Include dates each task will be completed.		
_____		
_____		
_____		
Was water quality sampling part of this inspection?	☐ Yes	☐ No
If YES, see the results on the final page of the inspection form.		
Sign the following certification: "I certify that this inspection form is true, accurate, and complete, to the best of my knowledge and belief."		
Signature _____		

CONSTRUCTION SITE INSPECTION CHECKLIST				
Requirement	**Yes**	**No**	**N/A**	**Corrective Action/Location**
Temporary Erosion Controls				
Does the applied erosion control provide 100% coverage for the required areas?				
Are there any non-vegetated areas that need erosion control?				
Is the area where erosion control is required free from visible erosion?				
Do any seeded or landscaped areas require maintenance, irrigation, fertilization, or mulching?				
Are there any areas of the site that are disturbed, but will likely lie dormant for over 14 days?				
Do any erosion control BMPs require maintenance?				
Temporary Sediment Controls				
Are temporary sediment controls functional, maintained properly, and installed in accordance with the details and/or the SWPPP Map?				
If not, do any sediment control BMPs require maintenance?				
Are temporary sediment controls free of accumulated litter?				
Is the built-up sediment less than 1/3 the height of the barrier?				
Are cross barriers installed where necessary and properly spaced according to the SWPPP Map?				
Are fiber rolls installed and maintained on required slopes in accordance with the details, functional and maintained?				
Are silt fences placed on level contours?				
Storm Drain Inlet Protection				
Are storm drain inlet BMPs internal to the project installed and maintained properly, according to the storm drain inlet BMP Fact Sheet located in the SWPPP report?				
Similarly, are offsite storm drain inlet BMPs installed and maintained properly?				
Stockpiles				
Are stockpiles covered and protected from run-on, run-off from adjacent areas, and from winds?				
Are stockpiles covered and located at least 50 feet from concentrated flows, downstream drainage courses and storm drain inlets?				
Have soil stockpiles that will sit for over 14 days been stabilized?				
Concentrated Flows				
Are concentrated flow paths free of visible erosion?				
Tracking Control				
Does the project have a stabilized construction site entrance/exit and is it installed correctly according to the SWPPP?				
Are points of ingress/egress to public/private roads inspected, swept, and vacuumed according to the SWPPP?				
Wind Erosion Control				
Is dust control implemented?				

CONSTRUCTION SITE INSPECTION CHECKLIST				
Requirement	**Yes**	**No**	**N/A**	**Corrective Action/Location**
Dewatering Operations				
Is dewatering handled in conformance with the dewatering permit issued by the RWQCB?				
Is required treatment provided for dewatering effluent?				
Vehicle & Equipment Fueling, Cleaning, and Maintenance				
Are vehicle and equipment fueling, cleaning and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious material?				
Are vehicle and equipment fueling, cleaning and maintenance activities performed on an impermeable surface in dedicated areas?				
If no, are drip pans used?				
Are dedicated fueling, cleaning, and maintenance areas located at least 50 feet away from downstream drainage facilities and watercourses, and protected from run-on and runoff?				
Is wash water contained for infiltration/ evaporation?				
Is on-site cleaning limited to washing with water (no soap, soaps substitutes, solvents, or steam)?				
On each day of use, are vehicles and equipment inspected for leaks and if necessary, repaired?				
Waste Management & Materials Pollution Control				
Are material storage areas and washout areas protected from run-on and runoff, and located at least 50 feet from concentrated flows and downstream drainage facilities?				
Are material handling and storage areas clean; organized; free of spills, leaks, or any other deleterious material; and stocked with appropriate clean-up supplies?				
Are liquid materials, hazardous materials, and hazardous wastes stored in temporary containment facilities?				
Are bagged and boxed materials stored on pallets?				
Are hazardous materials and wastes stored in appropriate, labeled containers?				
Are proper storage, clean-up, and spill-reporting procedures for hazardous materials and wastes posted in open, conspicuous and accessible locations adjacent to storage areas?				
Are temporary containment facilities and bagged/boxed materials covered?				
Are temporary concrete washout facilities designated and water tight?				
Do temporary concrete washout facilities prevent concrete residues from entering the drainage system?				
Are the temporary concrete washout facilities' liners free from punctures and holes?				
Are concrete wastes, including residues from cutting and grinding, contained and disposed of off-site or in concrete washout facilities?				
Are spills from mobile equipment fueling and maintenance properly contained and cleaned up?				
Is litter from work areas within the construction limits of the project site collected and placed in watertight dumpsters with lids?				
Are trash receptacles provided in the Contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods?				

CONSTRUCTION SITE INSPECTION CHECKLIST				
Requirement	**Yes**	**No**	**N/A**	**Corrective Action/Location**
Are waste management receptacles free of leaks?				
Is the site free of litter?				
Are the contents of waste management receptacles properly protected from contact with storm water or from being dislodged by winds?				
Are waste management receptacles filled at or beyond capacity?				
Are portable toilets placed within containment to prevent the discharge (leaking) of pollutants?				
Spill Control and Response				
Are there proper spill clean-up materials, and posted spill-reporting procedures for hazardous materials and wastes in open and accessible locations adjacent to storage areas?				
If a spill has occurred, was the Environmental Specialist contacted within 24 hours of a spill of a hazardous substance?				
Non-Storm Water Discharges				
Is there any evidence of illicit discharges or illegal dumping on the project site?				
If yes, has the Environmental Specialist been notified?				
If there has been an unauthorized or non-storm water discharge, has it been immediately contained, cleaned up and documented in the SWPPP?				
Are there any other potential non-storm water pollution control concerns at the site?				
Discharge Points				
Are discharge points and discharge flows free from noticeable pollutants?				
Are discharge points free of any significant erosion and deposition?				
SWPPP Update				
Does the SWPPP adequately reflect the current site conditions and contractor operations?				
Are all BMPs shown in the SWPPP Map also installed on the construction site?				
Is the SWPPP on-site where it is accessible to others?				
Is the NOI posted on-site?				
Does the SWPPP contain a current list of potential pollutant sources?				
General				
Was a Rain Even Action Plan (REAP) developed since the last inspection?				
Are there any other potential water pollution control concerns at the site?				
Storm Water Monitoring				
Is there a 50% chance of rain or greater in the forecast? (http://www.wrh.noaa.gov) Note: Print and attach NOAA forecast to this checklist.				
If this is a post-storm inspection, did the storm event produce precipitation of 0.5 inch or more?				
Are there any noticeable odors or visible sheen on the surface of any runoff or discharges?				

STORM WATER MONITORING AND REPORTING				
Parameter	**Date**	**Time**	**Location**	**Result**



APPENDIX I
NAL/NEL EXCEEDANCE
SITE EVALUATIONS

Appendix I

NAL Exceedance Site Evaluations

Numeric Action Level Exceedance Report

In the event that the storm event average of the samples exceeds an applicable NAL, Type 2 discharges must electronically submit all storm event sampling results to the SWRCB's SMARTS no later than 10 days after the conclusion of the storm event. In addition, the RWQCBs may request the submittal of an NAL Exceedance Report. The discharger must certify each NAL Exceedance Report in accordance with the General Permit's Special Provisions for Construction Activity.

An NAL Exceedance Report must contain the following information:

- Analytical method(s), method reporting unit(s), and MDL(s) of each analytical parameter;
- Date, place, time of sampling, visual observation (inspections), and/or measurements, including precipitating; and
- Description of the current BMPs associated with the sample that exceeded the NAL and the proposed corrective actions taken.

LUP Type 2

Numeric Action Level Exceedance Report

Date, time, sampling location, visual observations and precipitation	Parameter	Test Method/ Protocol	Discharge Type	Min. Detection Limit	Reporting Units	Numeric Action Level	Test Result	Associated BMP and Corrective Action
	pH	Field test with calibrated portable instrument	Type 2 Discharges	0.2 pH	Units	Lower NAL = 6.5 Upper NAL = 8.5		
	Turbidity EPA	0180.1 and/or field test with calibrated portable instrument	Type 2 Discharges other than ATS	1 NTU		250 NTU		
			For ATS discharges	1 NTU		N/A		

RBF

APPENDIX J
TRAINING REPORTING FORM

Appendix J

Training Reporting Forms

TRAINING REPORTING FORM

A copy of the appropriate individual's certificate shall be placed in this Appendix of the SWPPP.

TRAINING QUALIFICATIONS AND CERTIFICATION REQUIREMENTS

A. General

The discharger shall ensure that all persons responsible for implementing requirements of this General Permit shall be appropriately trained in accordance with this Section. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. Those responsible for preparing and amending SWPPPs shall comply with the requirements in this Section VII.
The discharger shall provide documentation of all training for persons responsible for implementing the requirements of this General Permit in the Annual Reports.

B. SWPPP Certification Requirements

1. **Qualified SWPPP Developer:** The discharger shall ensure that SWPPPs are written, amended and certified by a Qualified SWPPP Developer (QSD). A QSD shall have one of the following registrations or certifications, and appropriate experience, as required for:

    a. A California registered professional civil engineer;

    b. A California registered professional geologist or engineering geologist;

    c. A California registered landscape architect;

    d. A professional hydrologist registered through the American Institute of Hydrology;

    e. A Certified Professional in Erosion and Sediment Control (CPESC) TM registered through Enviro Cert International, Inc.;

    f. A Certified Professional in Storm Water Quality (CPSWQ) TM registered through Enviro Cert International, Inc.;

    g. A professional in erosion and sediment control registered through the National Institute for Certification in Engineering Technologies (NICET); or 2009-0009-DWQ 33 September 02, 2009

    Order Effective two years after the adoption date of this General Permit, a QSD shall have attended a State Water Board-sponsored or approved QSD training course.

2. The discharger shall list the name and telephone number of the

currently designated Qualified SWPPP Developer(s) in the SWPPP.

3. **Qualified SWPPP Practitioner:** The discharger shall ensure that all BMPs required by this General Permit are implemented by a Qualified SWPPP Practitioner (QSP). A QSP is a person responsible for nonstorm water and storm water visual observations, sampling and analysis. Effective two years from the date of adoption of this General Permit, a QSP shall be either a QSD or have one of the following certifications:

a. A certified erosion, sediment and storm water inspector registered through Enviro Cert International, Inc.; or

b. A certified inspector of sediment and erosion control registered through Certified Inspector of Sediment and Erosion Control, Inc.

Effective two years after the adoption date of this General Permit, a QSP shall have attended a State Water Board-sponsored or approved QSP training course.

4. The LRP shall list in the SWPPP, the name of any Approved Signatory, and provide a copy of the written agreement or other mechanism that provides this authority from the LRP in the SWPPP.

5. The discharger shall include, in the SWPPP, a list of names of all contractors, subcontractors, and individuals who will be directed by the Qualified SWPPP Practitioner. This list shall include telephone numbers and work addresses. Specific areas of responsibility of each subcontractor and emergency contact numbers shall also be included.

6. The discharger shall ensure that the SWPPP and each amendment will be signed by the Qualified SWPPP Developer. The discharger shall include a listing of the date of initial preparation and the date of each amendment in the SWPPP.

Training Log

Date:

Attendees:

Subject of Training:

Training By:

Copy of Training Certificate(s) here

The CPESC® Application Review Committee
certifies that

John F. Slayton

Subscribes to the Code of Conduct and Ethics and has met the requirements established by the CPESC Council as a

Certified Professional in Erosion and Sediment Control™

An EnviroCert International, Inc. Program

Certification Number: 5955

Certification Date: July 1, 2010

Chair, CPESC Council

CPESC Program Manager

The CPESC Program was established in 1982.

RBF

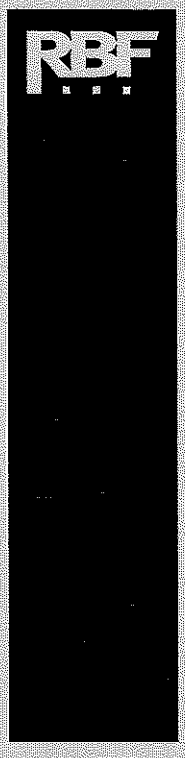
APPENDIX K
RESPONSIBLE PARTIES

Appendix K

Responsible Parties

Appendix K - Responsible Parties

Title and Contact Information	Area of Responsibility
Legally Responsible Person: Entity Name: Southern California Edison LRP Contact Person: Ed Antillon, Technical Services Director Address: One Innovation Way City, State, Zip: Pomona, CA 91768 Email: **Ed.Antillon@sce.com**	Property Owner and Permittee under the General Permit
Authorized Signatory for the LRP: Contact Person: John Slayton, Manager Address: 14005 S. Bensen Ave. City, State, Zip: Chino, CA 92710 Telephone Number: 909 548-7186 Email: **John.Slayton@sce.com**	Authorized to sign (and certify) on behalf of the LRP: the Notice of Intent, Notice of Termination, Changes to the Permit Registration Documents, SWPPP Certification, Annual Reports, Non-Compliance reports, and any other information requested by the RWQCB, SWRCB, or EPA under the General Permit.
Qualified SWPPP Developer: Company Name: RBF Consulting QSD Name: Tanya Bilezikjian, Project Manager Address: 14725 Alton Parkway City, State, Zip: Irvine, CA 9261802027 Telephone Number: 949 472-3505 714 321-3006 Email: **tbilezikjian@rbf.com**	Draft the SWPPP and any SWPPP amendments and certify compliance of the SWPPP with the General Permit.
Qualified SWPPP Practitioner: Company Name: TBD QSP Name: Address: City, State, Zip: Telephone Number (including emergency contact number[s]): Fax: Email:	Implement the SWPPP on a daily basis at the Project, oversee the training of contractors and other personnel undertaking SWPPP-related duties, monitor and direct contractors with SWPPP responsibilities (including those installing or maintaining BMPs), oversee the inspection and monitoring programs, perform inspections or delegate others to do so (see other delegated inspectors below), prepare reports required by the SWPPP for review and certification by the LRP's representative.
SWPPP Inspector(s): Company Name: TBD Name: Address: City, State, Zip: Telephone Number (including emergency contact number[s]): Fax: Email:	Conduct inspections under the supervision of the QSP.



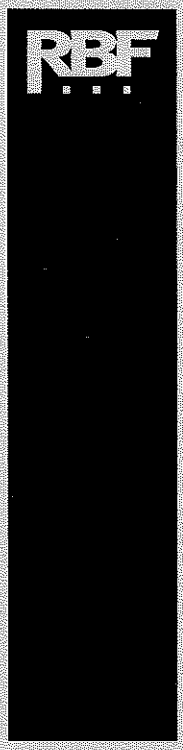
APPENDIX L
CONTRACTORS AND
SUBCONTRACTORS

Appendix L

Contractors and Subcontractors

APPENDIX L – CONSTRACTORS AND SUBCONTRACTORS

Contractor/Subcontractor Name and Address	Contact Person/ Phone Number	Activity	Start Date	End Date



APPENDIX M
INSPECTION RECORDS

Appendix M

Monitoring and Reporting Program Reports (Completed Forms)

Appendix K

Noise Documents

SCE - Moorpark / Newbury, Ventura Co.

Ambient Field Measurements - 1-hr Leq's.

10/1/12 → Calibration Check performed on 824: ✓ok 114.1 dB

[Weather → 65°F, Wind West @ ~5mph, gusts/10mph, Humidity - 65%, 30.02", Clear.]

① Location 5 : placed at the end of Presilla Rd, approx. 15-20' from property line. & Approx 100' East from New Pole

Noise Env.: Wind/Tree noise, birds. Overall very quiet.

- Area is mostly large residential lots with horses / openspace / Ag.

*@ approx 13:46-47 a car drove-by very close to meter.

* Lots of Wind noise; crow cawing & low plane over f at end of measure

File #1 Leq: 44.4dBA

② Location 4 : placed @ appnx 15-20' from New Pole #19, a top steep slope overlooking nearest residential properties. (~200' to SE

- Area is predominately open space / nurseries with a subdivision to the SE.

Noise sources: Some Air & Road traffic in distance. (Santa Rosa Rd.) Workers in Nursery and at houses.

* 14:09: Helicopter overflight

File #2 Leq: 46.4 dBA.

③ Location 6 : placed beside Ternez Dr. approx. 50ft ~~250~~ east of SCE ROW and NE of New pole 13.

Area is mostly Ag to west and Large lot residential elsewhere.

Noise sources: Roosters, dogs, Train Horns from nearby track by Hwy 118.

Water district tank / pump station is ~50' from meter.
↳ electric motor cycles on/off periodically.

File #3 Leq: 42.4 dBA

10/2/12 Calibration: 11/2 114dBA. [Weather = 60°F, Wind-SE@04mph, 75%, 30", Clear]

④ Location 1 : placed on slope with openspace / Utility Corridor on Northern edge of residential homes. ~50 ft to nearest house.

- Area is mostly an Industrial Park (Commercial business) with a ~~sor~~ area of residential homes to the south; OFS to the west / North / East. An Elementary or middle school is to the west.
- Noise sources : Warehouse noises such as machinery & trucks from the Industrial park to the SE.
  - Plan overflight @09:21

File #4 Leq: 49.8 dBA

⑤ Location 3 : placed on a dirt access rd. next to the property line of residential properties and nursery ops. ↳(to E) ↳(to W)

-Some wind rustling noises.

Noise sources : Very Quiet; some nursery vehicles / tractors.

File #5 Leq: 44.8 dBA

⑥ Location 2 : placed close to nursery property line - next property is also a farm with possibly a house nearer to the Road.

Sources : workers nearby, Santa Rosa Rd traffic, birds are fairly prevalent and Loud. -Nursery vehicle traffic ~~post~~ fairly dominant Source. -Lots of plane overflights.

File #6 Leq: 48.3 dBA.

⑦ Location 7 : placed in open dirt lot 100-150' south from Hitch Blvd. Open Space to the south of location, Ag. to the west & North, Some residential to the NE & East.

Sources : Predominant noise from Hitch Blvd, Hwy 118 and Trains adjacent to Hwy. 118. Train blow horns at corner of Hwy 118 / Hitch Blvd.

File #7 Leq: 47.4 dBA

⑧ Location 8: placed on side of the road ~~down~~ E Los Angeles Ave (Hwy 118) almost @ Mira Sol Dr. Subdivision is adjacent to Rd. to South
-Across the street is the SCE substation / "pull site."
~~On the~~ *An ~8f' hedge exists at the sidewalk along the Hwy 118. ~~On~~ -Inside hedge is a 6' high block wall. Some parts have even higher shrubs.

Sources: Hwy. 118 - very busy roadway with lots of large trucks.

File #8 Leq: 74.2 dBA.

TSP Foundation Install - Noise Sources

Name	M.	ID	Result. PWL			Lw / Li		Operatir	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	Day					X	Y	Z
			(dBA)	(dBA)	(dBA)			(min)	(Hz)		(m)		(m)	(m)	(m)
Heavy Truck			118.7	118.7	118.7	Lw	heavytruck	240.00	1000	(none)	3.60	r	77.33	57.08	3.60
Boom Crane			119.7	119.7	119.7	Lw	crane	240.00	1000	(none)	3.60	r	74.68	52.53	3.60
Backhoe			114.7	114.7	114.7	Lw	backhoe	360.00	1000	(none)	3.60	r	74.55	50.06	3.60
Auger Truck			119.7	119.7	119.7	Lw	augertruck	360.00	1000	(none)	3.60	r	79.44	52.27	3.60
Water Truck			118.7	118.7	118.7	Lw	watertruck	480.00	1000	(none)	3.60	r	72.76	46.25	3.60
Dump Truck			118.7	118.7	118.7	Lw	dumptruck	240.00	1000	(none)	3.60	r	79.05	46.49	3.60
Concrete Truck			119.7	119.7	119.7	Lw	concretetruck	120.00	1000	(none)	3.60	r	71.31	51.74	3.60

Conductor Removal - Noise Sources

Name	M.	ID	Result. PWL			Lw / Li		Operatir	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	Day					X	Y	Z
			(dBA)	(dBA)	(dBA)			(min)	(Hz)		(m)		(m)	(m)	(m)
Heavy Truck			118.7	118.7	118.7	Lw	heavytruck	240.00	1000	(none)	3.60	r	77.33	57.08	3.60
Bucket Truck			118.7	118.7	118.7	Lw	heavytruck	480.00	1000	(none)	3.60	r	72.97	53.80	3.60
Boom Crane			119.7	119.7	119.7	Lw	crane	480.00	1000	(none)	3.60	r	77.18	53.16	3.60
Wheel Puller			116.7	116.7	116.7	Lw	puller	360.00	1000	(none)	3.60	r	77.21	50.26	3.60
Line Puller			116.7	116.7	116.7	Lw	puller	360.00	1000	(none)	3.60	r	75.41	50.01	3.60
Tensioner			116.7	116.7	116.7	Lw	puller	360.00	1000	(none)	3.60	r	73.62	50.21	3.60
Lowboy Truck			118.7	118.7	118.7	Lw	heavytruck	240.00	1000	(none)	3.60	r	79.79	50.30	3.60

Conductor Install - Noise Sources

Name	M.	ID	Result. PWL			Lw / Li		Operatir	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	Day					X	Y	Z
			(dBA)	(dBA)	(dBA)			(min)	(Hz)		(m)		(m)	(m)	(m)
Heavy Truck			118.7	118.7	118.7	Lw	heavytruck	240.00	1000	(none)	3.60	r	77.33	57.08	3.60
Bucket Truck			118.7	118.7	118.7	Lw	heavytruck	480.00	1000	(none)	3.60	r	72.97	53.80	3.60
Boom Crane			119.7	119.7	119.7	Lw	crane	480.00	1000	(none)	3.60	r	77.18	53.16	3.60
Dump Truck			118.7	118.7	118.7	Lw	dumptruck	120.00	1000	(none)	3.60	r	79.25	47.48	3.60
Wire Truck			118.7	118.7	118.7	Lw	heavytruck	360.00	1000	(none)	3.60	r	79.83	53.15	3.60
Line Puller			116.7	116.7	116.7	Lw	puller	360.00	1000	(none)	3.60	r	75.41	50.01	3.60
Wheel Puller			116.7	116.7	116.7	Lw	puller	360.00	1000	(none)	3.60	r	77.21	50.26	3.60
Tensioner			116.7	116.7	116.7	Lw	puller	360.00	1000	(none)	3.60	r	73.62	50.21	3.60
Backhoe			114.7	114.7	114.7	Lw	backhoe	120.00	1000	(none)	3.60	r	70.25	50.73	3.60
Lowboy Truck			118.7	118.7	118.7	Lw	heavytruck	240.00	1000	(none)	3.60	r	79.79	50.30	3.60

Wood Pole Removal - Noise Sources

Name	M.	ID	Result. PWL			Lw / Li		Operatir	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	Day					X	Y	Z
			(dBA)	(dBA)	(dBA)			(min)	(Hz)		(m)		(m)	(m)	(m)
Heavy Truck			118.7	118.7	118.7	Lw	heavytruck	480.00	1000	(none)	3.60	r	77.33	57.08	3.60
Compressor			114.7	114.7	114.7	Lw	compressor	240.00	1000	(none)	3.60	r	78.77	47.34	3.60
Bucket Truck			119.7	119.7	119.7	Lw	crane	360.00	1000	(none)	3.60	r	72.69	50.15	3.60
Boom Crane			119.7	119.7	119.7	Lw	crane	360.00	1000	(none)	3.60	r	75.93	51.07	3.60
Flat Bed Truck			118.7	118.7	118.7	Lw	heavytruck	480.00	1000	(none)	3.60	r	80.18	53.10	3.60

TSP Erection - Noise Sources

Name	M.	ID	Result. PWL			Lw / Li		Operatir	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	Day					X	Y	Z
			(dBA)	(dBA)	(dBA)			(min)	(Hz)		(m)		(m)	(m)	(m)
Heavy Truck			118.7	118.7	118.7	Lw	heavytruck	240.00	1000	(none)	3.60	r	77.33	57.08	3.60
Heavy Truck			118.7	118.7	118.7	Lw	heavytruck	240.00	1000	(none)	3.60	r	80.18	53.10	3.60
Compressor			114.7	114.7	114.7	Lw	compressor	240.00	1000	(none)	3.60	r	78.77	47.34	3.60
Boom Crane			119.7	119.7	119.7	Lw	crane	480.00	1000	(none)	3.60	r	74.68	52.53	3.60

TSP Assembly - Noise Sources

Name	M.	ID	Result. PWL			Lw / Li		Operatir	Freq.	Direct.	Height		Coordinates		
			Day	Evening	Night	Type	Value	Day					X	Y	Z
			(dBA)	(dBA)	(dBA)			(min)	(Hz)		(m)		(m)	(m)	(m)
Heavy Truck			118.7	118.7	118.7	Lw	heavytruck	240.00	1000	(none)	3.60	r	77.33	57.08	3.60
Heavy Truck			118.7	118.7	118.7	Lw	heavytruck	240.00	1000	(none)	3.60	r	80.18	53.10	3.60
Compressor			114.7	114.7	114.7	Lw	compressor	360.00	1000	(none)	3.60	r	78.77	47.34	3.60
Boom Crane			119.7	119.7	119.7	Lw	crane	480.00	1000	(none)	3.60	r	74.68	52.53	3.60

ARCADIS
Infrastructure, environment, buildings

Source	Equipment	Vibration Level (VdB) at 25 ft	Distance to Receptor (feet)	Vibration Damage Criteria (VdB)	Calculated Vibration Impact (VdB)	Impact
Pole and Conductor Removal/Replacement	Backhoe	87	50	80	77.969	No Impact