DOCKETED	
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Project Title:	Prairie Song Reliability Project
TN #:	268262
Document Title:	REV 2 DR LAND-1 Response
Description:	N/A
Filer:	Erin Phillips
Organization:	Dudek
Submitter Role:	Applicant Consultant
Submission Date:	1/19/2026 11:11:18 AM
Docketed Date:	1/20/2026

MEMORANDUM

To:	Lisa Worrall, California Energy Commission
From:	Prairie Song Reliability Project, LLC
Subject:	Response to REV 2 DR LAND-1
Date:	January 19, 2026
Attachment(s):	1 Proposed Aerial Easement Survey Exhibit
	2 Redline Section 1, Executive Summary
	3 Redline Section 2, Project Description
	4 Updated Figure 3.6-2, APN Map

On January 13, 2026, Prairie Song Reliability Project, LLC (Applicant) received a follow-up land use question from California Energy Commission (CEC) Staff for the Prairie Song Reliability Project (Project; Docket Number 25-OPT-02). The question is provided below followed by the Applicant response in blue text.

LAND USE

California Code of Regulations, title 20, Appendix B (g) (3) (C) requires the application to discuss the legal status of the parcel(s) on which the project is proposed. If the proposed site consists of more than one legal parcel, the application must describe the method and timetable for merging or otherwise combining those parcels so that the proposed project, excluding linear infrastructure and temporary laydown or staging area, will be located on a single legal parcel.

On August 1, 2025, staff submitted DR LAND-4 (TN 265211) to request documentation of site control for each of the parcels within the project site. On September 4, 2025, the applicant provided a table of the terms and conditions of each purchase or lease agreement, and copies of the agreements (TN 265874). This filing was superseded by the applicant's updated response to DR LAND-4 on October 23, 2025 (TN 266803). On December 1, 2025, staff submitted REV 1 DR LAND-1 (TN 267809) to request clarification as to whether an easement agreement would be required for APN 3056-017-904. On December 24, 2025, the applicant provided a revised table of site control information for each project parcel (TN 268043). The revised table removed APN 3056-017-904 from the list of project parcels but also added a new parcel number to the table (APN 3056-017-906). The applicant states that APN 3056-017-906 would require a 150-foot-wide aerial easement from the landowner for a period of 50 years. However, APN 3056-017-906 does not appear in the Project's APN Map (Figure 3.6-2) and does not show any project components across that parcel. Staff requests further clarification on whether APN 3056-017-906 is within the project site.

REV 2 DR LAND-1. Please confirm if APN 3056-017-906 is within the project site. If APN 3056-017-906 is within the project site, provide a revised parcel figure that illustrates the project components located within this parcel. If APN 3056-017-906 is not located within the project site, provide a revised table of the project parcels and relevant site control information for each parcel.

REV 2 DR LAND-1 RESPONSE: APN 3056-017-906 is within the project site, and APN 3056-17-904 is not within the project site. Like APN 3056-017-905, APN 3056-017-906 is included in the project because it may be covered by an aerial easement for the potential North Gen-Tie Route. There will be no project infrastructure on these parcels and no expected permanent or temporary impacts. The Gen-Tie lines are planned to be strung via helicopter, and no truck or construction traffic is expected on either parcel except via existing roads. Please see the attached survey showing the proposed aerial easement over APN 3056-17-905 and APN 3056-17-906 (see Attachment 1 herein). To correct this error, the Applicant submits updates to the following application sections, tables, and figures. APN 3056-17-904 has been replaced by APN 3056-17-906:

- Section 1, Executive Summary (see Attachment 2 herein)
  - Table 1.1, Project Parcels
  - Section 1.4 Project Ownership
  - Figure 1-3, Site Layout
- Section 2, Project Description (see Attachment 3 herein)
  - Section 2.1, Project Location
  - Figure 2-1, Project Site Plan
- Figure 3.6-2, APN Map (see Attachment 4 herein)

Attachment 1

Proposed Aerial Easement Survey Exhibit

EXHIBIT "B"

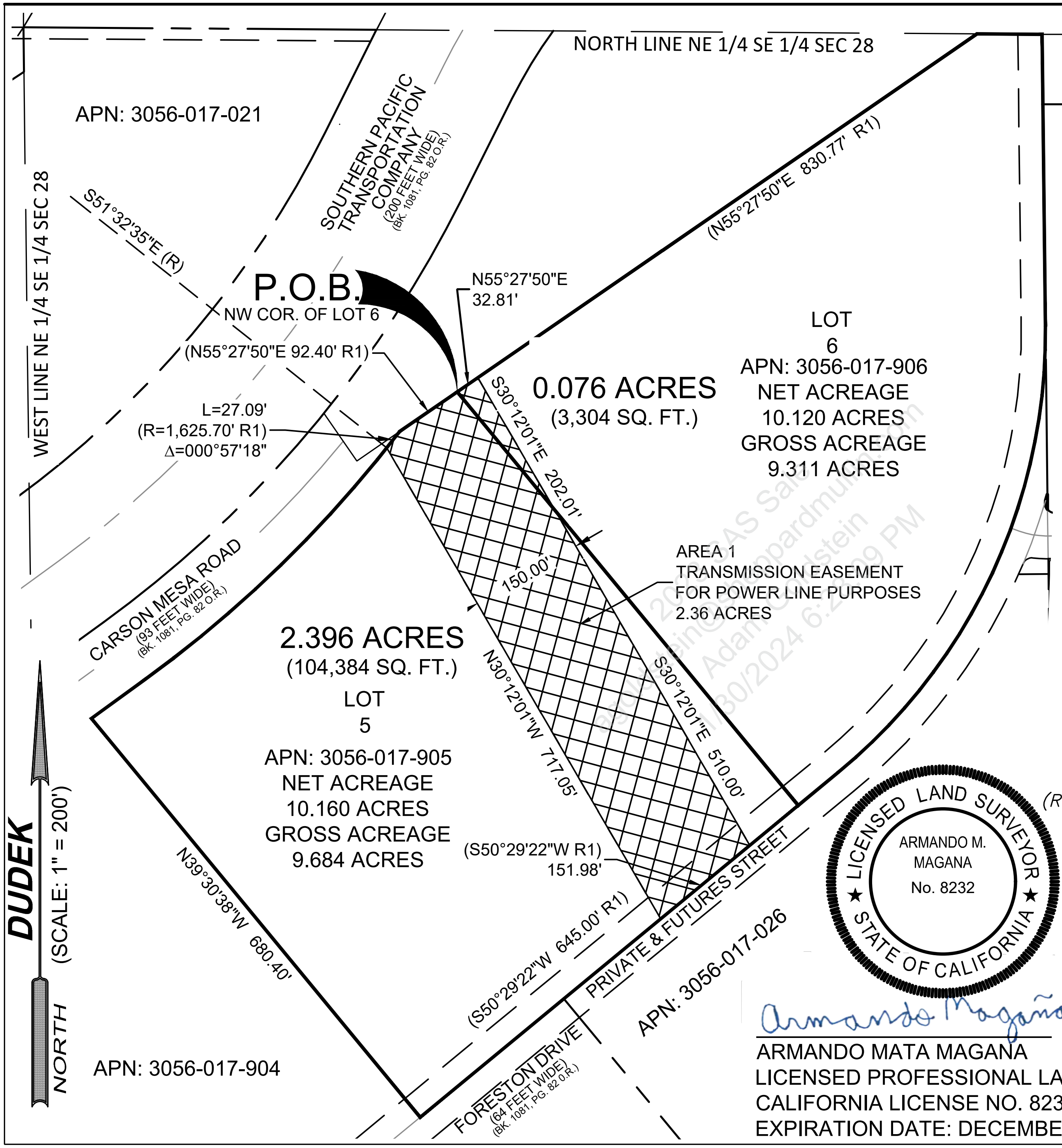
ANGELENO MRCA

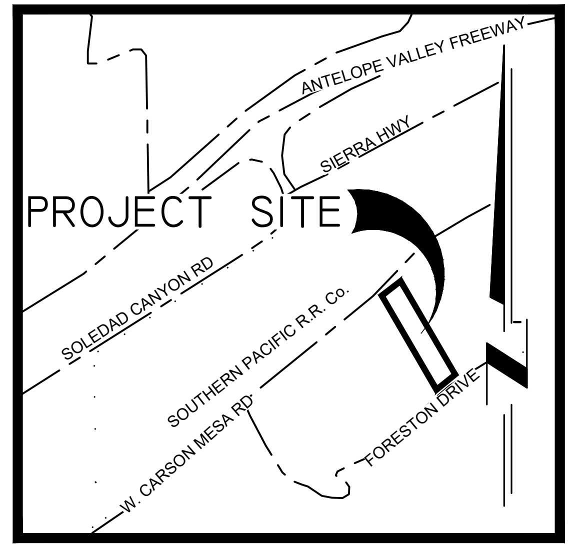
PROPOSED AREA 1

LOS ANGELES COUNTY, CALIFORNIA

TOWNSHIP 5N, RANGE 12W,

SECTION 28





VICINITY MAP

(NOT TO SCALE)

SURVEYOR NOTES:

(R1)	INDICATES RECORD DATA PER MAP No. 41990
(R)	RADIAL
P.O.B.	POINT OF BEGINNING
[hatched box]	TRANSMISSION EASEMENT AREA

Armando Magaña

ARMANDO MATA MAGANA
LICENSED PROFESSIONAL LAND SURVEYOR
CALIFORNIA LICENSE NO. 8232
EXPIRATION DATE: DECEMBER 31, 2023

DUDEK
605 THIRD STREET
ENCINITAS, CA 92024
PH.: 706-942-5147

Project Number: 15072.05
Plot Date: 09-26-2023

DUDEK

Attachment 2

Redline Section 1, Executive Summary

1 Executive Summary

Prairie Song Reliability Project LLC, a Delaware limited liability company (Applicant), a subsidiary of Coval Infrastructure DevCo LLC, a Delaware limited liability company, proposes to construct, operate, and eventually repower or decommission the up to 1,150-megawatt (MW) Prairie Song Reliability Project (Project) located on up to approximately 107 acres in unincorporated Los Angeles County. The primary components of the Project include a containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, a Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE) owned and operated Vincent Substation. The location and main elements of the Project are discussed in the following subsections. Figure 1-1, Regional Map, depicts the regional location and Project vicinity. Figure 1-2, Site Map, depicts the Project site.

The project will operate by transferring electrical energy from the existing power grid to the Project for storage and from the Project to the power grid when additional electricity is needed. The Project will provide additional capacity to the electrical grid to assist with serving load during periods of peak demand by charging when demand is low and discharging when demand is high. This operating principle increases the integration of additional intermittent renewable energy, such as wind and solar, in California's energy mix and reduces the need to operate natural gas power plants. The Project will also serve as an additional local/regional capacity resource that will enhance grid reliability, particularly to the Los Angeles (LA) Basin local reliability area and may allow for the deferral or avoidance of regional transmission facilities.

The Project will be remotely operated and monitored year-round as well as supported by on-site O&M staff 7 days a week. The Project will be available to receive or deliver energy 24 hours a day, 365 days a year. During the operational life of the Project, qualified technicians will inspect the Project facilities and conduct necessary maintenance to ensure reliable and safe operations.

The Project's principle Basic Objectives, detailed in Section 1 of this Application, include the construction and operation of an up to 1,150 MW BESS facility in Los Angeles County with an interconnection utilizing available system capacity at the existing SCE Vincent Substation to balance intermittent renewable generation and serve as an additional capacity resource that will enhance grid reliability. The facility will also provide new energy storage capacity to assist California electric utilities in meeting obligations under California's Renewable Portfolio Standard renewable energy sources and zero-carbon policy objectives; assist the State of California in meeting its goal of reducing statewide annual greenhouse gas emissions reduction goals; provide storage capacity to help balance electricity generation from intermittent renewable sources; provide energy storage to curtail dispatch of renewable resources and displace fossil fuel based generating stations; provide a storage facility in close proximity to a utility grid-connected substation with existing capacity to relieve grid congestion and enhance electricity reliability; provide economic benefits to the County, creating prevailing wage construction jobs, and facilitating local community benefits; and develop an energy storage project that is in close proximity to existing electrical infrastructure and the Vincent Substation, to avoid and minimize potential impacts from long 500kV gen-tie lines, among other purposes.

1.1 Project Location

A Project at the Vincent Substation creates a unique opportunity to help California achieve its greenhouse gas (GHG) reduction requirements and support LA Basin reliability requirements. The Vincent substation is located at a key point in the electrical grid, Service Path 26, which enables it to deliver energy from renewable resources outside of the LA Basin Resource Area to meet LA Basin Local Capacity Requirements (LCR), with tie lines into the Western and Eastern LA Basin. LCR refers to the minimum amount of local generation capacity needed within specific areas to meet reliability criteria, particularly in areas where transmission constraints limit the ability to import power and is a critical metric for understand energy needs which are necessary to meet future grid demand. The LA Basin LCR is increasing, primarily due to load growth. The 2024-2025 Transmission Plan shows that peak load in the SCE Main area is forecasted to grow from 25,265MW in 2026 to 27,929MW in 2034 (CAISO 2025a), representing a 9.5% increase over 8 years. The 2026 LCR Tech Study also shows that the local capacity needed in the LA Basin is expected to increase from 5,812MW in 2026 to 7,226MW in 2030, which is an approximate 20% increase in required capacity in 4 years. Compared with the 2025 LCR study, demand for the LA Basin is 429MW higher than last year's forecast and the forecasted LCR needs have increased by 1,689MW due to load forecast increase (CAISO 2025b). In addition, California Independent System Operator is projecting that there will be a total potential curtailment of 1,300GWh of wind and solar from the SCE North area in 2034 (CAISO 2025a). The Project is sited at a location that can help reduce wind and solar curtailment while also supporting the growing LCR needs in the LA Basin.

Land uses in the immediate vicinity of the Project include undeveloped and rural lands, multiple high-voltage transmission lines and an electrical substation, paved and rural roads, State Route 14, and railroad lines. The nearest incorporated municipality to the Project site is the City of Palmdale, which is approximately 4 miles to the northeast.

Table 1-1 provides the section, township, range, and assessor's parcel number (APN) for all parcels located within the Project site. A list of the owners and occupants of property within 1,000 feet of the Project facilities and 500 feet of the gen-tie line routes, as well as a map of the APNs within these areas and within the Project site are provided in Appendix 1A.

Table 1-1. Project Parcels

Project Component	Assessor Parcel Number	Section, Township, Range
BESS Facility Site	3056-017-007	Section 28, Township 5N, Range 12W
	3056-017-020	Section 28, Township 5N, Range 12W
	3056-017-021	Section 28, Township 5N, Range 12W
	3056-019-013	Section 28, Township 5N, Range 12W
	3056-019-026	Section 28, Township 5N, Range 12W
	3056-019-037	Section 28, Township 5N, Range 12W
	3056-019-040	Section 28, Township 5N, Range 12W
Northern Gen-Tie Route	3056-015-008	Section 27, Township 5N, Range 12W
	3056-015-023	Section 27, Township 5N, Range 12W
	3056-017-026	Section 28, Township 5N, Range 12W
	3056-017-906~~4~~	Section 28, Township 5N, Range 12W
	3056-017-905	Section 28, Township 5N, Range 12W
	3056-005-816	Section 27, Township 5N, Range 12W
	3056-005-817	Section 27, Township 5N, Range 12W
	3056-005-818	Section 27, Township 5N, Range 12W
	3056-015-801	Section 27, Township 5N, Range 12W
	3056-015-802	Section 27, Township 5N, Range 12W

Table 1-1. Project Parcels

Project Component	Assessor Parcel Number	Section, Township, Range
Southern Gen-Tie Route	3056-015-008	Section 27, Township 5N, Range 12W
	3056-015-023	Section 27, Township 5N, Range 12W
	3056-017-016	Section 28, Township 5N, Range 12W
	3056-017-022	Section 28, Township 5N, Range 12W
	3056-017-026	Section 28, Township 5N, Range 12W
	3056-017-027	Section 28, Township 5N, Range 12W
	3056-017-028	Section 28, Township 5N, Range 12W
	3056-027-007	Section 33, Township 5N, Range 12W
	3056-027-031	Section 33, Township 5N, Range 12W
	3056-005-816	Section 27, Township 5N, Range 12W
	3056-005-817	Section 27, Township 5N, Range 12W
	3056-005-818	Section 27, Township 5N, Range 12W
	3056-015-801	Section 27, Township 5N, Range 12W
	3056-015-802	Section 27, Township 5N, Range 12W

Note: BESS = battery energy storage system.

1.2 Project Elements

The Project will include construction, O&M, and eventual decommissioning of an approximately 1,150 MW BESS. A 500kV gen-tie connecting the Project substation to the POI within the existing SCE Vincent Substation will be used to charge from and discharge to the electrical grid. Figure 1-3, Site Layout, shows the Project site layout. Figure 1-4, Visual Appearance of the Site Prior to Construction, and Figure 1-5, Visual Appearance of the Site After Construction, includes a rendering of the site and all Project components after construction.

The Project will include the following components:

- Battery Energy Storage System (BESS) Enclosures: Lithium-iron phosphate cells, or similar technology, form the core of the battery energy storage system. The cells are the basic functional electrochemical unit containing an assembly of electrodes, electrolyte, separators, container, and terminals. Cells store electrical energy through direct conversion of chemical energy. The cells will be installed in battery modules on racks and enclosed in prefabricated, non-habitable enclosures. The BESS enclosures will also have a thermal management system for optimal performance and safety in accordance with UL 9540. Power for the HVAC system, lighting, and other electrical systems will be provided through separate auxiliary power connection to the on-site Project substation with connection lines installed above and/or below ground. The Sungrow Power Titan II has been selected for this project application as a representative BESS Enclosure. Sungrow Power Titan II design and operation information is used in this application to set maximum potential impact envelopes, for site design and modeling analysis, and to set baseline safety standards. A final manufacturer for the BESS Enclosures will be selected during the detailed design process post-certification.
- Power Conversion Systems (PCS): A PCS can be packaged and partially integrated in the BESS enclosure, or it can be an assembled system consisting of a bi-directional inverter, MV transformers, protection equipment, direct current (DC) and alternating current (AC) circuit breakers, harmonic filters, equipment

terminals, and a connection cabling system. A PCS functions to both convert between DC/AC and change the voltage level from the MV collection voltage to the working voltage output of the BESS enclosures.

- The PCS will convert electric energy from AC to DC when the energy is transferred from the grid to the battery, and from DC to AC when the energy is transferred from the battery to the grid. Each PCS will also include transformers that convert the AC side output of the inverter between low and medium AC voltage to increase the overall efficiency of the BESS. Inverters within the PCS units will be unattended systems designed to operate in all conditions. The inverters will be monitored and controlled remotely. The PCS units will have on-site disconnects for use in case of an emergency or a situation requiring unscheduled maintenance.
- Medium Voltage (MV) Collection System: The MV collection system will include multiple components that connect the PCS units to the Project substation including underground conductor circuits, switchboards, switchgear, and panels at 34.5kV voltage. The conductors for the MV collection system will be installed underground using trenching.
- Project Substation, Control Building, and Telecommunications Facilities: The Project substation will include up to six (6) main power transformers (MPTs). When the BESS facility is charging, power from the regional electric transmission grid will be stepped down from 500kV to 34.5kV and sent from the Project substation through the MV collection system and PCS units into the battery packs within the BESS enclosures. When the BESS facility is discharging, power from the battery packs within the BESS enclosures will be sent to the PCS units, stepped up to 34.5kV, and transported to the Project substation through the MV collection system before being stepped up to 500kV at the MPTs and delivered back to the regional electric transmission grid. A control building will be installed within the Project substation area and contain an energy management system and metering and telecommunication equipment for communication with SCE/California Independent System Operator facilities and to support remote Project operations and monitoring. The Project substation area will also include seven (7) static masts, up to 150 feet tall, for lightning protection.

O&M buildings will be constructed for the Project's anticipated 16 full-time operations staff. The O&M area will include parking, outside equipment and laydown areas, and two (2) permanent buildings with basic offices, meeting rooms, washroom facilities and climate-controlled storage for certain equipment and materials. An existing on-site water well and septic system will serve the O&M building. The O&M building will be powered with a distribution line from the Project substation.

- Access Roads: The BESS yard roadway system will include new facility access roads and driveways, a perimeter road, and internal access roads. All new BESS yard access roads, driveways, internal and perimeter roads will be bladed, compacted, and surfaced with asphalt. All internal roadways and private driveways will be constructed to meet access requirements for construction, O&M, and emergency response requirements.

  The Project substation roadway system will include new facility access roads and driveways. These roads will be bladed, compacted, and surfaced with stone. These roads will all be constructed to meet access requirements for construction, O&M, and emergency response requirements.
- Laydown Yards: The Project will include up to three (3) laydown yards for equipment and material staging and storage during construction. These areas will also be used for worker parking during construction. The primary laydown yard will be located at the north end of the BESS Site as shown in Figure 1-3. The primary laydown yard will be bladed, compacted, and surfaced with aggregate, while additional laydown yards will be cleared of vegetation and surfaced with aggregate or other soil stabilizing materials. Portions of

additional laydown yards may also be graded, if necessary. Landscape fabric may also be installed under the surface of all laydown yards to prevent vegetation growth, if required to comply with fire prevention standards.

- Stormwater Detention Facilities: Regulatory standards require that volumes and flow rates of stormwater discharge after construction are not to exceed pre-development conditions. Stormwater generated on site will flow to underground detention chambers. Stormwater treatment and storage sizing will be designed to hold the anticipated runoff from a 50-year, 24-hour storm event in compliance with applicable regulations. Stormwater will infiltrate into the subgrade underneath the stormwater chambers. If the design capacity of the stormwater chambers is exceeded, however, stormwater may be stored in available upstream areas such as catch basins, infiltration trenches, or drain as sheet flow from the surface.
- Site Security and Fencing, including fire detection system: The BESS Site will be enclosed with a minimum 8-foot-tall block wall topped with 1 foot of three-strand barbed wire or razor wire. The wall will be installed on the outside of the perimeter road. An additional internal wall will be installed around the Project substation area. The walls will be required to prevent unauthorized access and to comply with human health and safety regulations. A chain link fence will separate the BESS yard from the Project substation yard. Gates will be installed at various access points along the fence lines and equipped with locks and Knox boxes to allow for authorized personnel (e.g., transmission service provider, O&M staff, and emergency response) to access appropriate portions of the BESS Site.

Lighting will only be in areas where required for safety, security, or operations. Controlled security lighting up to 28 feet in height will be installed at the Project substation and around the BESS yards, in accordance with applicable laws, ordinances, regulations, and standards (LORS). Permanent motion-sensitive, directional security lights will be installed to provide adequate illumination around the substation area and points of ingress/egress. All non-task lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties. Security cameras will be placed on site and monitored 24/7.

Fire protection will include multiple fire detection systems on site and within the individual BESS enclosures. Each BESS enclosure will have a fire rating in conformance with the California Fire Code 2022. In addition, each BESS enclosure will contain an onboard battery management system that monitors the state of individual battery cells and relays information 24/7. In the event of an anomaly, the system is designed to shut down and mitigate the hazard. Each BESS enclosure will have internal Fire Alarm Control Panels. The Fire Alarm Control Panels will identify which units have incidents and will notify the Fire Department and First Responders.

The Project's fire protection design will comply with California Fire Code 2022, Section 1207 Electrical Energy Storage Systems, which adopts the National Fire Protection Association's Standard for the Installation of Stationary Energy Storage Systems (NFPA 855). BESS enclosures will be Underwriters Laboratories (UL) listed, tested, and certified to the most rigorous international safety standards. UL independently tests equipment for compliance with the latest fire safety code requirements, and the methods were developed to minimize fire risk and safety concerns about battery storage equipment raised by fire departments and building officials in the United States.

- 500kV Gen-Tie Line including Transmission Structures and Conductors: The Project will be interconnected to the regional electrical transmission grid via a new single-circuit 500kV gen-tie line within an up to 150-foot-wide corridor between the Project substation and the SCE Vincent Substation. The gen-tie line will consist of up to 11 tubular steel poles or steel lattice tower structures. The Applicant will construct and own the portion of the gen-tie line between the Project substation and the Point of Change of Ownership (POCO) transmission structure, and SCE will construct and own the remaining portion of the gen-tie from the POCO to the POI within the Vincent Substation.

As described above, two (2) potential gen-tie line routes are under consideration. Either route will be overhead and originate at the Project substation located within the BESS Site, and extend south and east, crossing the railroad tracks and West Carson Mesa Road, as close to perpendicular as possible, until reaching the SCE Vincent Substation. In total, the Northern Gen-Tie Route will be approximately 1.1 miles long. In total, the Southern Gen-Tie Route will be approximately 1.8 miles long. The gen-tie will 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), where feasible.

- Fiber Optic Telecommunications Lines: Telecommunications equipment will be installed between the control building at the Project substation and the Vincent Substation to facilitate communication with SCE/California Independent System Operator facilities. SCE interconnection policies for 500kV systems require three (3) redundant fiber optic cables to be installed on diverse paths without a single point of failure (i.e., all fiber optic lines cannot be installed on a single set of structures). Between the control building within the Project substation area and the Vincent Substation, the Applicant and SCE will install one (1) of the three (3) fiber optic lines aboveground on the gen-tie structures. The two (2) other fiber optic lines will be installed underground within the Southern Gen-Tie Route corridor and separated by at least 25 feet. The two (2) other fiber optic lines will be installed underground within the Southern Gen-Tie Route corridor regardless of which Gen-Tie Route corridor option is selected.
- Transmission Structure Access Path: A combination of existing access roads and new access roads will be used to access the transmission structures. The new access roads will mostly follow the centerline of the gen-tie. The new access roads were designed to utilize existing roads as much as possible to minimize the need for new disturbance.
- Interconnection Facilities within Existing SCE Vincent Substation Footprint (SCE constructed and owned): To facilitate interconnection of the BESS facility to the electric transmission grid, SCE will need to install one (1) 500kV dead end structure, nine (9) 500kV coupling capacitor voltage transformers, three (3) 500kV line drops, three (3) line current relays, and one (1) 500kv line position, which includes the following equipment: seven (7) 500kV circuit breakers, seven (7) 500kV disconnect switches, 84 insulators, and two (2) breaker failure backup relays.

1.3 Project Schedule

The Project is anticipated to be built over an approximately 20-month period from the onset of site preparation activities through energization. Following energization, testing and commissioning will take place over 6 months. Initial mobilization and site preparation is anticipated to begin no later than March 2027. Testing and commissioning is anticipated to conclude no later than April 2029. The commercial operation date is expected shortly following the completion of testing and commissioning in June 2029. It is anticipated that construction crews will work 8 hours to 10 hours per day, with work occurring Monday through Friday. Overtime, night work, and weekend work will be used only as necessary to meet the Project schedule or complete time-sensitive or safety critical work. All work schedules will comply with applicable LORS.

1.4 Project Ownership

Prairie Song Reliability Project LLC (Applicant), a subsidiary of Coval Infrastructure DevCo LLC, a Delaware limited liability company, and/or its affiliate(s) will be the owner and operator of the Project, including the BESS enclosures, power inverters and transformers, Project substation, and the gen-tie line to the POCO. SCE will be owner and operator of the gen-tie from the POCO to the interconnection at the SCE Vincent Substation.

The Applicant, or its affiliates, has site control of the BESS site including the Southern Gen-Tie Route. With respect to the Northern Gen-Tie Route, APNs 3056-017-906~~4~~ and 3056-017-905 will not be owned by the Applicant. Instead, the Applicant will enter into an easement with the underlying landowner for approximately 0.15 miles of the Northern Gen-Tie Route.

1.5 Structure of this Application

This application is organized as follows:

- **Chapter 1: Executive Summary**. This chapter provides a discussion of the Project components and background, describes the Project benefits, summarizes the anticipated schedule, and summarizes the contents of the application.
- **Chapter 2: Project Description**. This chapter provides a detailed description of the Project and its various components; identifies the Project's location; Project purpose and objectives; specifies the General Plan and zoning designations; and provides details regarding the Project's construction, operations, and decommissioning; and explains the intended uses of the application and authorizing actions.
- **Chapter 3: Environmental Analysis**. This chapter includes a description of the environmental setting, regulatory setting, cumulative setting, and impact analysis for each environmental factor (resource area). The resource areas addressed in Sections 3.1 through 3.17 include all resource areas identified in the most recently adopted version of the CEC Appendix B checklist and all additional relevant resource areas and impact questions that are defined in the significance thresholds in Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.). Each section addresses the baseline conditions, applicable regulations, impact questions, analysis methodology, environmental impacts, and mitigation measures to reduce or avoid significant effects. A determination is provided in each section to summarize the level of impact (i.e., No Impact, Less-Than-Significant Impact, Less-Than-Significant Impact with Mitigation Incorporated, and Potentially Significant Impact) to each resource area, according to CEQA and other applicable significance criteria. The following resource areas are included in Chapter 3:
  - *Section 3.1:* Air Quality
  - *Section 3.2:* Biological Resources
  - *Section 3.3:* Cultural Resources and Tribal Cultural Resources
  - *Section 3.4:* Geological Hazards and Resources
  - *Section 3.5:* Hazardous Materials Handling
  - *Section 3.6:* Land Use
  - *Section 3.7:* Noise
  - *Section 3.8:* Paleontological Resources
  - *Section 3.9:* Public Health

  - *Section 3.10:* Socioeconomics
  - *Section 3.11:* Soils
  - *Section 3.12:* Traffic and Transportation
  - *Section 3.13:* Visual Resources
  - *Section 3.14:* Waste Management
  - *Section 3.15:* Water Resources
  - *Section 3.16:* Wildfire
  - *Section 3.17:* Worker Health and Safety
- Chapter 4: Alternatives. This chapter identifies alternatives to the Project in accordance with CEQA Guidelines Section 15126.6, including a thorough description of the No Project Alternative and all alternatives considered and rejected.
- Chapter 5: Laws, Ordinances, Regulations, and Standards (LORS). This chapter contains a comprehensive list of LORS applicable to the Project. The LORS contained in this chapter are also reflected and discussed in each Chapter 3 subsection but are provided in this chapter for comprehensive visibility.
- Chapter 6: Permits and Approvals Table. This chapter contains a comprehensive list of permits and approvals necessary for the Project and their status. The permits and approvals contained in this chapter are also reflected and discussed in each Chapter 3 subsection but are provided in this chapter for comprehensive visibility.
- Chapter 7: Persons Who Prepared the Application. This chapter identifies all persons responsible for preparation of the application.
- Chapter 8: Environmental Analysis Summary. This chapter contains a comprehensive summary table of impact significance determinations. The determinations contained in this chapter are also reflected and discussed in each Chapter 3 subsection but are provided in this chapter for comprehensive visibility.

1.6 Mandatory Opt-In Requirements

This Application was prepared pursuant to the requirements of Public Resources Code sections 25520 and 25545.2, and the California Energy Commission's siting regulations relating to non-fossil-fueled powerplants, energy storage facilities, and related facilities (Cal. Code of Regs., tit. 20 Section 1875 et seq.) In accordance with Section 1876.5 of the CEC's regulations, the Applicant met with CEC Staff for a pre-filing consultation on May 21, 2025, more than 30 days prior to filing this opt-in application.

1.6.1 Authority and Verification

A letter signed and dated by the Applicant attesting under penalty of perjury to the truth and accuracy of this application (see Appendix 1D Attestation Letter). The Attestation meets the requirements of Cal. Code Regs., tit. 20 Section 1707 and 1876.

1.6.2 Facility Definition

Consistent with Section 1877(b) of the CEC's regulations, this section provides information stating how the Project meets the definition of "facility" set forth in Public Resources Code (PRC) section 25545(b)(2). Section 25545(b)(2) defines a "facility" as:

> An energy storage system as defined in Section 2835 of the Public Utilities Code that is capable of storing 200 megawatt-hours or more of electrical energy.
>
> Public Utilities Code section 2835 provides, in pertinent part, that an energy storage system is "commercially available technology that is capable of absorbing energy, storing it for a period of time, and thereafter dispatching the energy." An energy storage system must be "cost effective and either reduce emissions of greenhouse gases, reduce demand for peak electrical generation, defer or substitute for an investment in generation, transmission, or distribution assets, or improve the reliable operation of the electrical transmission or distribution grid." Public Utilities Code section 2835(a)(4) also provides that an energy storage system must do one or more of the following:
>
> - Use mechanical, chemical, or thermal processes to store energy that was generated at one time for use at a later time.
> - Store thermal energy for direct use for heating or cooling at a later time in a manner that avoids the need to use electricity at that later time.
> - Use mechanical, chemical, or thermal processes to store energy generated from renewable resources for use at a later time.
> - Use mechanical, chemical, or thermal processes to store energy generated from mechanical processes that would otherwise be wasted for delivery at a later time.

This application seeks certification of the Project as an energy storage system capable of storing 200 megawatt-hours or more of electrical energy, as defined in PRC section 25545(b)(2) and Public Utilities Code section 2835. As described throughout this Application and in greater detail in Section 2.0, Project Description, the Project will utilize commercially available technology to store up to 9,200 MWh of electricity for later dispatch to the grid. The Project may allow for the deferral or avoidance of regional transmission facilities, and will improve the reliable operation of the electrical transmission grid.

1.6.3 Project Labor Code Requirements

Consistent with Section 1877(c) of the CEC's regulations, this opt-in application contains all certifications required by PRC sections 25545.3.3 and 25545.3.5.

Sections 25545.3.3 and 25545.3.5 require this application to include a certification relating to specific commitments concerning labor used to construct the facility. The Applicant "certifies" that it will meet the requirements of a covered project and that a skilled and trained workforce will be used to perform all construction work on the project. The Applicant certifies the construction of the covered project is not in its entirety a public work for purposes of Chapter 1 (commencing with Section 1720) of Part 7 of Division 2 of the Labor Code. The Applicant further certifies that the Project will be constructed pursuant to a project labor agreement (PLA) and that the terms of the PLA will comply with Section 25545.3.3 (b) (6) and Section 25545.3.5 (e) and therefore will meet the requirements of all of the applicable provisions of Section 25545.3. These certifications are provided in Appendix 1C.

1.6.4 Permit Application Submission History

Consistent with Section 1877(d) of the CEC's regulations, this section identifies and discusses whether the Applicant has submitted any local, state, or federal permit applications, and the plan to obtain any required permit that has not yet been submitted to the relevant state agency. The Applicant has not submitted any local, state, or federal permit applications. Below is a list and brief description of federal, state, and local permits and approvals that may be required to implement the proposed project.

Federal

No federal permits will be required to implement the proposed project.

State

The following state applications may be required:

- California Public Utilities Commission (CPUC): Since the Project interconnection facilities (e.g., gen-tie line) are required to be owned in part by SCE, the CPUC would have jurisdiction over the approval of those portions of the Project, pursuant to General Order 131-D, and may rely on the this application and the CEC's analysis to fulfill its California Environmental Quality Act (CEQA) review obligations of any substation or interconnection facility improvements under its jurisdiction that are necessary to serve the Project. SCE will be responsible for this submittal and coordination with the CPUC after the CEC issues its Decision on the Application.
- Regional Water Quality Control Board (RWQCB) - Pursuant to provisions of the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code Section 13260[a]). The State Water Resources Control Board defines a water of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050[e]). All waters of the United States are waters of the state. Wetlands, such as isolated seasonal wetlands, that are not generally considered waters of the United States are considered waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2019). If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act. The Project is expected to require a WDR from RWQCB.

Local

No discretionary local permits will be required to implement the proposed project. As discussed in this opt-in application, a ministerial lot line adjustment and three (3) franchise agreements for the crossing of Soledad Canyon Road, Carson Mesa Road, and the Los Angeles County Transit Metro Authority rail line may be needed from the County of Los Angeles and Los Angeles County Transit Metro Authority.

1.6.5 Public Resources Code Sections 25526 and 25527

Consistent with Section 1877(e) of the CEC's regulations, this section of the opt-in application discusses whether the Project is located on an area identified in Public Resources Code section 25527, on a site designated by the California Coastal Commission under PRC section 30413(b), or on a site designated by the San Francisco Bay Conservation and Development Commission under Government Code section 66645(b). The Project is located on private parcels, and is use consistent with the Los Angeles County's General Plan and zoning ordinance designations for the site. The Project is not located on an area identified in PRC section 25527, or on a site designated by the California Coastal Commission under PRC section 30413(b), or on a site designated by the San Francisco Bay Conservation and Development Commission under Government Code section 66645(b).

See Section 3.6, Land Use, for additional information regarding the Project site characteristics and designations.

1.6.6 Net Positive Economic Benefit to the Local Government

Consistent with Section 1877(f) of the CEC's regulations, this opt-in application contains information demonstrating that the Project will provide an overall, net positive economic benefit to the local government that would have had permitting authority over the site and related facilities, but for the CEC's exclusive jurisdiction. A full analysis of project benefits that the Project will provide is provided in Sections 1.0, 2.0, and 3.10, and Appendix 1E Net Benefit Analysis. A brief summary of the Project's key environmental and economic benefits is provided below:

- The Project is expected to generate 543 total jobs, $60.8 million in total labor income, and $145.1 million in total output during a 2-year construction in Los Angeles. Of the 543 total jobs during construction, 303 represent direct full-time equivalent (FTE) positions with an average compensation of $141,000 over the 2-year construction period. These jobs will include laborers, operators, electricians, and other skilled workers. Direct economic output will total an estimated $90.8 million. The indirect and induced impacts from the construction phase are estimated to generate an additional 240 full-time and part-time jobs with an average compensation of $75,400. Indirect and induced output totals an estimated $54.2 million.
- Project operations will generate 49 total jobs, $5.7 million in total labor income, and $14.4 million in total economic output. Of the 49 jobs associated with Project operations, the Applicant anticipates 20 FTEs will be required to directly manage the Project's ongoing operations with an average compensation of $181,500. The indirect and induced impacts of Project operations are estimated to generate an additional 29 full-time and part-time jobs with an average compensation of $70,500. Indirect and induced output totals an estimated $5.5 million.
- The Project will rely on the regional labor force and thus will have no impact on housing development.
- The Project will help improve economic efficiency through grid resilience and energy security while helping the State meet its GHG reduction goals.
- The Applicant will pay the statutory school impact fees to the Acton-Agua Dulce Unified School District, which is a positive economic benefit. Further, in addition to the statutory fees, the Applicant intends to fund education in some capacity in the County and plans to begin discussions with representatives of local schools regarding this community benefit.
- Through an already well-developed collaboration with the Los Angeles County Fire Department, the Applicant expects to assist in the funding of emergency response plans and regular fire and safety training.

- The Project is estimated to generate positive tax revenues for the County, totaling about $154.9 million, inclusive of both construction and operational phases.
- Reduction of approximately 19.7 metric tons of carbon dioxide emissions over a 40-year period compared to natural gas.
- Ability to store electricity when surplus to then be used to power approximately 880,900 homes, assuming an average consumption rate of 1.24 kilowatt per home.
- Estimated sales tax benefits of approximately $97.9 million during construction. Estimated average sales tax benefits of approximately $1.2 million annually during operations.
- During the 40-year operating period of the Project, the annual average property tax is estimated to generate $6.2 million. Additional bond revenue could average $3.7 million based on 2024-2025 Tax Rate Area allocations for the Project site.

The project's overall net economic benefits are discussed in detail in Appendix 1E of this application.

1.6.7 Legally Binding Enforceable Agreement(s) for Community Benefits of the Project

Consistent with Section 1877(g) of the CEC's regulations, this opt-in applications include the applicant's plan or strategy, including a timeline for execution, to obtain legally binding and enforceable agreement(s) with, or that benefit, a coalition of one or more community-based organizations prior to project certification, consistent with Public Resources Code section 25545.10.

As part of the Project, the Applicant plans on making significant investments over the next 5 years to 10 years with community-based initiatives and programs in the Antelope Valley and Los Angeles County area. The Applicant has been meeting with multiple County-based community organizations and will be meeting with additional County-based organizations to better understand their immediate and long-term needs and how their missions directly support the residents of the surrounding communities. A brief description of several of the opportunities currently under consideration, and a timeline for the execution of one or more legally binding and enforceable community benefits agreements is provided in the preliminary Community Benefits Plan in Appendix 1B.

1.6.8 Environmental Leadership Development Project Requirements

The Project meets the requirements of PRC sections 21183 and 21183.6 for the following reasons:

- The Project qualifies as a leadership project because it will comply with PRC section 21183 (a) (1) as it will result in a minimum investment of one hundred million dollars ($100,000,000) in California upon completion of construction. See Section 3.10 of this Application for a description of the Project's capital investment.
- The Project will be constructed in accordance with a PLA that will comply with Section 21183 (b).
- The Project will comply with Section 21183 (c) and Section 21183.6 because it will not result in significant GHG emission impacts as demonstrated in Section 3.1 Air Quality, of this Application. A discussion of baseline conditions of GHGs is included in Section 3.1.1, Affected Environment, of the application, and a discussion of GHGs emitted by the Project is included in Section 3.1.4, Impact Analysis, of the application.

GHG emissions emitted by the Project are primarily a result of energy consumption associated with round trip efficiency and transmission losses when operating the BESS facility. As SCE, the energy provider for the Project, moves towards meeting the state's Renewable Portfolio Standard (RPS) goals of 100% renewable energy by 2045 as established in Senate Bill (SB) 100, GHG emissions from the Project would be reduced. Additionally, the Project would assist SCE and the state in meeting RPS goals by supporting the use of intermittent renewable energy sources, such as solar and wind. Therefore, the Project's emissions associated with electricity would become net-zero over time as SCE's electricity generation sources shift toward renewables, and the Project would assist the state and local utility in meeting its renewable energy goals outlined in SB 100.

- The Project will generate very little solid and no organic waste and therefore it will not be required to comply with the waste-related laws referenced in Section 21183 (d).
- By filing this Opt-In Application with the CEC, the Applicant agrees to be legally bound by the terms and conditions of the CEC License, thereby satisfying Section 21183 (e).
- The Applicant also agrees to pay the court and record preparation costs identified in Section 21183 (f) and (g).
- With respect to Section 21183(h), the Applicant acknowledges its understanding that, at the time the draft EIR is released, all then-available materials to be included in the record of proceedings must be publicly available and downloadable from an internet website maintained by the Commission. The Applicant further acknowledges its understanding that materials prepared or received after the release of the draft EIR must be promptly posted from the same website within the time limits prescribed by Public Resources Code Section 21186.

1.7 References

Avian Power Line Interaction Committee. 2006. *Suggested Practices for Avian Protection On Power Lines: The State of the Art in 2006*. Accessed June 18, 2025. https://www.nrc.gov/docs/ml1224/ml12243a391.pdf.

CAISO (California Independent System Operator). 2025a. *2024-2025 Transmission Plan*. May 30, 2025. Accessed June 2025. https://www.caiso.com/documents/iso-board-approved-2024-2025-transmission-plan.pdf.

CAISO. 2025b. "2026 Local Capacity Technical Study, Final Report and Study Results." April 30, 2025. Accessed June 2025. https://stakeholdercenter.caiso.com/InitiativeDocuments/Final-2026-Local-Capacity-Technical-Report.pdf.

SWRCB. 2019. State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2, 2019 and revised April 6, 2021. https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2021/procedures.pdf.

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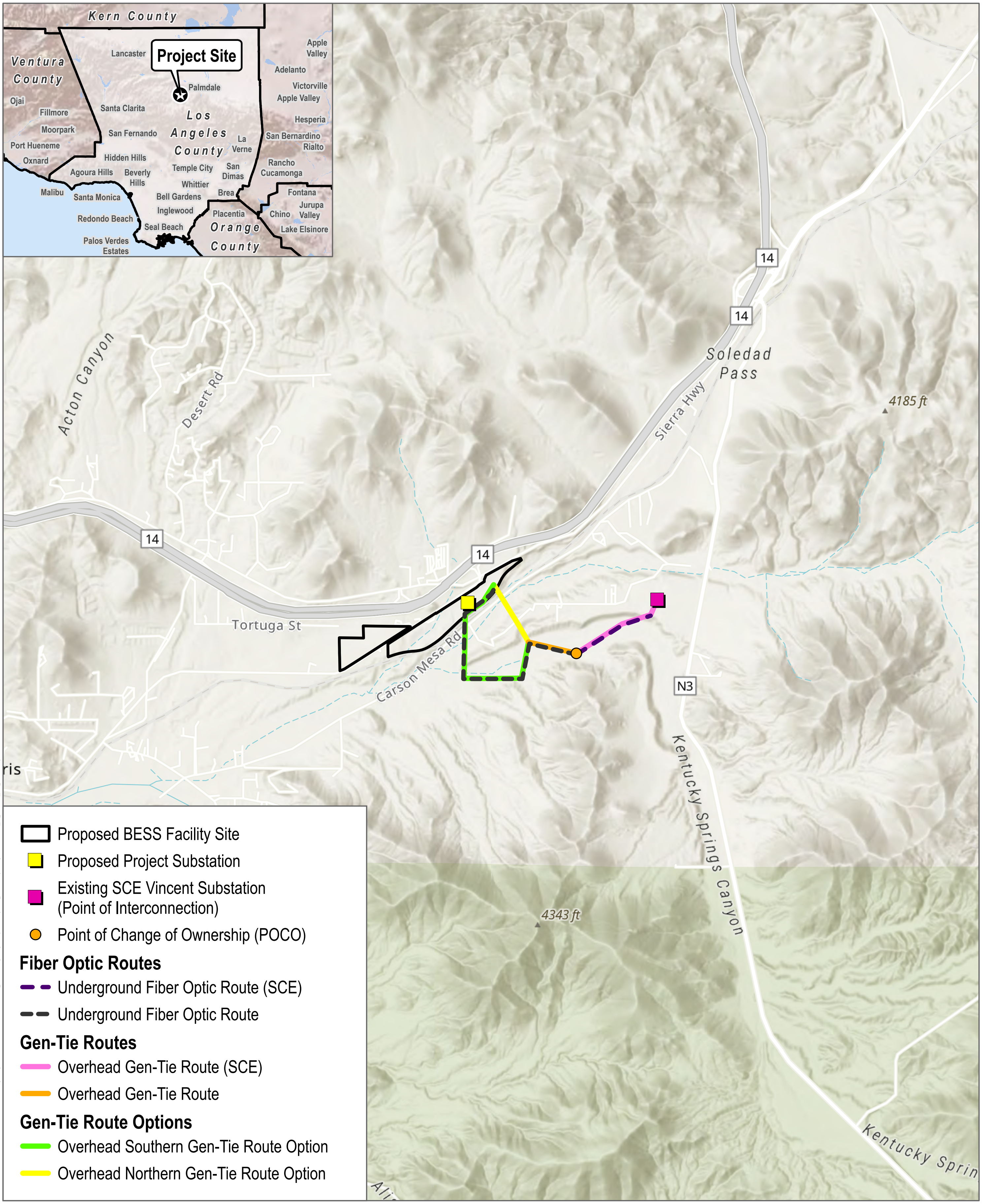

SOURCE: World Topographic

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FIGURE 1-1

Regional Map

Prairie Song Reliability Project

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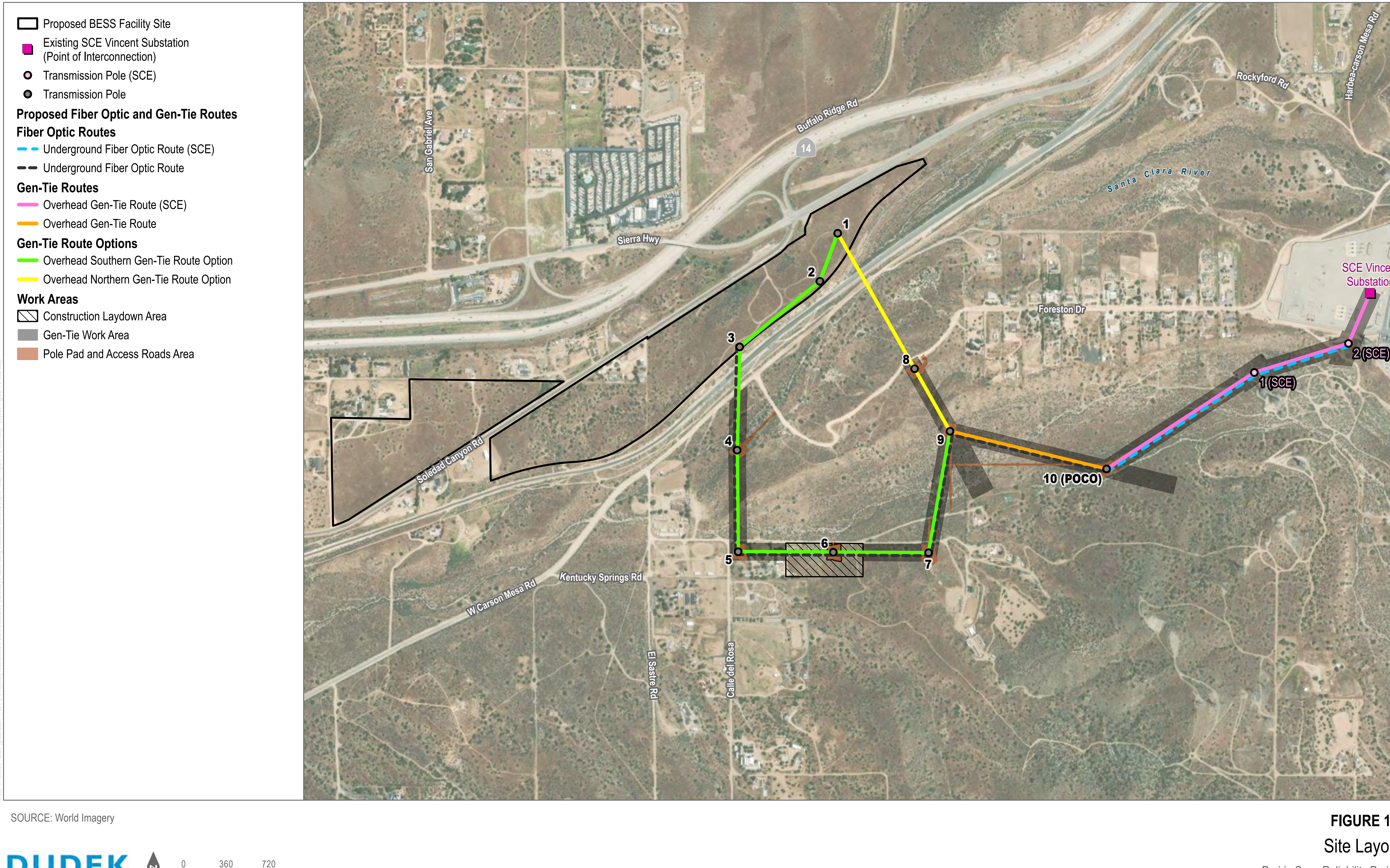

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FIGURE 1-3

Site Layout

Prairie Song Reliability Project

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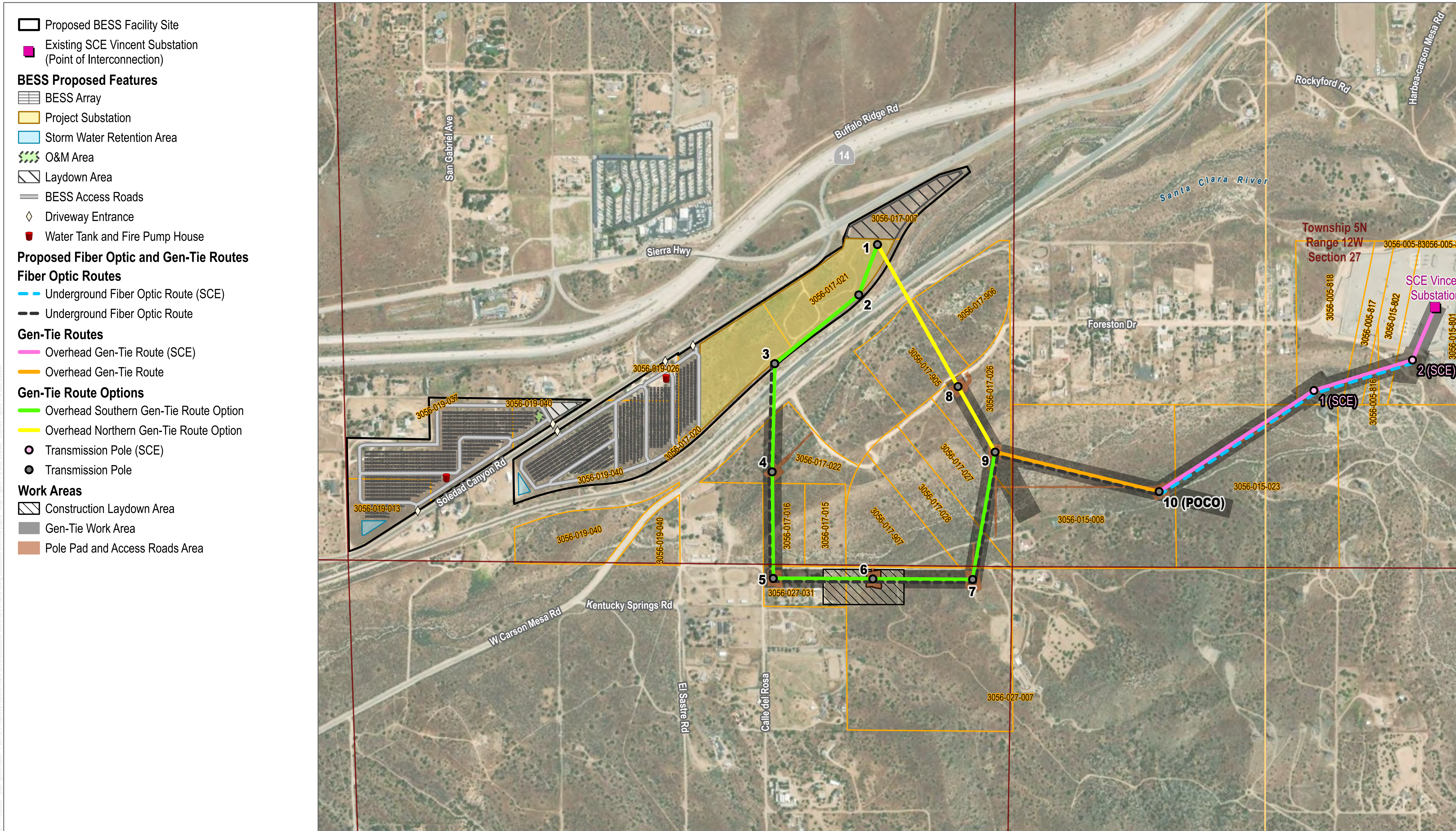

SOURCE: World Imagery

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0 360 720 Feet

FIGURE 1-3
Site Layout
Prairie Song Reliability Project

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FIGURE 1-4

Visual Appearance of the Site Prior to Construction

Angeleno Battery Energy Storage Project

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FIGURE 1-5a

Visual Appearance of the Site After Construction (Northern Gen-Tie Route Option)

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FIGURE 1-5b

Visual Appearance of the Site After Construction (Southern Gen-Tie Route Option)

Angeleno Battery Energy Storage Project

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Attachment 3

Redline Section 2, Project Description

2 Project Description

Prairie Song Reliability Project LLC, a Delaware limited liability company (Applicant), a subsidiary of Coval Infrastructure DevCo LLC, a Delaware limited liability company, proposes to construct, operate, and eventually repower or decommission the up to 1,150-megawatt (MW) Prairie Song Reliability Project (Project) located on up to approximately 107 acres in unincorporated Los Angeles County. The primary components of the Project include a containerized battery energy storage system (BESS) facility utilizing lithium-iron phosphate cells, or similar technology, operations and maintenance (O&M) buildings, an on-site Project substation, a 500-kilovolt (kV) overhead generation interconnection (gen-tie) transmission line, and interconnection facilities within the existing Southern California Edison (SCE)-owned and operated Vincent Substation.

Electrical energy will be transferred from the existing power grid to the Project for storage and from the Project to the power grid when additional electricity is needed. The Project will provide additional capacity to the electrical grid to assist with serving load during periods of peak demand by charging when demand is low and discharging when demand is high. This operating principle increases the integration of additional intermittent renewable energy, such as wind and solar, in California's energy mix and reduces the need to operate natural gas power plants. The Project will also serve as an additional local/regional capacity resource that will enhance grid reliability, particularly to the Los Angeles Basin local reliability area and may allow for the deferral or avoidance of regional transmission facilities.

The Project will be remotely operated and monitored year-round as well as supported by on-site O&M staff seven (7) days a week. The Project will be available to receive or deliver energy 24 hours a day and 365 days a year. During the operational life of the Project, qualified technicians will inspect the Project facilities and conduct necessary maintenance to ensure reliable and safe operational readiness.

2.1 Project Location

The Project will be located in unincorporated Los Angeles County (County), California south of State Route 14 approximately three (3) miles northeast of the center of the unincorporated community of Acton. The Project site is within the Los Angeles County-designated Community Standard District of Action. The Project is within the USGS 7.5-minute Acton and Pacifico Mountain Quadrangles, Township 5N, Range 12W, Sections 27, 28, 33 and 34. The BESS site is comprised of Assessor's Parcel Numbers (APNs) 3056-017-007, 3056-017-020, 3056-017-021, 3056-019-013, 3056-019-026, 3056-019-037, and 3056-019-040. Development of the BESS facility will occur on an area of land sandwiched between two (2) existing transportation corridors, the Antelope Valley Freeway (State Route 14) to the north and Los Angeles County Metropolitan Transportation Authority (LACMTA)-owned Southern Pacific Railroad lines and Carson Mesa Road to the south, that are approximately 1,200 feet apart.

The Project will utilize one (1) of two (2) potential gen-tie routes. Either route will extend south and east from the Project substation, crossing Southern Pacific Railroad tracks and West Carson Mesa Road, and then proceed northeast to the Point of Interconnection (POI) at the Vincent Substation. The Northern Gen-Tie Route is approximately 1.1 miles long, and will be sited on APNs 3056-015-008, 3056-015-023, 3056-017-026, 3056-017-9064, 3056-017-905, 3056-005-816, 3056-005-817, 3056-005-818, 3056-015-801, and 3056-015-802. The Southern Gen-Tie Route is approximately 1.8 miles long, and will be sited on APNs 3056-015-008, 3056-015-023, 3056-017-016, 3056-017-022, 3056-017-026, 3056-017-027, 3056-017-028, 3056-027-007, 3056-027-031, 3056-005-816, 3056-005-817, 3056-005-818, 3056-015-801, and 3056-015-802. The Project will also include three (3) fiber optic telecommunications lines: one (1) will be installed aboveground on the gen-tie structures (along whichever gen-tie route is ultimately selected), and the other two (2) will be installed underground within the Southern Gen-Tie Route corridor. The two (2) other fiber optic lines will be installed underground within the Southern Gen-Tie Route corridor regardless of which Gen-Tie Route corridor option is selected. The Project's interconnection facilities will be located within the SCE Vincent Substation. Land uses in the immediate vicinity of the Project include undeveloped and rural lands, multiple high-voltage transmission lines and an electrical substation, paved and rural roads, State Route 14, and railroad lines.

The nearest municipality to the Project site is the City of Palmdale, which is located approximately four (4) miles to the northeast. There are a few single-family residences adjacent to the BESS facility Site's northern and western boundaries as well as a few other single-family residences in the vicinity of the gen-tie line.

2.2 Project Objectives

The Project's principle Basic Objectives include the following:

- Construct and operate an up to 1,150MW BESS facility in Los Angeles County with an interconnection utilizing available system capacity at the existing SCE Vincent Substation to balance intermittent renewable generation and serve as an additional capacity resource that will enhance grid reliability.
- Provide new energy storage capacity to assist California electric utilities in meeting obligations under California's Renewable Portfolio Standard Program and Senate Bills 100 and 1020, which require renewable energy sources and zero-carbon resources to supply 60% of all retail sales of electricity to California end-use customers by December 31, 2030, 90% of all retail sales of electricity to California end-use customers by December 31, 2035, 95% of all retail sales of electricity to California end-use customers by December 31, 2040, and 100% of all retail sales of electricity to California end-use customers by December 31, 2045.
- Provide new energy storage capacity to assist the State of California in meeting its goal of reducing statewide annual greenhouse gas emissions from the electric sector to 25 million metric tons by 2035.
- Provide storage capacity to help balance electricity generation from renewable sources, such as wind and solar, with electricity demand by storing excess generation predominately from emissions free power sources and deliver it back to the grid when demand exceeds real-time generation supply.
- Offer energy storge to curtail dispatch and displace the need for additional fossil fuel based generating stations needed to serve peak demand periods when intermittent renewable sources may be inadequate or unavailable. The additional storage capacity may allow for the deferral or avoidance of regional transmission facilities.
- Provide energy storage of sufficient size, power, capacity, scale, and location to assist California utilities in meeting obligations under the California Public Utilities Commission's (CPUC's) Mid-Term Reliability Procurement and upcoming Reliability and Clean Power Procurement Program Requirements.
- Develop an electricity storage facility in close proximity to a utility grid-connected substation with existing capacity available for interconnection for charging and discharging and the ability to deliver capacity to the load to minimize environmental impacts.
- Secure a location to allow the stored energy to relieve grid congestion, and enhance electricity reliability, without requiring the construction of substantial new regional transmission infrastructure or network upgrades.

- Construct and operate a battery energy storage facility in Los Angeles County, resulting in economic benefits to the County, creating prevailing wage construction jobs, and facilitating local community benefits.
- Locate and gain site control of site large enough and well-suited to support development of the Project's 1,150MW and up to 9,200MWh battery energy storage.
- Develop an energy storage project that is in close proximity to existing electrical infrastructure and the Vincent Substation, to avoid and minimize potential impacts from long 500kV gen-tie lines.
- Locate a site to accommodate a gen-tie line of reasonable length to the POI and the ability to deliver power to the Los Angeles Basin local reliability area during peak demand.
- Locate near existing roadways and related infrastructure where available and feasible for construction and O&M access.

2.3 Project Components

The Project will include construction, O&M, and eventual decommissioning of an up to 1,150MW BESS. A 500kV gen-tie connecting the Project substation to the POI within the existing SCE Vincent Substation, will facilitate charging and discharging to the electrical grid.

2.3.1 General Facility Description, Design, and Operation

The BESS facility will include the following primary components (refer to Section 2.3.2, Transmission and Interconnection Description, Design, and Operation for a detailed description of the gen-tie line and interconnection components of the Project):

- Battery Energy Storage System (BESS) Enclosures
- Power Conversion Systems (PCS)
- Medium voltage (MV) Collection System
- Project Substation, Control Building, and Telecommunications Facilities
- Access Roads
- Laydown Yards
- Stormwater Detention Facilities
- Site Security and Fencing
- Fire Detection and Suppression System
- Operations and Maintenance Building
- Existing Distribution Line Reroute

Project components are described in the following subsections. Figure 2-1, Project Site Plan, shows the Project layout. The Project's site plan package is provided in Appendix 2A, and the Project's conceptual landscape plan is included as Appendix 2B. Table 2-1 summarizes the preliminary dimensions of major BESS facility components, and Table 2-2 summarizes the preliminary footprint/disturbance acreage associated with the BESS facility.

Table 2-1. Preliminary Dimensions of Major BESS Facility Components

Component	Quantity	Approximate Dimensions
BESS Enclosures	2,035*	20 ft × 8 ft × 9.5 ft (L × W × H)
PCS	517*	20 ft × 8 ft × 9.5 ft (L × W × H)
MV Collection system	—	Buried in trenches up to 10 ft × 10 ft (W × D)
Project Substation Area	1	2,545 ft × 440 ft (L × W); seven (7) 150 ft (H) (lightning masts)
Control Building	1	27 ft W × 95 ft L × 10 ft H (to ceiling)
Access Roads	—	26 ft (W) internal radii 55 ft minimum
Fire Water Tanks	2	33 ft in Diameter × 16 ft H
Laydown Yards	3	Variable
Stormwater Detention Facilities	2	Variable
Security Wall	—	Minimum 8 ft H block wall topped with 1 ft of barbed/razor wire
Operations and Maintenance Building	2	20 ft × 60 ft × 15 ft (L × W × H)

Notes: BESS = battery energy storage system; PCS = power conversion system; MV = medium voltage.
* The number of BESS enclosures and PCS units will depend on the manufacturer selected. The total number of BESS enclosures and PCS units may increase or decrease in the final design. It is also possible that the BESS units ultimately procured may incorporate the PCS units within the BESS enclosures.

Table 2-2. Preliminary Footprint of BESS Facility

Component	Permanent Disturbance
BESS Yards	30.0 acres
Project Substation	23.1 acres
Access Roads	7.9 acres
Laydown Yards	1.0 acres
Stormwater Detention Facilities	4.1 acres
*Other**	*4.7 acres*
Total⁺	**70.8 acres**

Notes: BESS = battery energy storage system.
* Other areas include maximum grading limits. The analyses assume that all areas used for the BESS facility are permanently disturbed.
⁺ The total permanent disturbance acreage is a conservative estimate, and final designs may require fewer acres. Underground components within the BESS facility will be located within the footprint of above ground disturbance areas.

2.3.1.1 Battery Energy Storage System

The energy storage facility will utilize a modular and containerized BESS. There are several battery cell technologies commercially available, with one of the most common presently being lithium iron phosphate (LFP) cells, or similar. LFP technology is considered one of the safest, most efficient, and commercially financeable energy storage technologies available on the market. The initial Project concept has been developed assuming an LFP technology. By the time the Project reaches the procurement stage, it is possible for other battery cell technology with proven safety and performance records to be suitable for the Project. Although the number and dimensions of the containers may change (as it does between LFP technology providers), the technology ultimately procured will result in potential environmental impacts substantially similar to, or less than, those analyzed based on this Project Description. The Sungrow Power Titan II has been selected for this project application as a representative BESS enclosure. Sungrow Power Titan II design and operation information is used in this application to set maximum potential impact envelopes, for site design and modeling analysis, and to set baseline safety standards. A final manufacturer for the BESS enclosures will be selected during the detailed design process post-certification. The Project will provide defensible space by setting back all BESS enclosures at least 100 feet from the property boundary.

The BESS enclosures will be prefabricated off site and arrive at the site ready to be installed and commissioned. Each modular BESS enclosure will include battery packs on racks, a battery management system, fire detection systems, thermal management systems (either liquid or air cooled depending final selected technology), and ancillary power electronics within a specialized steel-framed, non-occupiable container. The BESS enclosures will not exceed 15 feet in height.

Over the life of the project the storage capacity of the battery cells will naturally degrade. The project will implement an augmentation strategy to maintain the contractually required capacity of the system. Augmentation will entail either a capacity maintenance approach of adding/replacing individual battery modules in the existing BESS yard or designing the BESS system to incorporate space for additional BESS enclosures for later augmentation. The Project design and analysis front loads the work for the Project augmentation and assumes that it will install the end-of-life capacity at the start of construction. This assumption is made to capture augmentation impacts during construction instead of trying to assume the augmentation schedule for the Project. Equipment type/specifications, capacity agreements, and tax incentives can all change how and when augmentation is completed. Front loading augmentation to occur during construction creates a conservative case for the analysis of potential impacts that could arise from augmentation and sets a maximum impact envelope for the Project. During Project operations, the Project analysis assumes that one (1) crane and one (1) forklift will operate in support of augmentation once every 3 to 5 years for 8 hours per day.

2.3.1.2 Power Conversion System

A PCS is a packaged and integrated, or assembled, system consisting of a bi-directional inverter, MV transformers, protection equipment, direct current (DC) and alternating current (AC) circuit breakers, harmonic filters, equipment terminals, and a connection cabling system. A PCS functions to both convert between DC/AC and change the voltage level from the MV collection voltage to the working voltage of the BESS enclosures.

The PCS will convert electric energy from AC to DC when the energy is transferred from the grid to the battery, and from DC to AC when the energy is transferred from the battery to the grid. Each PCS will also include transformers that convert the AC side output of the inverter between low and medium AC voltage to increase the overall efficiency of the BESS. Inverters within the PCS units will be unattended systems designed to operate in all conditions. The inverters will be monitored and controlled remotely, and there will be on-site disconnects for use in case of an emergency or a situation requiring unscheduled maintenance.

PCS units will be installed on concrete foundations or steel piles and connected to multiple BESS enclosures with wiring and cables installed underground. All outside electrical equipment will be housed in the appropriate National Electrical Manufacturers Association-rated enclosures.

2.3.1.3 MV Collection System

The MV collection system will include multiple components that connect the PCS units to the Project substation including underground conductor circuits, switchboards, switchgear, and panels at 34.5kV. The conductors for the MV collection system will be installed underground during construction using trenching.

To connect the portion of the BESS yard north of Soledad Canyon Road to the Project substation, which is located south of Soledad Canyon Road, a portion of the MV collection system will need to be located underground within Soledad Canyon Road. A 180-foot-wide underground corridor will house the MV collection system as it traverses the road. The MV collection lines under Soledad Canyon Road will be installed using horizontal directional drilling, will be inside six (6) in conduit, covered by a minimum of 42 inches, and spaced 10 feet apart.

2.3.1.4 Project Substation

The Project substation will include six (6) main power transformers (MPTs). When the BESS facility is charging, power from the regional electric transmission grid will be stepped down from 500kV to 34.5kV and sent from the Project substation through the MV collection system and PCS units into the battery packs within the BESS enclosures. When the BESS facility is discharging, power from the battery packs within the BESS enclosures will be sent to the PCS units, stepped up to 34.5kV, and transported to the Project substation through the MV collection system before being stepped up to 500kV at the MPTs and delivered back to the regional electric transmission grid. A control building will be installed within the Project substation area and contain an energy management system, metering, and telecommunication equipment for communication with SCE/California Independent System Operator (CAISO) facilities and to support remote Project operations monitoring. The Project substation area will also include seven (7) static masts, up to 150 feet tall, for lightning protection.

2.3.1.5 BESS Facility Access Roads

The Project's roadway system will utilize existing roads wherever available and feasible and include new facility access roads and driveways, a perimeter road, and internal access roads. All new access roads, driveways, internal and perimeter roads will be bladed, compacted, and surfaced with asphalt. All internal roadways and private driveways will be constructed to meet access requirements for construction, O&M, and emergency response.

2.3.1.6 Laydown Yards

The Project will include up to three (3) laydown yards for equipment and material staging and storage during construction. These areas will also be used for worker parking during construction. The primary laydown yard will be located in the northernmost portion of the BESS site. The primary laydown yard will be bladed, compacted, and surfaced with aggregate, while an additional laydown yard to facilitate construction of the gen-tie line will be cleared of vegetation and surfaced with aggregate or other soil stabilizing materials. Landscape fabric may also be installed under the surface of all laydown yards to prevent vegetation growth, if required to comply with fire prevention standards. The O&M building and required number of parking spaces for O&M staff will be constructed within the primary laydown following construction of the BESS facility components.

The proposed Project's preliminary layout, earthwork volumes, and Project component dimensions assumed for environmental analyses in subsequent chapters are conservatively large to allow for design flexibility within the project footprint and Project schedule preservation.

2.3.1.7 Stormwater Detention Facilities

Regulatory standards require that volumes and flow rates of stormwater discharge after construction are not to exceed pre-development conditions. Stormwater generated on-site will flow to underground stormwater detention chambers located in the southwestern portions BESS facility site (Figure 2-1, Project Site Plan). Stormwater treatment and storage sizing will be designed to hold the anticipated runoff from a 100-year, 24-hour storm event in compliance with applicable regulations. After a rainfall event, stormwater will infiltrate into the subgrade underneath the stormwater chambers. If the design capacity of the stormwater chambers is exceeded, however, stormwater may be stored in available upstream areas such as catch basins, infiltration trenches, or drain as sheet flow from the surface.

2.3.1.8 Site Security

The BESS facility site will be enclosed with a minimum 8-foot-tall block wall topped with 1 foot of three-strand barbed wire or razor wire. The wall will be installed on the outside of the perimeter roads. The wall will be required to prevent unauthorized access and to comply with human health and safety regulations. Gates will be installed at various access points along the wall and equipped with locks and knox boxes to allow for authorized personnel (e.g., transmission service provider, O&M staff, emergency response) to access appropriate portions of the BESS facility site. The wall will serve a dual purpose for security and off-site noise reduction (see Section 3.7, Noise).

Lighting will only be in areas where it is required for safety, security, or operations. Controlled security lighting no more than 28 feet tall will be installed at the Project substation and around the BESS yards, in accordance with applicable requirements and regulations. Permanent motion-sensitive, directional security lights will be installed to provide adequate illumination around the substation area and points of ingress/egress. All lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties, compliant with applicable codes and regulations. Security cameras will be placed on site and monitored 24/7.

2.3.1.9 Fire Detection and Suppression System

Fire protection will include multiple fire detection systems on-site and within the individual BESS enclosures. Each BESS enclosure will have a fire rating in conformance with the California Fire Code 2022. In addition, each BESS enclosure will contain an onboard battery management system that monitors the appropriate state of individual battery cells and relays information 24/7 and an internal Fire Alarm Control Panel that will identify which units have incidents and will notify first responders. In the event of an anomaly, the system is designed to shut down and mitigate the hazard.

The Project's fire protection design will comply with California Fire Code 2022, Section 1207 Electrical Energy Storage Systems, which adopts the National Fire Protection Association's Standard for the Installation of Stationary Energy Storage Systems (NFPA 855). BESS enclosures will be Underwriters Laboratories (UL) listed, tested, and certified to the most rigorous international safety standards. UL independently tests equipment for compliance with the latest fire safety code requirements, and the methods were developed to minimize fire risk and safety concerns about battery storage equipment raised by fire departments and building officials in the United States.

Faults, mechanical damage, or manufacturing defects in lithium-ion batteries can cause thermal runaway, which can lead to fires or other hazards. Should a thermal runaway event occur, the BESS enclosures are designed and constructed in such a way that fire will not propagate from one enclosure to a neighboring enclosure. The Project's

BESS enclosures, as part of the testing and listing process, will be subjected to destructive testing including fire testing. The Project's BESS enclosures will include the following UL certifications:

- UL 1642 – Standard for Lithium Batteries (cell level certification).
- UL 1973 – Standard for Batteries for Use in Stationary Applications (module level certification).
- UL 9540 – Standard for Energy Storage Systems and Equipment (system level certification).
- UL 9540A – Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems.
- IEC 62619 – Standard for Battery Safety in Stationary Applications.

The BESS facility ingress/egress and circulation will be designed to comply with LA County's Draft fire regulations. Each portion of the BESS facility (the BESS yards north and south of Soledad Canyon Road.) will have primary and secondary access points. The BESS yard north of Soledad Canyon Road. will have a primary access point in the southwest corner of the site and a secondary access point in the northwest corner of the site, near the O&M buildings and laydown yard. The BESS yard south of Soledad Canyon Road. will have a secondary access point directly across from the secondary access point for the northern BESS yard and a primary access point that is approximately 1,030 feet east of the secondary access point. There will also be an access point for the Project Substation that is approximately 340 feet east of the BESS yard primary access point, in the approximate middle of the Project area that is south of Soledad Canyon Road. All access points will have Knox boxes and will connect to roads that are 26 feet wide (see Appendix 2A Fire Safety and Water Circulation Plan PSR-BE-201).

Water for fire defense will be provided via an on-site well that will serve two (2) 40,000-gallon water tanks. There will be a separate water tank and booster pump in each of the BESS yards. The water tanks will serve hydrants located throughout the BESS yards. Hydrants were specifically located to be no more than 300 feet apart throughout the BESS yards. The project commissioned a fire water supply assessment that concluded that the maximum amount of water necessary to fight a fire on the site would be 15,000 gallons (see Appendix 3.17A). The project will provide 40,000 gallons of water at each BESS yard.

The fire water line system has been highlighted in PSR-BE-201. PSR-BE-201 shows the existing well in the south BESS yard and the water line connection to the water tank in that same yard (approximately 245 feet to the northeast of the existing well). The water tank and associated pumphouse serve as the distribution point for the fire water line. Three (3) lines leave the pumphouse. Two (2) fire water lines support the hydrant system in the south BESS yard. The loops follow the road and surround each of the BESS blocks. The third fire water line runs southwest along the northern road in the south BESS yard until it comes to the first responder secondary entrance. The fire water line then heads north and crosses Soledad Canyon Road along the northeastern side of the two (2) opposing first responder secondary entrances. Once in the north BESS yard, the fire water line heads back southwest along the southern road in the north BESS yard for approximately 1,030 feet. The fire water line then heads north and connects to the pump house and water tank in the north BESS yard. There are two (2) fire water lines that exit the pump house in the north BESS yard that serve the hydrants that are spaced along access roads and surround the BESS blocks.

The Los Angeles County Fire Department will review and comment on the facility fire protection and suppression plans.

2.3.1.10 Operations and Maintenance Building

O&M buildings will be constructed for the Project's anticipated 16 full-time operations staff and is planned to be in the easternmost portion of the BESS yard north of Soledad Canyon Road. The O&M buildings will include parking, outside equipment and laydown areas, basic offices, meeting rooms, washroom facilities and climate-controlled storage for certain equipment and materials. An existing groundwater well will provide water for washroom and a septic system will provide for sanitary facilities. The existing groundwater well is located south of Soledad Canyon Road on APN 3056-019-026. To serve the O&M buildings and fire water needs, which are located north of Soledad Canyon Road, an underground water line will be constructed from the existing groundwater well to the O&M buildings as shown in Figure 2-1, Project Site Plan. A portion of the water line will be located within Soledad Canyon Road as shown in Figure 2-1, Project Site Plan. The water line will run under Soledad Canyon Road along the northeast edge of the opposing first responder secondary access points between the north and south BESS yards. The water line will be covered by a minimum of 24 inches of material. The water line will be installed via horizontal directional drilling.

2.3.1.11 Existing Distribution Line Reroute

There is currently an SCE overhead electrical distribution line that bisects the southern portion of the BESS facility site. The distribution line consists of wooden poles with a cross bar carrying the distribution lines. The Project plans to reroute this line around the BESS facility site using similar distribution poles and wires. The Project will alter the existing distribution line route from where it enters the property on the south side of the BESS facility site. The Project will install approximately nine (9) poles similar to the existing poles, outside of the BESS facility site wall, along the southern and western boundary of the BESS facility site south of Soledad Canyon Road until they connect with Soledad Canyon Road. At Soledad Canyon Road, the new distribution line will tie into the existing distribution line at the western boundary of the southern BESS facility site (See Appendix 2A Distribution Line Reroute PSR-SE-103).

2.3.2 Transmission and Interconnection Description, Design, and Operation

The Project will be interconnected to the regional electrical transmission grid via an approximately 1.1-mile-long or 1.8-mile-long new single-circuit 500kV gen-tie line within an up-to 150-foot-wide corridor between the Project substation and the SCE Vincent Substation. The Applicant will construct and own the portion of the gen-tie line between the Project substation and the Point of Change of Ownership (POCO) transmission structure (see Figure 2-1, Project Site Plan, site layout Pole 10), and SCE will construct and own the remaining portion of the gen-tie from the POCO to the POI within the Vincent Substation. The Project's transmission and interconnection facilities will include the following components:

- 500kV Gen-Tie Line including Transmission Structures and Conductors
- Fiber Optic Telecommunications Utility Poles and Fiber Optic Lines
- Access Paths
- Temporary Work Areas
- Interconnection Facilities within Existing SCE Vincent Substation Footprint (SCE constructed and owned)

The proposed route was selected to minimize the number of existing utility crossings, cross existing utilities at the optimum locations, minimize the total gen-tie line length and number of transmission structures required, minimize the number of turning structures required, and enter the Vincent Substation as close as possible to the POI. The proposed transmission structures were sited to avoid potential impacts to environmental resources. Project components associated with transmission and interconnection facilities are described in the following subsections. Figure 2-2, Transmission Line Route, shows the gen-tie routes, scattered rural residences, scenic areas (scenic drives and the Los Angeles National Forest), and existing transmission lines within 1 mile of the proposed routes. There are no parks or recreational areas within 1 mile of the proposed routes. Table 2-3 summarizes the preliminary dimensions of major transmission components, and Table 2-4 summarizes the preliminary new ground disturbance area associated with construction of the transmission and interconnection facilities (Southern Gen-Tie scenario). Section 3.13, Visual Resources, includes photographic simulations of a representative above ground section of the gen-tie route prior to construction and after construction.

Table 2-3. Preliminary Dimensions of Major Transmission Components

Component	Quantity	Approximate Dimensions
500kV Gen-Tie Line	1	Applicant Owned: North: 3,500 ft long / South: 7,300 ft long
		SCE Owned: 2,800 ft long
Substation Bay Dead-End Transmission Structure	1	Applicant Owned: 170 ft tall
		SCE Owned: n/a
Angled Dead-End Transmission Structure	up to 7	Applicant Owned: 175 ft tall to 195 ft tall
		SCE Owned: n/a
Tangent Delta Transmission Structure	1	Applicant Owned: 155 ft tall (Northern Gen-Tie Route) to 180 ft tall (Southern Gen-Tie Route)
		SCE Owned: n/a
Lattice Tower Transmission Structure	2	Applicant Owned: n/a
		SCE Owned: 234 ft tall to 243 ft tall
Conductors	1	Applicant Owned: North: 30,800 ft / South: 63,000 ft
		SCE Owned: 16,000 ft
Overhead Shield Wire	1	Applicant Owned: North: 3,600 ft / South: 7,300 ft
		SCE Owned: 2,900 ft
Fiber Optic Cables on Gen-Tie Structures	1	Applicant Owned: North: 3,600 ft / South: 7,300 ft
		SCE Owned: 2,900 ft
Fiber Optic Cables Underground	2	Applicant Owned: 12,000 ft
		SCE Owned: 5,700 ft
Transmission Structure Access Path	Varies	26 ft wide
Transmission Line Corridor	1	150 ft wide

Notes: kV = kilovolt; SCE = Southern California Edison; gen-tie = generation interconnection.

Table 2-4. Approximate New Ground Disturbance Area Associated with Transmission and Interconnection Facilities

Component	Permanent Disturbance	Temporary Disturbance
Applicant Portion		
Transmission Structure Pads	2.48 acres	—
Transmission Structure Access Path	1.14 acres	—
Laydown Area	—	4.23 acres
Tension and Pulling Sites (i.e., Gen-Tie Work Area)	—	19.4 acres
Applicant Total	**3.62 acres**	**~23.63 acres**
SCE Portion		
Transmission Structure Pad	0.3 acres	—
Transmission Structure Access Path	0.5 acres	—
Tension and Pulling Sites (i.e., Gen-Tie Work Area)	—	8.99 acres
SCE Total	**0.8 acres**	**8.99 acres**

Note: gen-tie = generation interconnection; SCE = Southern California Edison.

2.3.2.1 500kV Gen-Tie Line

The 500kV gen-tie line will originate at the Project substation within the BESS facility site and extend south and east, crossing Southern Pacific Railroad tracks and West Carson Mesa Road, as close to perpendicular as possible, and then proceed northeast to the POI at the Vincent Substation. The Project proposes a Northern Gen-Tie Route and Southern Gen-Tie Route. The Applicant understands a crossing agreement with LACMTA will be required prior to construction. LACMTA requires a crossing agreement application to include a 90% design package. This will be provided as the Project design progresses. The Project expects to submit the application in 2026.

The interconnecting 500kV transmission single-circuit configuration will be overhead. The gen-tie line will be constructed with either monopole tubular steel poles or steel lattice towers. Gen-tie structures will be at least 155 feet tall, with a maximum height of 243 feet. There will be a total of approximately 1 monopole or steel lattice tower structures. The total number of gen-tie structures will be determined by the final design of the gen-tie line. The Project transmission facilities will be designed consistent with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) where feasible. Transmission facilities will also be evaluated for potential collision reduction devices in accordance with *Reducing Avian Collisions with Power Lines: The State of Art in 2012* (APLIC 2012).

The POCO will be located on APN 3056-015-008 (see Pole 10 within Figure 2-1, Project Site Plan). The POCO is the point where the conductors of the Generation Tie-Line are attached to the Last Structure, which will be connected on the side of the last project owned structure (Last Structure) facing Vincent Substation. The project shall own and maintain the Last Structure, the conductors, insulators and jumper loops from such Last Structure to the Interconnection Customer's Large Generating Facility. SCE will own and maintain the Vincent Substation, as well as all towers, transmission lines, circuit breakers, disconnects, relay facilities and metering within the Vincent Substation, together with the line drop, in their entirety, from the Last Structure to Vincent Substation. SCE will own the insulators that are used to attach the project-owned conductors to the Last Structure.

The conductor from the site to the POCO is planned to be triple bundle 795 Drake or equivalent. The conductor from the POCO to the Vincent Substation will be double bundle 2156 Bluebird or equivalent.

Table 2-3 includes the approximate number and dimensions of the different types of transmission structures that will be used.

2.3.2.2 Transmission Structure Access Path

Where possible, the transmission structure access path will utilize existing access roads to minimize new ground disturbance. A transmission structure access path up to 26 feet wide will be located within portions of the transmission corridor outside of the BESS facility and Vincent Substation footprints and generally follow the centerline of the gen-tie.

2.3.2.3 Telecommunication Facilities

The facility will be designed with a comprehensive Supervisory Control and Data Acquisition (SCADA) System to allow remote monitoring of facility operation and/or remote control of critical components. The fiber optic or other cabling required for the monitoring system typically will be installed in buried conduit within the access road or planned trenching leading to a SCADA system cabinet at the Project substation. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard-wired connections to locally available commercial service providers.

The Project's SCADA system will interconnect to an external fiber optic network or fixed wireless service at the Project substation and will require installation of buried fiber optic cables underground or fixed wireless antennas. External telecommunications connections to the SCADA system cabinets could be provided through wireless or hard-wired connections to locally available commercial service providers, so no additional disturbance associated with telecommunications is anticipated. As such, the Project will not require any substantial construction efforts regarding telecommunications facilities and structures. No relocation of existing telecommunication structures will occur.

Telecommunications equipment will be installed between the control building at the Project substation and the Vincent Substation to facilitate communication with SCE/CAISO facilities. To achieve communication requirements with the Vincent Substation, the project will involve the following:

- Install optical ground wire on the Generation Tie-Line to provide one (1) of three (3) telecommunication paths required for the line protection scheme, the remote terminal units. A minimum of eight (8) strands within the optical ground wire shall be provided for SCE's exclusive use into Vincent Substation.
- Install appropriate single-mode fiber optic cable from the Project Site to a point near the POCO to the Vincent Substation to provide the second telecommunication path required for the line protection scheme and the RAS. A minimum of eight (8) strands within the single-mode fiber optic cable shall be provided for SCE's exclusive use. The telecommunication path shall meet the Applicable Reliability Standards criteria for diversity.
- Install appropriate single mode fiber optic cables from the Project Site to a point designated by SCE near the Vincent Substation to provide a third telecommunication path required for the Generation Tie-Line protection scheme. A minimum of eight (8) strands within the single mode fiber optic cable shall be provided

for SCE's exclusive use. The telecommunication path shall meet the Applicable Reliability Standards criteria for diversity.

- Own, operate and maintain all three (3) telecommunication paths (including optical ground wire, any fiber-optic cables, and appurtenant facilities) up to the POCO.

In addition to the telecommunications equipment installed by the Project, SCE will install the following equipment:

- Lightwave, channel, and associated equipment (including terminal equipment), supporting protection and the remote terminal unit requirements at the Project Site and Vincent Substation for the interconnection of the Project. Notwithstanding that certain telecommunication equipment, including the telecommunications terminal equipment, will be located on the Interconnection Customer's side of the POCO, SCE shall own, operate and maintain such telecommunication equipment as part of the SCE's Interconnection Facilities.
- Install appropriate length of fiber optic cable, including conduit and vaults, from the Vincent Substation 500kV switchrack to extend the fiber optic cable and conduit into the communication room at Vincent Substation. The 2021 Reassessment Study assumed the installation of approximately 250 feet of underground fiber optic cable and associated conduit, and one (1) 4' × 4' × 6' vault to extend the fiber optic cable into the communication room at Vincent Substation. The actual location and length of fiber optic cable and conduit, and location and number of vaults, will be determined during final engineering of SCE's Interconnection Facilities.
- Install appropriate length of fiber optic cable, including conduit and vaults, to extend the Project's second diverse telecommunications from the point designated by SCE near the SCE's Vincent Substation into the communication room at Vincent Substation. The 2021 Reassessment Study assumed the installation of approximately 250 feet of underground fiber optic cable and associated conduit, and one (1) vault to extend the Project's diverse telecommunications into the communication room at Vincent Substation. The actual location and length of fiber optic cable and conduit, and location and number of vaults, will be determined during final engineering of the SCE's Interconnection Facilities.
- Install appropriate length of fiber optic cable, including conduit and vaults, from the point designated by the SCE to extend the Project's third diverse fiber optic cable to into the communication room at Vincent Substation. The 2021 Reassessment Study assumed the installation of approximately 950 feet of underground fiber optic cable and associated conduit, and one (1) 4' × 4' × 6' vault to extend the fiber optic cable into the communication room at Vincent Substation. The actual location and length of fiber optic cable and conduit, and location and number of vaults, will be determined during final engineering of the Participating TO's Interconnection Facilities.

To meet these requirements, the Applicant and SCE will install one (1) of the three (3) fiber optic lines aboveground on the gen-tie structures. The two (2) other fiber optic lines will be installed underground within trenches anticipated to be up to 4 feet wide within the Southern Gen-Tie Route corridor and separated by at least 25 feet. The two (2) other fiber optic lines will be installed underground within the Southern Gen-Tie Route corridor regardless of which Gen-Tie Route corridor option is selected. Where the underground fiber optic line leaves the BESS facility site it will be installed via horizontal directional drilling underneath the railroad tracks. Horizontal directional drilling is a trenchless construction technique used to install underground utilities like pipelines and conduits without disturbing the surface. The Applicant understands a crossing agreement with LACMTA will be required prior to construction. LACMTA requires a crossing agreement application to include a 90% design package. This will be provided as the Project design progresses. The Project expects to submit the application in 2026.

2.3.2.4 Interconnection Facilities within Existing SCE Vincent Substation Footprint

To facilitate interconnection of the BESS facility to the electric transmission grid, SCE will need to install one (1) 500kV dead end structure, nine (9) 500kV coupling capacitor voltage transformers, three (3) 500kV line drops, three (3) line current relays, and one (1) 500kv line position which includes the following equipment: seven (7) 500kV circuit breakers, seven (7) 500kV disconnect switches, 84 insulators, and two (2) breaker failure backup relays. No additional network upgrades outside of the Vincent Substation are necessary to interconnect the project to the grid.

2.3.2.5 Transmission System Impact Studies

The Project will interconnect to SCE's transmission system within the CAISO planning area. CAISO identified two (2) potential Affected Systems from the QC12 Phase I Interconnection Study: California Department of Water Resources and Los Angeles Department of Water and Power.

The Applicant has contacted both potential affected systems and both have responded that the Project will not have any negative impact on their systems (see Confidential Appendix 2C).

The Applicant filed an Interconnection Request with CAISO in the Cluster 12 Interconnection Request window. CAISO, in cooperation with SCE, prepared the Phase I Interconnection Study (January 15, 2020), and Phase II Interconnection Study (November 20, 2020). The Applicant entered into a Large Generator Interconnection Agreement with CAISO and SCE on January 28, 2022. The Project's Phase I and II Interconnection Studies are included in Confidential Appendix 2C.

2.3.2.6 California Public Utilities Commission General Orders

Because SCE is an investor-owned electric utility, the SCE Improvements described above, are regulated by CPUC. CPUC General Orders (GO) cover regulatory requirements for investor-owned electrical utilities.

The Project will comply with applicable GOs, including GO 95 (Rules for Overhead Electric Line Construction) and GO 128 (Rules for Construction of Underground Electric Supply and Communications Systems).

2.3.2.7 Transmission System Design

One-line diagrams for the Project substation are included in Appendix 2A Single Line PSR-SE-001. The one-line diagrams include all equipment ratings including the bay arrangement of the circuit breakers, disconnect switches, buses, transformers, and other equipment that will be required for the Project interconnection at the Project site.

A one-line diagram for the Project's interconnection at the SCE Vincent Substation is included in Confidential Appendix 2C, specifically within Appendix A of the Large Generator Interconnection Agreement (Page 106 of 137).

Table 2-5 below, Transmission System Design/Safey and Nuisance Regulations, identifies transmission system design laws, regulations, ordinances, and standards; adopted local, regional, state, and federal land use plans; and leases and permits applicable to the Project.

The applicant plans on installing triple bundle 795 Drake or equivalent from the BESS to the POCO. Depending on the selected route, the length of the applicant's conductor will be either 30,800 feet for the Northern Route or 63,000 feet for the Southern Route. These lengths represent the total conductor length of all phases along the applicant's portion of the 500 kV route (North: 3,500 feet long/South: 7,300 feet long). In determining the line type, the Project assumed a Max Operating Temperature of 212 degrees Fahrenheit as well as the other inputs from the Phase II SCE design. The allowable ampacity of the original conductor was 1,485 amps. The current conductor design has an ampacity of 3,396 amps. Allowable ampacity affects how much energy the line can carry, so an increase in ampacity equates to an increase in carrying capacity. Triple bundle 795 Drake will be located vertically along monopoles in the applicant-owned portion of the gen-tie route (see figures in Appendix 2 PSR-TL-005 through PSR-TL-008).

SCE plans on installing double bundle 2156 Bluebird or equivalent from the POCO to the Vincent Substation. SCE will install approximately 16,000 feet of conductor on their towers. This length represents the total conductor length of all phases along the SCE portion of the 500 kV route (2,800 feet long). SCE has sized the double bundle 2156 Bluebird to meet the carrying capacity requirements for the Project and will locate the conductor vertically along tower in the SCE-owned portion of the gen-tie route (see figures in Appendix 2 PSR-TL-009).

Table 2-5. Transmission System Design/Safety and Nuisance Regulations

Item	Title
CPUC GO-95	Rules for Overhead Electric Line Construction
NESC	National Electrical Safety Code (NESC)
GO-128	Rules for Construction of Underground Electric Supply and Communication Systems
GO-131-D	Rules for Planning and Construction of Electric Generation Line and Substation Facilities in California
Decision 93-11-013	California Public Utilities Commission (CPUC) EMF Decision
CPUC GO-52	Construction and Operation of Power and Communication Lines for the Prevention or Mitigation of Inductive Interference
ASCE 48-19	Design of Steel Transmission Structures
ASCE 74	Guidelines for Electrical Transmission Line Structural Loading
ASCE 113	Substation Structure Design Guide
FAA 70/7460	Proposed Construction and/or Alteration of Objects that May Affect the Navigation Space
IEEE 81	Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System
IEEE 525	Guide for the Design and Installation of Cable Systems in Substations
IEEE 605	Guide for Bus Design in Air Insulated Substation
IEEE 691	Guide for Transmission Structure Foundation Design and Testing
IEEE 738	Standard for Calculating the Current-Temperature Relationship of Bare Overhead Conductors
IEEE 1127	Guide for the Design, Construction, and Operation of Electric power Substations for Community Acceptance and Environmental
IEEE 1427	Guide for Recommended Electrical Clearances and Insulation Levels in Air Insulated Electrical Power Substations
IEEE 1863	Guide for Overhead AC Transmission Line Design

Table 2-5. Transmission System Design/Safety and Nuisance Regulations

Item	Title
47 CFR 15.25, "Operating Requirements, Incidental Radiation	Prohibits operations of any device emitting incidental radiation that causes interference to communications; the regulation also requires mitigation for any device that causes interference
Title 14 CFR, Part 77, "Objects Affecting Navigable Airspace"	Describes the criteria used to determine whether a "Notice of Proposed Construction or Alteration" (FAA Form 7460-1) is required for potential obstruction hazards.
FAA Advisory Circular No. 70/7460-1M, "Obstruction Marking and Lighting"	Describes the FAA standards for marking and lighting of obstructions as identified by FAA Regulations Part 77

2.3.2.8 Transmission Line Safety and Nuisance

The electrical effects of high-voltage transmission lines fall into two (2) broad categories: corona effects and field effects. Corona is a luminous discharge due to ionization of the air surrounding a conductor around the surface of an energized conductor and associate hardware when the voltage gradient exceeds a certain critical value during certain conditions. Corona may result in radio and television reception interference, audible noise, light, and production of ozone. Corona is a function of the voltage of the line, the diameter of the conductor, and the condition of the conductor and hardware surface. Corona performance is predicted using empirical equations from high-voltage line measurements. The methodology has been validated for predicting corona-induced noise and interference. The electric field gradient is the rate at which the electric field changes and is directly related to the line voltage and the geometric configuration of the line. Field effects are the voltages and currents that may be induced in nearby conducting objects. A transmission line's inherent electric and magnetic fields cause these effects. Operating power lines produce electric and magnetic fields commonly referred to as an electromagnetic field (EMF). The EMF produced by the AC electrical power system in the U.S. has a frequency of 60 hertz, meaning that the intensity and orientation of the field changes 60 times per second. The electric field (EF) is expressed in V/m or kV/m, and magnitudes are often given in root-mean-square (rms) units. Magnetic field is generated by electrical currents. Transmission lines create time-varying magnetic fields measured in Gauss (G) or milligauss (mG). Electric fields are calculated using an imaging method, while magnetic fields are obtained by summing fields from currents in all conductors, assuming balanced three-phase currents

Corona from a transmission line may result in the production of audible noise (AN), radio influence voltage (RIV) and television interference.

The electric field gradient is greatest at the surface of the conductor. Large-diameter conductors have lower electric field gradients at the conductor surface and, hence, lower corona than smaller conductors, everything else being equal. Also, irregularities (such as nicks and scrapes on the conductor surface) or sharp edges on conductors and insulators hardware concentrate the electric field at these locations and, thus, increase corona at these spots. Similarly, contamination on the conductor surface such as dust or insects can cause irregularities that are a source for corona. Raindrops, snow, fog, and condensation are also sources of irregularities.

2.3.2.8.1 Audible Noise, Corona Losses, and EMF Model Results

EMFs, audible noise, and radio and television interference near power lines vary regarding the line design, line loading, distance from the line, and other factors. Electric fields, corona, audible noise, and radio and television interference depend on line voltage and not on the level of power flow. The calculations were made under maximum operating voltage. The line design includes triple-bundled 795 thousands of circular mils (kcmil) ACSR Drake conductors on monopole structures and double-bundled 2156 kcmil ACSR Bluebird conductors on SCE lattice towers. Table 2-6 shows the audible noise under fair weather, max audible noise under foul weather, and the Environmental Protection Agency's 55 day–night average sound level criteria.

Table 2-6. 500kV Audible Noise

Gen-Tie Design	Max Audible Noise at Edge of Right of Way (dBA)	Normal Audible Noise at Edge of Right of Way (dBA)	EPA 55 day-night sound level criteria (dBA)
SCE Owned Lattice Tower	55.1	30.1	48.5
Delta Monopole	51.0	26.0	
Deadend Monopole	49.6	24.6	

Source: Appendix 2D and 2E.
Notes: gen-tie = generation interconnection; dBA = A-weighted decibels; SCE = Southern California Edison.

Corona losses are estimated to range from .52 Watts/m -.913 Watts/m under fair weather conditions and 74.5 Watts/m – 130.5 Watts/m under foul weather conditions. One (1) study calculated radio interference induced by corona from a 500kV three-phase transmission line at approximately 45 decibels above 1 microvolt per meter (dB[1μV/m]3; henceforth referred to as dB) at approximately 88 feet (27 meters) away from the outermost phase of a transmission line (Tejada-Martinez et al. 2019). Measured radio interference was generally similar to calculated values particularly for conductors strung on towers horizontally but was found to be closer to 50 dBuV/m for conductors strung on towers in a vertical manner. Two (2) other studies of 500kV transmission lines at the same distance from center phase calculated radio interference at approximately 30 dB to generally below 60 dB, except for when subconductors were spaced closely together, depending on the geometric parameters (e.g., conductor size, conductor spacing) (El Dein 2013; Phaiboon et al. 2000). As discussed above, wet weather and other conditions (e.g., debris build up on conductors) can affect corona and therefore radio interference, with higher interference anticipated in wetter weather. The 500kV transmission lines would be engineered and installed so as to avoid harmful interference with radio or other transmissions.

The magnetic field is proportional to line loading (amperes), which varies as demand for electrical power varies and as generation from the generating facility is changed by the system operators to meet changes in demand. The magnetic field at the edge of the gen-tie right-of-way is expected to range from 99.09 mG to 171.29 mG. The electric field at the edge of the right-of-way is expected to range from 0.342 kilovolts/meter (kV/m) – 1.777 kV/m).

Overall, construction and operation of the Project, including the interconnection of the facility with SCE's transmission system, are not expected to result in increases in EMF levels, corona, radio interference, or audible noise and mitigation would not be required.

2.4 Construction

The following sections detail the approximate construction schedule and workforce, construction activities, estimated water use, and materials handling proposed by the Project.

2.4.1 Schedule and Workforce

The Project is anticipated to be built over an approximately 20-month period from the onset of site preparation activities through energization. Following energization, testing and commissioning will take place over 6 months. Initial mobilization and site preparation is anticipated to begin no later than March 2027 and testing and commissioning is anticipated to conclude no later than April 2029. The commercial operation date (COD) is expected shortly following the completion of testing and commissioning in June 2029. It is anticipated that construction crews will work 8 hours to 10 hours per day, with work occurring Monday through Friday. Overtime, night work, and weekend work will be used only as necessary to meet the Project schedule or complete time-sensitive or safety critical work. All work schedules will comply with applicable California labor laws and County regulations. Estimated durations of construction activities are presented in Table 2-7.

Table 2-7. Estimated Construction Activity Duration

Construction Activity	Estimated Duration	Estimated Timeframe
Demolition	2 weeks	3/1/2027–3/12/2027
Site Preparation	1.5 months	3/1/2027–4/15/2027
Substation Site Preparation	2 weeks	4/16/2027–4/30/2027
Civil Work and Grading	4 months	5/1/2027–8/31/2027
Substation Civil Work and Grading	1 month	9/1/2027–9/30/2027
Paving	1.5 months	8/15/2027–9/30/2027
Battery Enclosure/PCS Installation	12 months	10/1/2027–10/1/2028
Project Substation Installation	8 months	2/1/2028–10/1/2028
Gen-Tie Foundations and Structure Erection	4 months	2/1/2028–5/31/2028
Gen-Tie Line Stringing and Pulling	1 month	6/1/2028–7/1/2028
SCE Interconnection Facility Upgrades within Vincent Substation	6 months	4/1/2028–10/1/2028
Testing and Commissioning	6 months	10/2/2028–4/1/2029

Note: PCS = power conversion system.

2.4.2 Sequencing

During construction activities, multiple crews will be working on the site with various equipment and vehicles. The daily number of construction workers (consisting of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel) will range from approximately 50 to 250 workers, depending on the phase of construction. It is estimated that construction will require the vehicle trips and equipment listed in Table 2-8.

Table 2-8. BESS Project – Construction Equipment and Usage Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips[1]	Equipment Type	Quantity	Usage Hours
Demolition	10	4	6	Rubber tired dozer	1	10
				Concrete/Industrial Saws	1	10
				Tractors/Loaders/ Backhoes	2	10
Site Preparation	242	12	24	Tractors/Loaders/ Backhoes	2	10
				Excavator	2	10
				Rubber tired dozer	2	10
Substation Site Preparation	242	12	100	Tractors/Loaders/ Backhoes	1	10
				Excavator	1	10
				Rubber tired dozer	1	10
Grading	242	12	524	Graders	2	10
				Tractors/Loaders/ Backhoes	2	10
				Rollers	2	10
Substation Grading	242	12	486	Graders	1	10
				Tractors/Loaders/ Backhoes	1	10
				Rollers	1	10
Paving	16	0	0	Pavers	2	10
				Paving Equipment	2	10
				Rollers	2	10
Battery Enclosure/ PCS Installation	121	12	20	Air Compressors	1	10
				Cranes	1	10
				Forklift	1	10
				Tractors/Loaders/ Backhoes	1	10
Substation Installation	121	12	4	Aerial Lifts	1	10
				Air Compressors	1	10
				Bore/Drill Rigs	1	10
				Forklift	1	10
				Trenchers	1	10
Gen-Tie Foundation and Tower Erection	121	12	0	Air Compressors	1	10
				Cranes	1	10
				Forklifts	1	10
				Pumps	1	10
				Welders	1	10

Table 2-8. BESS Project – Construction Equipment and Usage Assumptions

Construction Phase	One-Way Vehicle Trips: Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips[1]	Equipment: Equipment Type	Quantity	Usage Hours
Gen-Tie Stringing and Pulling	121	12	0	Aerial Lift	1	10
				Tractors/Loaders/ Backhoes	1	10
SCE Interconnection Facility Upgrades	121	12	0	Air Compressors	4	10
				Cranes	2	10
				Excavators	2	10
				Rough Terrain Forklifts	2	10
				Skid Steer Loaders	2	10
				Tractors/Loaders/ Backhoes	2	10
				Trencher	1	10
Testing and Commissioning	242	12	0	NA	NA	NA
Decommissioning	242	12	20	Concrete/Industrial Saws	2	10
				Cranes	2	10
				Rubber Tired Dozers	2	10
				Tractors/Loaders/ Backhoes	2	10

Notes: PCS = power conversion system; gen-tie = generation interconnection; SCE = Southern California Edison.

1 The average daily haul truck trips for each phase consider phase durations from Table 2-7.

* The Project layout depicted in Figure 2-1, Project Site Plan, shows the "End of Life" configuration of the BESS, meaning it shows the equipment layout after all augmentation units are implemented. The numbers in this table conservatively assume that foundations and BESS equipment installation related to augmentation occurs during initial construction of the facility. Construction of foundations and BESS equipment installation for augmentation may occur during O&M periodically within the BESS facility footprint.

2.4.3 Site Preparation

Environmental clearance surveys will be performed at the Project site prior to commencement of construction activities. The limits of construction disturbance areas delineated in the final approved engineering design packages will be surveyed and staked. Initial ground disturbing activities in preparation for construction will include installation of erosion and sediment control measures prior to start of major earthwork activities. Rough grading and grubbing/vegetation removal will be performed where required to accommodate site drainage and allow construction equipment to access the site. Detention chambers and stormwater facilities will be created for hydrologic control. The construction contractor will be required to incorporate applicable best management practices (BMPs) including the guidelines provided in the California Stormwater Quality Association's Construction BMP Handbook (CASQA 2024), as well as a soil erosion and sedimentation control plan to reduce potential impacts related to construction of the proposed Project. Stabilized construction entrances and exits will be installed at driveways to reduce tracking of sediment onto adjacent public roadways.

Site preparation will be consistent with applicable BMPs and the Antelope Valley Air Quality Management District's Fugitive Dust Rules. Site preparation will involve the removal and proper disposal of existing debris that will unduly interfere with Project construction or the health and safety of on-site personnel. Dust-minimizing techniques will be employed, such as placement of wind control fencing, application of water, and application of dust suppressants. All applicable governmental requirements and BMPs will be incorporated into the construction activities for the Project site.

Vegetation on the site will be removed where necessary to ensure the BESS facility is free from combustible vegetation to allow for fire protection and defensible space. Where feasible, in compliance with fire protection requirements, vegetation root mass within appropriate portions of the BESS facility lease area on the outside of the perimeter and substation access roads will be left in place for soil stabilization. However, the environmental analyses in subsequent sections conservatively assume that all areas within the maximum anticipated grading limits of the BESS facility will be permanently disturbed.

2.4.4 Site Grading and Civil Work

Following site preparation activities, grading and civil work will commence. Construction activities during this phase will include excavation and grading of the Project site. Preliminary designs conservatively assume that grading will include up to approximately 175,410 cubic yards (cy) of cut and up to approximately 625,095 cy of fill, resulting in a net of 449,685 cy of fill. Blasting is not expected but may be required if large boulders are encountered during excavation and grading. Fill material requirements will be satisfied by offsite borrow pits or quarries.

Conventional grading will be performed throughout the Project site but minimized to the maximum extent feasible to reduce unnecessary soil movement. Land-leveling equipment, such as a smooth steel drum roller, will be used to even the ground surface and compact the upper layer of soil to a value recommended by a geotechnical engineer for structural support. Following major civil work within the BESS facility site, site access roads and driveways, the perimeter and substation access roads, and interior roadways to access the laydown areas and BESS yards will be graded, compacted, and surfaced with gravel or paving. Once the roadways have been constructed, the Project perimeter fence and access gates will be constructed.

2.4.5 Foundations and Underground Equipment Installation

Following completion of major site grading and civil work, equipment foundations and below grade equipment will be installed. A grounding grid and underground conduit will be installed below grade beneath the Project substation area and BESS components. Typical ground grids consist of direct-buried copper conductors with copper-clad ground rods arranged in a grid pattern. After installation of the grounding grid, the area will be backfilled, compacted, and leveled followed by application of an aggregate rock base. A containment area within the MPT foundations will be sized to hold the full volume of oil within the MPTs. The MPT foundations within the substation area are anticipated to be concrete slab foundations poured into excavations up to 7 feet deep. Foundations for the control building, static masts, other aboveground substation equipment, O&M buildings, BESS enclosures, PCS units, DC/DC converters, and BESS auxiliary transformers and panels are anticipated to be slab on grade, or pile foundations embedded up to 24 feet below ground level. Depending on soil conditions, the piles may be drilled or driven and set with a slurry. However, some of these Project components may be installed on concrete slab foundations depending on the geotechnical conditions at the final locations.

Additional underground work will include trenching for the placement of underground electrical and communications lines, including the MV collection system, AC and DC cables, and fire alarm cable. The wires will either be installed in conduit, cable-trays, or direct-buried, depending upon final design and application

2.4.6 BESS and Project Substation Equipment Installation

Where possible, major equipment will be delivered directly to its permanent location and offloaded directly into place with a crane or heavy equipment. Where staging or sequencing does not allow, equipment will be stored at one of the laydown areas near its permanent location and installed at a later date. Major aboveground equipment will be the MPTs and other Project substation components, control building, BESS enclosures, PCS units, DC/DC converters, BESS auxiliary transformers and panels, and material for the O&M buildings.

Electrical work will include installing cables, terminations, and splices. Electrical wiring will be installed underground, at-grade, and above ground, depending on the application and location. The wires will either be installed in conduit, cable-trays, or direct-buried, depending upon final design and application.

2.4.7 Gen-Tie Structure Erection

Environmental clearance surveys will be performed within the gen-tie corridor prior to commencement of construction activities. The gen-tie corridor boundaries, gen-tie centerline, telecommunications route centerlines, and transmission structure access path will be surveyed and flagged. Initial activities will include the installation of erosion and sediment control measures and materials, and preparation of the transmission structure and fiber optic utility pole work areas. The transmission structure access path may be bladed, compacted, and surfaced with gravel where necessary to facilitate transmission structure deliveries and construction equipment access. The surface of the access path will be at-grade to allow water to sheet flow across the gen-tie corridor, as it currently does. Overland travel and temporary construction activities associated with the gen-tie and telecommunications facilities may occur anywhere within the 150-foot-wide transmission corridor. Vegetation at the transmission and fiber optic utility pole work areas will be trimmed, mowed, or removed. At locations where gen-tie line structures and fiber optic utility poles will be installed, minor cuts may be required where the foundation will be installed.

Cast-in-place concrete foundations will be installed by placing reinforcing steel and a structure stub or anchor bolt cage into the foundation hole, positioning the stub, and encasing it in concrete. Each transmission structure foundation will be set on anchor bolts on top of the foundation with cranes. Holes will be excavated using a truck-mounted drill rig or standalone auger rig. Poles will be delivered on a flat-bed trailer and hoisted into place with a crane. The annular space between the poles and holes will be backfilled with concrete or soil. Excavated spoil material not used for backfilling will be spread around the structure work areas.

2.4.8 Gen-Tie Stringing and Pulling

For a conductor pulling location, the distance needed behind the dead-end structures should be equal to or greater than a 3:1 ratio (300 feet needed for a 100-foot-tall structure), or as recommended by the conductor manufacturer, to mitigate potential damage to the conductor during installation. The width of the pulling area is consistent with the 150-foot-wide Gen-Tie corridor. The pulling area will need to be relatively flat since trucks, trailers and various other small vehicles will need room to maneuver for placement of materials and equipment. The area will be cleared of any brush or obstacles, to facilitate unobstructed travels. For the wire end of a pull, there will be a minimum of two (2) 53-foot-long semi-trailers side by side, loaded with three (3) conductor reels each. One (1) trailer will be feeding the conductor to a tensioner, as the other trailer will be utilized for replacement of empty reels, and then facilitate a continuation of pulling efforts. The tensioner will be approximately the size of a semi-trailer and is responsible for tensioning the conductor during installation. A heavy-duty forklift or a large size all-terrain crane will be needed to support placement/removal of reels to the wire trailers, due to size and weight. After conductor installation, a bulldozer will be used to secure the installed conductors during application of additional tensions for the sagging process. The pulling equipment utilized is comparable in size/quantity to equipment utilized to support the new conductor reels. Pulling equipment utilizes multiple reels of high-tension pulling cables, mounted to semi-trailers, to support the new conductor placement into position on the structures. Pulling sites are depicted as Gen-Tie Work areas in Figure 2-2, Transmission Line Route.

A helicopter may be used to complete gen-tie stringing and pulling where the gen-tie crosses the railroad. For this portion of the stringing and pulling work it is assumed that a MD600 helicopter would be used for up to three (3) 10-hour days consisting of 1 day for mobilization, 1 day for stringing and pulling, and 1 day for demobilization. For the purposes of project analysis, it is anticipated that the helicopter would facilitate pulling of conductors and shield wires from proposed transmission structures No. 1 to No. 9 if the Northern Gen-Tie Route is selected, and transmission structures No. 3 to No. 5 if the Southern Gen-Tie Route is selected (please see Figure 2-2, Transmission Line Route, for transmission structure numbering). Helicopter use would be supported by one (1) approximately 150-foot by 100-foot landing zone. Landing zones would primarily be used for staging materials, picking up and transporting electrical personnel and equipment, and refueling helicopters. The landing zone is anticipated to be located at the main laydown area but may need to shift to one (1) of the other two (2) laydown areas depending on the sequencing of construction.

2.4.9 SCE-Owned Gen-Tie Segment and Interconnection Facilities within Vincent Substation Footprint

SCE will construct the segment of the gen-tie between the POCO and the POI within the SCE Vincent Substation, and the fiber optic routes between the POCO and the SCE control building within the Vincent Substation footprint. The Applicant will bring the fiber optic cables to underground pull boxes at the POCO structure, and SCE will install the segment of the fiber optic cables between the POCO and control building in conduit placed in underground trenches. The trenches are anticipated to be up to 4 feet wide, and the trenches for the redundant routes will need to be at least 25 feet apart to meet SCE’s diverse path requirements. It is anticipated that SCE will install the trenches within the access road to the angled dead-end structure outside the Vincent Substation fence line. However, SCE may install the cables within existing roadways or other pre-disturbed areas along the perimeter of the substation fence depending on final design and routing.

SCE will also construct the interconnection upgrades within the Vincent Substation footprint at the POI. These upgrades are described in Section 2.3.2.4 above.

2.4.10 Construction Water Use

Construction water is anticipated to be purchased from a local water purveyor and trucked to the site. During construction, an estimated 18 million gallons (approximately 55 acre-feet) of untreated water will be required for common construction-related purposes, including but not limited to dust suppression, soil compaction, and grading. Dust-control water may be used during ingress and egress of on-site construction vehicle equipment traffic and during the construction of the Project. A sanitary water supply line will not be required during construction because restroom facilities will be portable units, serviced by licensed providers, and water and sewage from the restroom facilities will be stored in on-site tanks and serviced by trucks. Drinking water will be provided via portable water coolers.

2.4.11 Solid and Non-hazardous Waste

The Project will produce a small amount of solid waste from construction activities. This may include paper, wood, glass, plastics from packing material, waste lumber, insulation, scrap metal and concrete, empty nonhazardous containers, and vegetation waste. This waste will be segregated, where practical, for recycling. Non-recyclable waste will be placed in covered dumpsters, located in project laydown areas, and removed on a regular basis by a certified waste-handling contractor for disposal at a Class III (non-hazardous waste) landfill.

2.4.12 Hazardous Materials

The hazardous materials used for construction will be typical of most construction Projects of this type. Materials may include small quantities of gasoline, diesel fuel, oils, lubricants, solvents, detergents, degreasers, paints, ethylene glycol, dust palliatives, herbicides, and welding materials/supplies. A hazardous materials business plan will be prepared prior to commencement of construction activities. The hazardous materials business plan will include a complete list of all materials used on site and information regarding how the materials will be transported and in what form they will be used. This information will be recorded to maintain safety and prevent possible environmental contamination or worker exposure. During Project construction, material safety data sheets for all applicable materials present at the site will be made readily available to on-site personnel.

2.4.13 Hazardous Waste

Small quantities of hazardous waste will most likely be generated over the course of construction. This waste may include waste paint, spent construction solvents, waste cleaners, waste oil, oily rags, waste batteries, and spent welding materials. Workers will be trained to properly identify and handle all hazardous materials. Hazardous waste will be either recycled or disposed of at a permitted and licensed treatment, recycling, or disposal facility in accordance with law. All hazardous waste shipped off site will be transported by a licensed hazardous waste hauler.

2.4.14 Commissioning

As part of Project construction activities, and after installation, equipment will be tested and commissioned. Commissioning work will be completed by qualified personnel, and in accordance with various codes, standards and specifications including IEEE, Institute of Electrical and Electronic Engineers, NEC National Electrical Code (NFPA 70), NETA International Electrical Testing Association, specific provisions of NFPA National Fire Protection Association, and the relevant OEM / manufacturers installation and commissioning manuals. Documentation necessary for commissioning will include (but is not limited to) complete sets of electrical plans, itemized equipment descriptions, control narratives, and other procedural requirement such as persons or entities to notify when equipment has become available for acceptance tests.

Commissioning will include testing of mechanical, electrical, fire protection, and other systems at substantial completion. Systems to be commissioned and tested include (but are not limited to) BESS enclosures, PCS units, auxiliar service transformers, MV collection system, DC cables, SCADA systems, power backup systems, and fire protection system. Performance testing will also be completed to ensure charge and discharge performance of the systems as designed and in accordance with the utility requirements. Full details of the commissioning activities will be made available in a commissioning plan, prepared by the BESS supplier and construction contractor and reviewed by the Engineer of Record, as part of the construction documentation package.

2.5 Operations and Maintenance

Once constructed, the Project will be available to operate 7 days per week, 365 days per year. The facility will be remotely monitored and operated by an Owner contracted O&M provider, by means of a NERC-CIP compliant remote operations center. Project operations will be monitored remotely through the SCADA system and by the Project's anticipated full-time operations staff members. It is estimated that there will be four (4) full-time staff members for remote monitoring and 16 full-time operations staff members on site.

On-site maintenance will be required, which will include replacement of inverter power modules, filters, and miscellaneous electrical repairs on an as-needed basis. During operation of the Project substation, O&M staff will visit the substation periodically for switching and other operation activities. Light duty maintenance trucks will be utilized to perform routine maintenance, including but not limited to equipment testing, monitoring, repair, routine procedures to ensure service continuity, and standard preventative maintenance. Typically, one (1) major maintenance inspection will take place annually. Even when considering routine maintenance and augmentation activities, the project expects to provide no less than a 96% annual availability factor to the grid.

Batteries within utility-scale BESS facilities degrade with use over time, leading to a loss of capacity. To maintain the Project's capacity in compliance with interconnection requirements and commercial contracts, periodic augmentation by installing new batteries and related equipment within the Project site will occur to maintain the capacity over an approximate 40-year life. As batteries slowly lose their capacity to store energy, extra batteries will be installed at the beginning of the Project and at several intervals through the Project life, which is referred to as augmentation. Augmentation is expected to occur in order to maintain an annual lifetime capacity of 9,200MWh. If the project were to discharge for 8 hours daily and have an annual availability of 96% then the Project would have an annual capacity factor of approximately 32%. The Project's final augmentation strategy will be determined by market based contracting requirements. Augmentation may include constructing new foundations, installing BESS equipment on the foundations, and completing electrical work within the existing Project footprint. The preliminary site layout depicted on Figure 2-1, Project Site Plan, shows an "end of life" configuration, meaning it shows the equipment layout after all augmentation units are implemented. The construction sequencing and equipment usage assumptions in Tables 2-5 and 2-6 above, and environmental analyses in subsequent chapters, conservatively assume that all initial BESS equipment and augmentation BESS equipment are constructed at the same time.

2.5.1 Solid and Non-hazardous Waste

The Project will produce a small amount of waste associated with maintenance activities, which could include broken and rusted metal, defective or malfunctioning electrical materials, empty containers, and other miscellaneous solid waste, including typical refuse generated by workers. Most of these materials will be collected and delivered back to the manufacturer or to recyclers. Non-recyclable waste will be placed in covered dumpsters, located near the O&M buildings, and removed on a regular basis by a certified waste-handling contractor for disposal at a Class III landfill.

2.5.2 Hazardous Materials

Limited amounts of hazardous materials will be stored or used on the site during operations, including diesel fuel, gasoline, and motor oil for vehicles; refrigerant within the BESS enclosures; mineral oil to be sealed within the transformers; and lead-acid-based batteries for emergency backup. Appropriate spill containment and cleanup kits will be maintained during operation of the Project. A spill prevention control and countermeasures plan will be developed for site operations.

2.5.3 Hazardous Waste

Fuels and lubricants used in operations will be subject to the spill prevention control and countermeasures plan to be prepared for the proposed Project. Solid waste, if generated during operations, will be subject to the material disposal and solid waste management plan to be prepared for the proposed Project.

2.6 Decommissioning

In general, the BESS will be recycled at the expiration of the Project's life (estimated to be 40 years). Most parts of the proposed system are recyclable. Batteries include lithium, which degrades but can be recycled or repurposed. Steel, wood, and concrete from the decommissioned facilities will be recycled. Metal and scrap equipment and parts that do not have free-flowing oil may be sent for salvage. Materials 3 feet or more below the ground surface will be left in place.

Fuel, hydraulic fluids, and oils will be transferred directly to a tanker truck from the respective tanks and vessels. Storage tanks and vessels will be rinsed and transferred to tanker trucks. Other items that are not feasible to remove at the point of generation, such as smaller container lubricants, paints, thinners, solvents, cleaners, batteries, and sealants, will be kept in a locked utility structure with integral secondary containment that meets Certified Unified Program Agencies and Resource Conservation and Recovery Act requirements for hazardous waste storage until removal for proper disposal and recycling. It is anticipated that all oils and batteries will be recycled at an appropriate facility. Site personnel involved in handling these materials will be trained to properly handle them. Containers used to store hazardous materials will be inspected regularly for any signs of failure or leakage. Additional procedures will be specified in a Hazardous Materials Business Plan closure plan submitted to the Certified Unified Program Agencies. Transportation of the removed hazardous materials will comply with regulations for transporting hazardous materials, including those set by the Department of Transportation, the U.S. Environmental Protection Agency, California Department of Toxic Substances Control, California Highway Patrol, and California State Fire Marshal. See Appendix F, Decommissioning Plan, for additional information.

2.7 Project Site Selection

The Project site and related facilities were selected taking into consideration engineering constraints, site geology, environmental impacts, water, waste and fuel constraints, and electric transmission constraints, among other factors. The Project location was selected, in part, due to it being large enough to support development of the Project, its close proximity to existing electrical infrastructure and the Vincent Substation, thereby minimizing the length of the proposed gen-tie line to the POI and ability to deliver power to the Los Angels Basin local reliability area during peak demand, and because it is located immediately adjacent to existing roadways for construction and O&M access.

The Project is uniquely suited to help California achieve its GHG reduction requirements and support LA Basin reliability requirements. The Vincent substation is located at a key point in the electrical grid, Service Path 26, which enables it to deliver energy from renewable resources outside of the LA Basin Resource Area to meet LA Basin Local Capacity Requirements (LCR), with tie lines into the Western and Eastern LA Basin. LCR refers to the minimum amount of local generation capacity needed within specific areas to meet reliability criteria, particularly in areas where transmission constraints limit the ability to import power and is a critical metric for understand energy needs which are necessary to meet future grid demand. The LA Basin LCR is increasing, primarily due to load growth. The 2024-2025 Transmission Plan shows that peak load in the SCE Main area is forecasted to grow from 25,265MW in 2026 to 27,929MW in 2034 (CAISO 2025a), representing a 9.5% increase over 8 years. The 2026 LCR Tech Study also shows that the local capacity needed in the LA Basin is expected to increase from 5,812MW in 2026 to 7,226MW in 2030, which is an approximate 20% increase in required capacity in 4 years. Compared with the 2025 LCR study, demand for the LA Basin is 429MW higher than last year's forecast and the forecasted LCR needs have increased by 1,689MW due to load forecast increase (CAISO 2025b). In addition, CAISO is projecting that there will be a total potential curtailment of 1,300 gigawatt hours of wind and solar from the SCE North area in 2034, absent storage availability (CAISO 2025a). Locating this important energy storage ~~e~~ Project ~~at~~ with efficient and environmentally sound access to the Vincent Substation provides the Project with the ability to help reduce wind and solar curtailment while also supporting the growing LCR needs in the LA Basin, allowing stored resources to be dispatched when needed.

The Project site was selected in furtherance of the Project Objectives detailed in Section 2.2 above. The site selection criteria are discussed in detail in Chapter 4, Alternatives.

2.8 References

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Project Parcels (APN #)
Proposed BESS Facility Site
Existing SCE Vincent Substation (Point of Interconnection)
Transmission Pole (SCE)
Transmission Pole

Proposed Fiber Optic and Gen-Tie Routes
Underground Fiber Optic Route (SCE)
Underground Fiber Optic Route
Overhead Gen-Tie Route (SCE)
Overhead Gen-Tie Route
Overhead Southern Gen-Tie Route Option
Overhead Northern Gen-Tie Route Option

BESS Proposed Features
BESS Array
Project Substation
Storm Water Retention Area
O&M Area

Laydown Area
Driveway Entrance
Water Tank and Fire Pump House
BESS Access Roads

Work Areas
Construction Laydown Area
Gen-Tie Work Area
Pole Pad and Access Roads Area

SOURCE: World Imagery; Los Angeles County
Acton & Pacifico Mountain Quadrangle

DUDEK

0 1,000 2,000 Feet

FIGURE 2-1
Project Site Plan
Prairie Song Reliability Project

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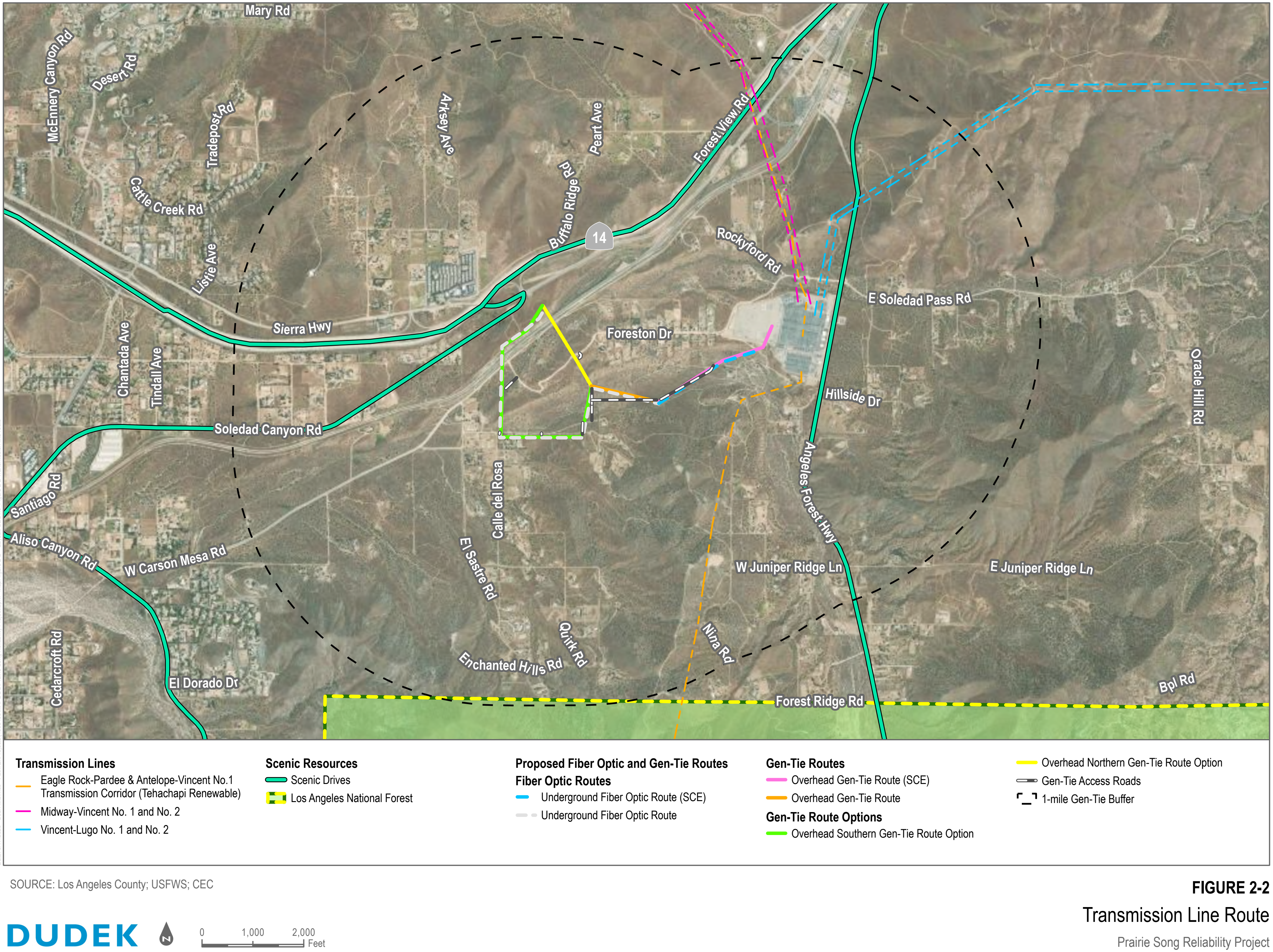

SOURCE: Los Angeles County; USFWS; CEC

DUDEK

FIGURE 2-2

Transmission Line Route

Prairie Song Reliability Project

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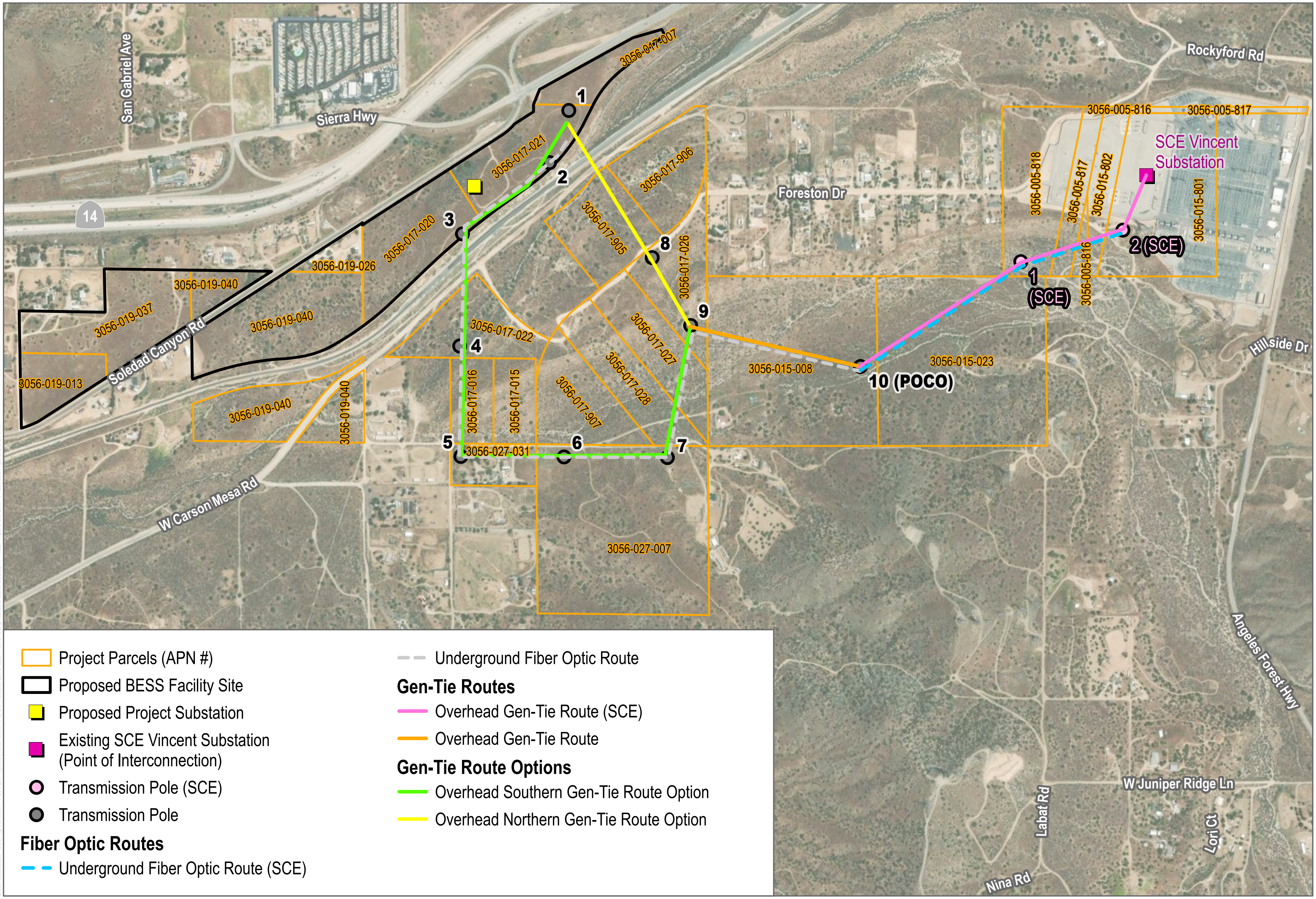
Attachment 4

Updated Figure 3.6-2, APN Map



SOURCE: World Imagery; Los Angeles County

DUDEK

FIGURE 3.6-2

Assessor Parcel Number (APN) Map

Prairie Song Reliability Project