

APPENDIX A
Project Initial Study

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Initial Study

**Sylmar Ground Return System
Replacement Project**



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

September 2010

CEQA Initial Study

Sylmar Ground Return System Replacement Project

September 2010

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Section 1

Project and Agency Information

1.1 PROJECT TITLE AND LEAD AGENCY

Project Title:	Sylmar Ground Return System Replacement Project
Lead Agency Name:	Los Angeles Department of Water and Power
Lead Agency Address:	111 North Hope Street, Room 1044 Los Angeles, California 90012
Contact Person:	Ms. Irene Paul
Contact Phone Number:	(213) 367-3509
Project Sponsor:	Los Angeles Department of Water and Power

1.2 PROJECT BACKGROUND

The City of Los Angeles Department of Water and Power (LADWP) has prepared this Initial Study (IS) to address the impacts of construction and operation of the Sylmar Ground Return System Replacement Project (proposed Project). The Project is the replacement of overhead lines and underground and sub-sea electric cables that run from the Sylmar Converter Station to the Pacific Ocean. This series of overhead lines, underground cables, and sub-sea cables lead to an electrode in the ocean. These overhead, underground, and submarine segments constitute the Sylmar Ground Return System (Sylmar Electrode System).

The Project will increase reliability of the Sylmar Electrode System while also protecting other electric systems by allowing for energy to be safely conducted through an earth return path when needed on an infrequent basis. The existing infrastructure and equipment serving this function are undersized and deteriorated.

This IS serves to identify site-specific impacts, evaluate their potential significance, and determine the appropriate document needed to comply with the California Environmental Quality Act (CEQA). Based upon this IS, an Environmental Impact Report (EIR) is the appropriate CEQA document for the Project.

1.2.1 Electric Power Transmission

Regional electric power transmission line systems are frequently referred to as a “grid.” A grid provides redundant power transmission paths to ensure that electricity can be routed from any power generating station to any load center within a given service area through a variety of routes. To prevent system-wide failures and power outages from overload conditions and other system disturbances, the ability to re-route electricity within a grid is critical.

When power is transferred over very long distances, it can be more efficient and economical to use direct current (DC) transmission instead of alternating current (AC) transmission which is

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commonly used for electric power delivery to homes and businesses. As such, DC transmission results in lower power losses during transfer than AC transmission lines. Additionally, high voltage DC transmission lines can carry more electricity per conductor than a high voltage AC transmission line. Therefore, more electricity can be delivered to areas of high-energy demand using a DC current.

DC systems are typically designed with an electrode connection so that loss of one converter or conductor does not result in an immediate and complete shutdown of all transmitted power. Power from a DC system will automatically transfer to the parallel AC system (if present). Due to the large amount of power that can be transferred on these DC systems, their loss can overload these parallel AC systems.

1.2.2 Existing Electrode System

The existing Sylmar Electrode System was constructed in 1969 and is part of the +/-500-kilovolt (kV) Pacific Direct Current Intertie Transmission Line (PDCI). The PDCI is approximately 846 miles long, extending from the Celilo Converter Station, located near the City of The Dalles, Oregon, to the Sylmar Converter Station, located in the San Fernando Valley, California. The transmission line is used to transfer power generated along the Columbia River in Oregon to the greater Los Angeles area. In addition, the PDCI also transmits power from south to north as seasonal load and resource conditions dictate.

The Sylmar Converter Station and the line from Sylmar to the Nevada/Oregon Border (NOB) are owned by PDCI Partners: Southern California Edison (SCE), Burbank Water and Power, Glendale Water and Power, Pasadena Water and Power, and LADWP. LADWP operates the southern portion of the PDCI. The Celilo Converter Station and the Oregon portion of the line are owned by Bonneville Power Administration (BPA).

The electrode system is designed to carry current when the PDCI is experiencing an anomaly. By carrying power during disturbances, the electrode system allows the unaffected portions of the PDCI to continue to operate, sending electric current offshore to prevent damage to, and disruption of, other underground utilities located onshore. During normal operation, the electrode's current is nearly zero. The electrode system is approximately 31 miles in length, comprising an overhead line portion, an underground cable portion and a submarine cable which terminates at an electrical ground point.

The earth is used as a return path in the DC circuit, due to its low resistance, which results in maximum current transfer. In electrical circuits, the current follows the path of least resistance and returns back to its source – in this case, to the Celilo electrode located in Rice Flats, a few miles from the Celilo Converter Station.

The overhead portion of the electrode system consists of two, 1,272 kilo-circular mils (Kcmil)¹, 45 AL/7 ST² aluminum conductor steel reinforced (ACSR) conductors attached to steel towers. The towers have an average height of 127 feet and are spaced an average of 1,028 feet apart.

¹ Kilo-circular mil (Kcmil) refers to a unit of conductor area in thousands of circular mils. One (1) circular mil equals 0.001 inch squared.

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The underground portion comprises two, 15-kV, 1,250 Kcmil copper, single-conductor cables known as the Kenter-Sunset Electrode Cables A and B, which are insulated with oil impregnated paper and covered with an outer lead sheath. The cables are installed in concrete-encased conduits in city streets with 47 subsurface vaults along the existing alignment. Vaults are part of the overall underground system, and house conduits, cables, and other related components. Vaults also serve as cable pulling points that allow tension to be controlled. The vaults are accessed via surface maintenance holes for cable maintenance and repair. The vaults are approximately 6 to 10 feet wide, 9 to 21 feet long, and 9 feet high. The tops of the vaults are approximately 3 feet below the street surface.

The submarine segment of the electrode system starts at the existing Sunset Vault located at 17350 Sunset Boulevard near U.S. Highway 1 – Pacific Coast Highway (PCH). The existing vault has a footprint of approximately 80 square feet and is 10 feet high. From the Sunset Vault, the two copper submarine cables, referred to as the Santa Monica and Malibu cables, connect to a second vault (the Gladstone Vault) located on the south side of PCH in a commercial parking lot. The distance between the two vaults is approximately 400 feet. From the Gladstone Vault to approximately 1,000 feet offshore, the two cables are 3-conductor, 500 Kcmil copper, 2.75 inches in diameter, insulated with 175 circular mils of Ethylene Propylene Rubber (EPR), and enclosed in a common 125 mil-thick Polyvinyl Chloride (PVC) jacket. From 1,000 feet to approximately 6,000 feet offshore, the Santa Monica and Malibu cables are 3-conductor, 300 Kcmil copper, 2.23 inches in diameter, insulated with 175 circular mils of high-density polyethylene (HDPE), and enclosed in a common HDPE jacket. The Santa Monica Cable was originally buried approximately 3 feet below the ocean floor. The Malibu Cable was laid on the ocean floor and portions have become buried as a result of shifting sand and sediments. These two, 3-conductor submarine cables connect to the electrode, a ground point where electricity can travel through the earth.

Each of the six copper conductors connects to an electrical ground point consisting of an array of 4 silicon iron electrode elements. The electrode consists of 24 electrode elements in total. Each electrode element is placed inside a precast reinforced concrete vault. The 24 vaults are located approximately 6,000 feet from shore, and the distance between each of the vaults ranges from approximately 10 to 23 feet. The length of the total array is approximately 543 feet and is located directly on the ocean floor at approximately 60 feet below mean sea level (msl). Two unlighted, anchored buoys are located 25 feet from either end of the group of vaults. Each vault is 7 feet wide, 11 feet long and 6 feet high.

The Sylmar Electrode System is used for approximately 20 hours per year. The total number of hours in service per year does not occur over a single period; operation is as needed to accommodate operation of the PDCI. The cables are configured to operate either individually, or simultaneously. Current ratings for the cables are as follows:

1. Two Cables Operating Together – 3,100 Amperes (Amps) for 20 minutes followed by “ramp down” to 1460 Amps and continuous operation at 1460 Amps thereafter

² aluminum/steel stranding

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2. Only One Cable Operating – 3,100 Amps for 3 minutes followed by ramp down to 730 Amps and continuous operation at 730 Amps thereafter

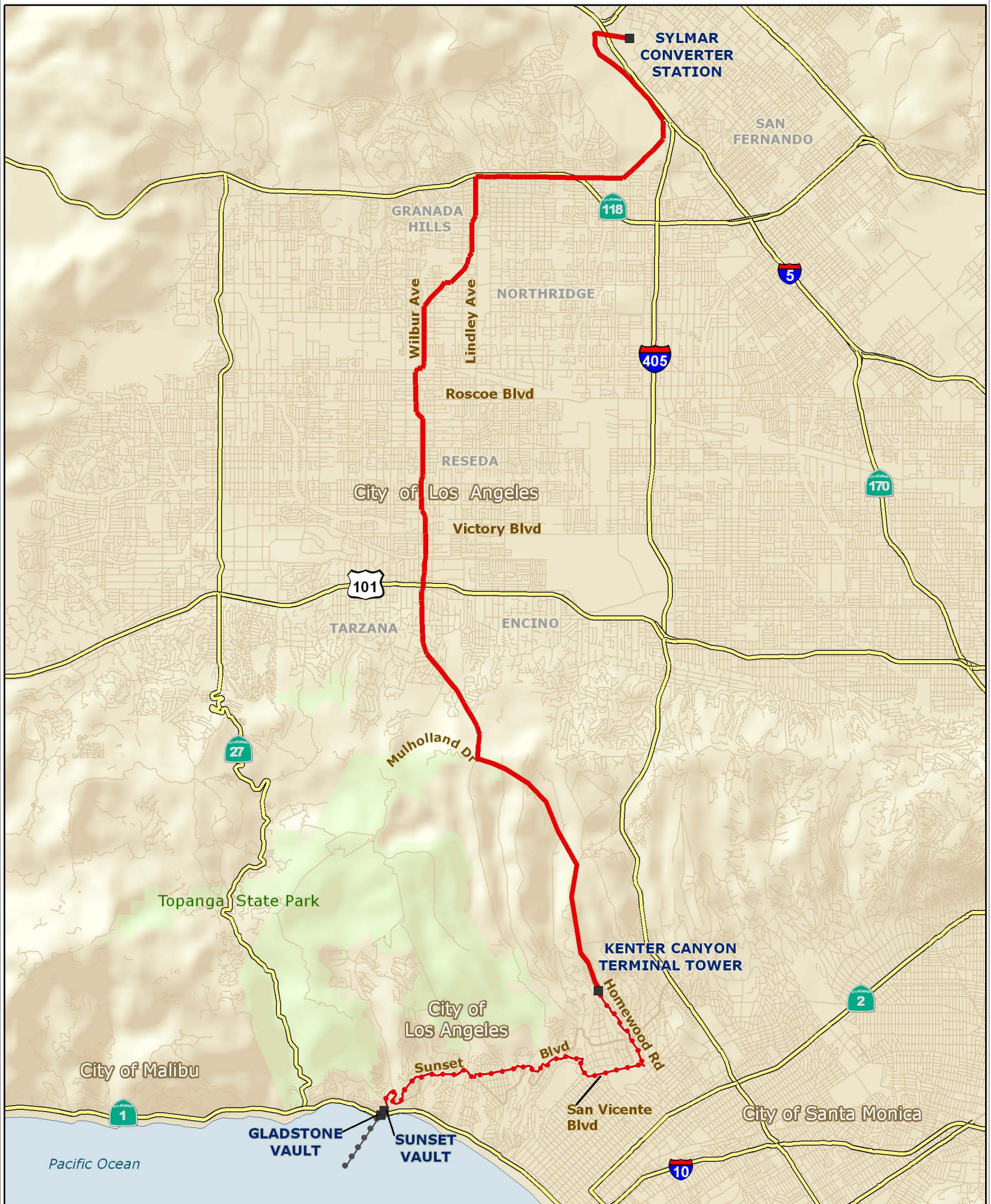
Present operation of the electrode system is limited to 20 minutes at a maximum current of 3,100 Amps and then 1460 Amps continuously after that. Normal operation limits ground current operation to a maximum of 30 minutes for any single event. However, the 30 minute limit is procedural and not absolute and there have been occasions where the 30 minutes has been exceeded due to interconnection reliability requirements.

The Sylmar Electrode System is tested periodically. Testing for the land cables is typically conducted once per year to determine the integrity of cable insulation. A DC voltage of 5- to 10-kV is applied to the conductor for approximately 10 minutes. During the DC voltage application, insulation resistance and leakage current readings are taken at intervals of 1 minute for approximately 10 to 20 minutes. Any significant decrease in resistance or increase in leakage current is an indication of insulation degradation and/or an electrical fault. The submarine cables are tested monthly by measuring the resistance of the conductors. An increase in this resistance indicates the likelihood of an electrical fault.

1.2.3 Existing Electrode System Location

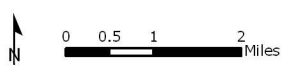
The onshore segment of the existing electrode system begins with an overhead portion that connects the Sylmar Converter Station to the Kenter Canyon Terminal Tower and travels through sections of the communities of Sylmar, Granada Hills, Northridge, Reseda, Tarzana, and Encino and through lands administered by the Santa Monica Mountains Conservancy (Conservancy lands) (see **Figure 1-1**). More specifically, from the Sylmar Converter Station, the overhead line proceeds west over Interstate 5 onto LADWP property. The overhead line then follows a path south around the Los Angeles Reservoir and Lower Retention Basin within LADWP property. At this point, the line exits LADWP property and parallels Rinaldi Street, and continues west over State Highway 118. Just after reaching Zelzah Avenue it turns southward before reaching Wilbur Avenue. In the community of Northridge, the overhead line follows Wilbur Avenue and crosses U.S. Highway 101 in Tarzana. After crossing the highway, the line follows a southeast path toward Encino, crossing Mulholland Drive and proceeding through Conservancy lands. The overhead line meets Mandeville Canyon Road outside of the Conservancy lands and travels south, paralleling the road, until connecting with the underground cables at the Kenter Canyon Terminal Tower. The overhead portion of the existing electrode system is approximately 22.5 miles long.

At the Kenter Canyon Terminal Tower the electrode system continues underground and traverses the communities of Brentwood and Pacific Palisades in the City of Los Angeles. From the Kenter Canyon Terminal Tower, the alignment proceeds southward along Homewood Road, then south on Gretna Green Way to San Vicente Boulevard (see **Figure 1-2**). The alignment proceeds westward on San Vicente Boulevard, turning northwest on 26th Street to Allenford Avenue. The alignment proceeds westward along Pontoon Place and Jonesboro Place to the intersection with Sunset Boulevard. It proceeds westward along Sunset Boulevard and turns westward at Napoli Drive.



Key to Features

	Existing Overhead Alignment
	Existing Underground Alignment
	Submarine Alignment

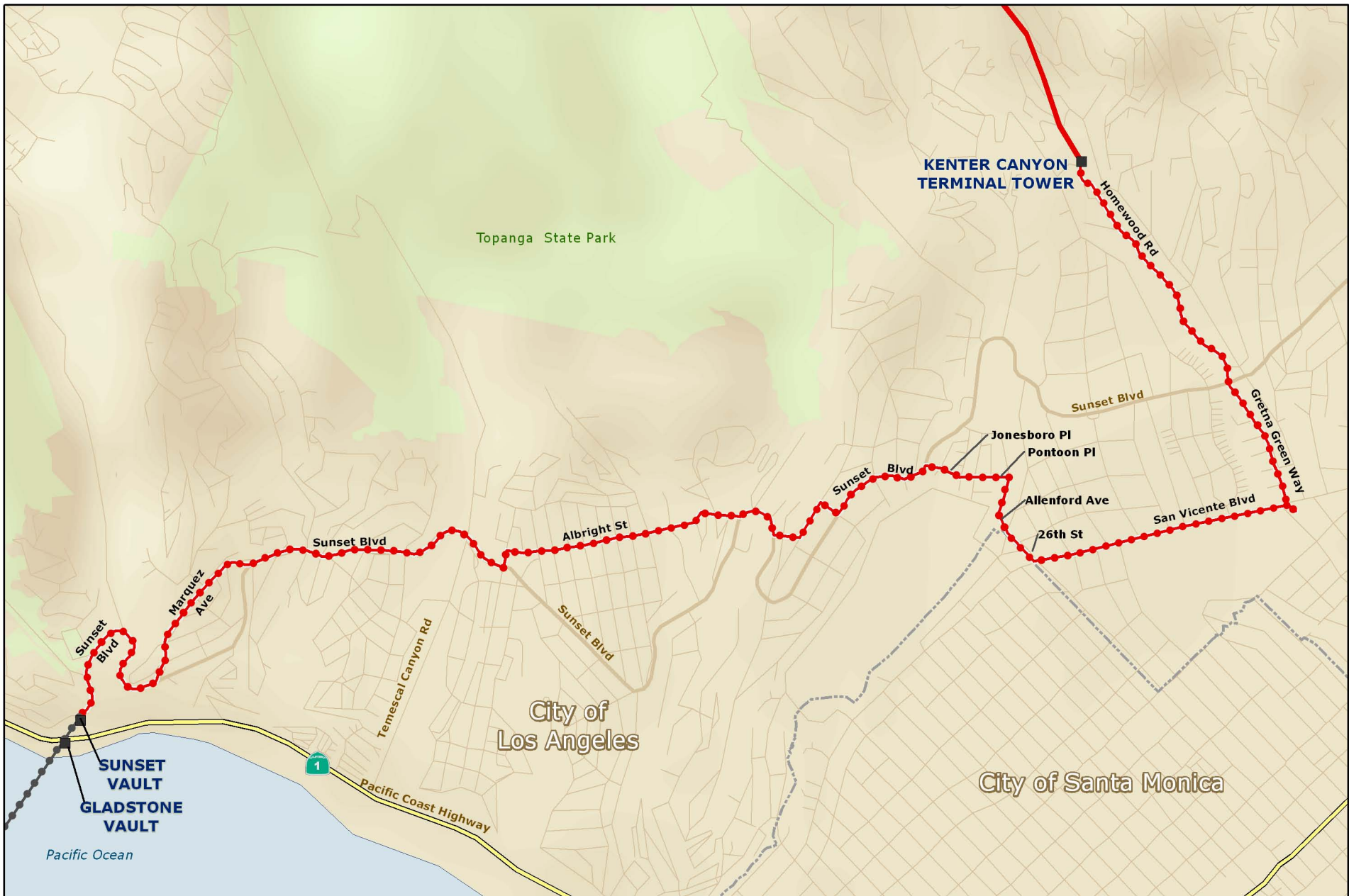


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Existing Overhead and Underground Alignments

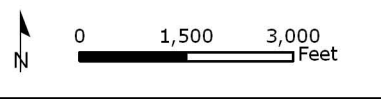
Figure 1-1





Key to Features

- Existing Overhead Alignment
- Existing Underground Alignment
- Submarine Alignment



Date: June 14, 2010

Existing Underground Alignment

Figure 1-2



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The alignment continues south on Amalfi Drive, and just north of Minorca Drive the alignment turns west, crossing under Ravoli Drive to connect to Sunset Boulevard. The alignment proceeds northwest along Sunset Boulevard and then continues westward, crossing through Will Rogers State Park. From this location, the alignment proceeds directly to the west, crossing under Villa Grove Drive, Rivas Canyon Road, and Chautauqua Boulevard, and then traverses Albright Street until reconnecting with Sunset Boulevard. The alignment then continues westward along Sunset Boulevard to Marquez Avenue. The alignment proceeds southward on Marquez Avenue until it intersects again with Sunset Boulevard.

At this point, the alignment follows Sunset Boulevard until reaching the Sunset Vault. From the Sunset Vault, the underground cables connect to the Gladstone Vault, located underground on the west side of PCH, in the parking lot for Gladstone's Restaurant. The distance between the Sunset Vault and the Gladstone Vault is approximately 400 feet. From the Gladstone Vault, the Santa Monica and Malibu cables extend into Santa Monica Bay and tie into an electrode array approximately 6,000 feet offshore.

1.2.4 Upgrades to and Operational Deficiencies of the Existing Electrode System

1.2.4.1 Upgrades to the Existing System

The PDCI was energized in 1970 at a voltage of +/-400 kV and a current of 1,800 Amps (1,440 megawatts [MW]). The PDCI line was upgraded as follows:

- 1982: Current upgrade to 2,000 Amps (1,600 MW)
- 1985: Voltage upgrade to +/-500 kV (2,000 MW)
- 1989: Current upgrade to 3,100 Amps (3,100 MW), Sylmar East added
- 2004: Sylmar East and West combined into a single converter station

The upgrades to the PDCI necessitated upgrades to the overhead portion of the Sylmar Electrode System. Upgrades included an increase of the tension of the overhead lines and/or a reduction of the tension of the transmission lines below. The present emergency rating for the overhead portion of the Sylmar Electrode System is 3,100 Amps for 20 minutes. The emergency rating is determined by the amount of current that the line should be able to support for a specific period of time before the conductor would potentially sag into the transmission conductors below. If an emergency arises, the overhead portion can be continuously operated at 1,460 Amps.

1.2.4.2 Operational Deficiencies

In order to enhance the reliability of the Sylmar Electrode System, the overhead, underground and submarine segments system will be reviewed, studied, and replaced, as necessary, to address existing deficiencies.

Specific to the underground segment, the paper insulation of the existing land cables contains insulating fluid (an oil), which over the years has migrated along the cables due to the elevation difference (500 feet) between their two end points. The oil migration has caused the cables at certain locations to have an internal pressure higher than the allowable operating pressure of 20 pounds-force per square inch gauge (psig). The high internal pressure of the cable has caused

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cable lead sheath rupture, which allows water penetration into the cables and subsequent cable failures.

Since 1970, the high internal pressures in the cables and other factors may have contributed to numerous failures. Reservoirs were added in 1981 to drain fluid from the cables to alleviate the high internal pressure. However, since 1998 there have been seven failures, two of which involved both cables failing at the same time. These failures critically jeopardize operations of the PDCI during periods of peak load, thereby limiting power delivery to the greater Los Angeles area.

In 2003, LADWP commissioned a study to evaluate the existing underground cable segment of the electrode system. The study concluded that, in its present configuration, the underground cables do not have an adequate conductor size to meet the existing rating.

In December 2005 and October 2009, visual inspections of the offshore segment of the electrode system were undertaken by a team of divers. These inspections concluded that:

- Due to the original construction and design, the cables are vulnerable to anchor damage and other physical damage due to wave action.
- The Malibu Cable has sustained the most electrical faults as a result of external damage by anchors and wave action, due to the fact that it was not buried to the same extent as the Santa Monica Cable.
- Wave action over time causes the “pigtailed” (i.e., connecting wires) on the electrode elements at the point of attachment to break open from metal fatigue.
- The submarine cables have been in place for 40 years and, due to failures, the conductors are full of seawater.

Therefore, to correct existing operational deficiencies and increase system reliability, LADWP proposes to upgrade the overhead, underground, and submarine segments comprising the Sylmar Ground Return System.

1.3 PROJECT OBJECTIVES

The objectives of the proposed Project are to 1) improve the reliability of the PDCI; 2) minimize restrictive operational conditions and failures of the Sylmar Electrode System; 3) minimize the operational risks associated with peak load conditions along the PDCI; and 4) enable future rating upgrades.

The Project would:

- Improve operation of the Ground Return System
- Improve operational flexibility of the PDCI
- Increase the emergency rating and reliability of the PDCI
- Reduce the need for system maintenance and repair

1.4 PROJECT DESCRIPTION

The Project would replace the existing electrode system from the Sylmar Converter Station to the Pacific Ocean. New features include:

- Up to 23 miles of overhead electric transmission lines
- Up to 8 miles of underground electric transmission cables, including 31 vaults in existing streets
- Up to 1.1 miles of submarine cables
- New electrode array system, including full or partial replacement of the 24 submarine vaults and electrode elements

The Project would also include the removal of the existing overhead lines and underground electrode cables, where possible.

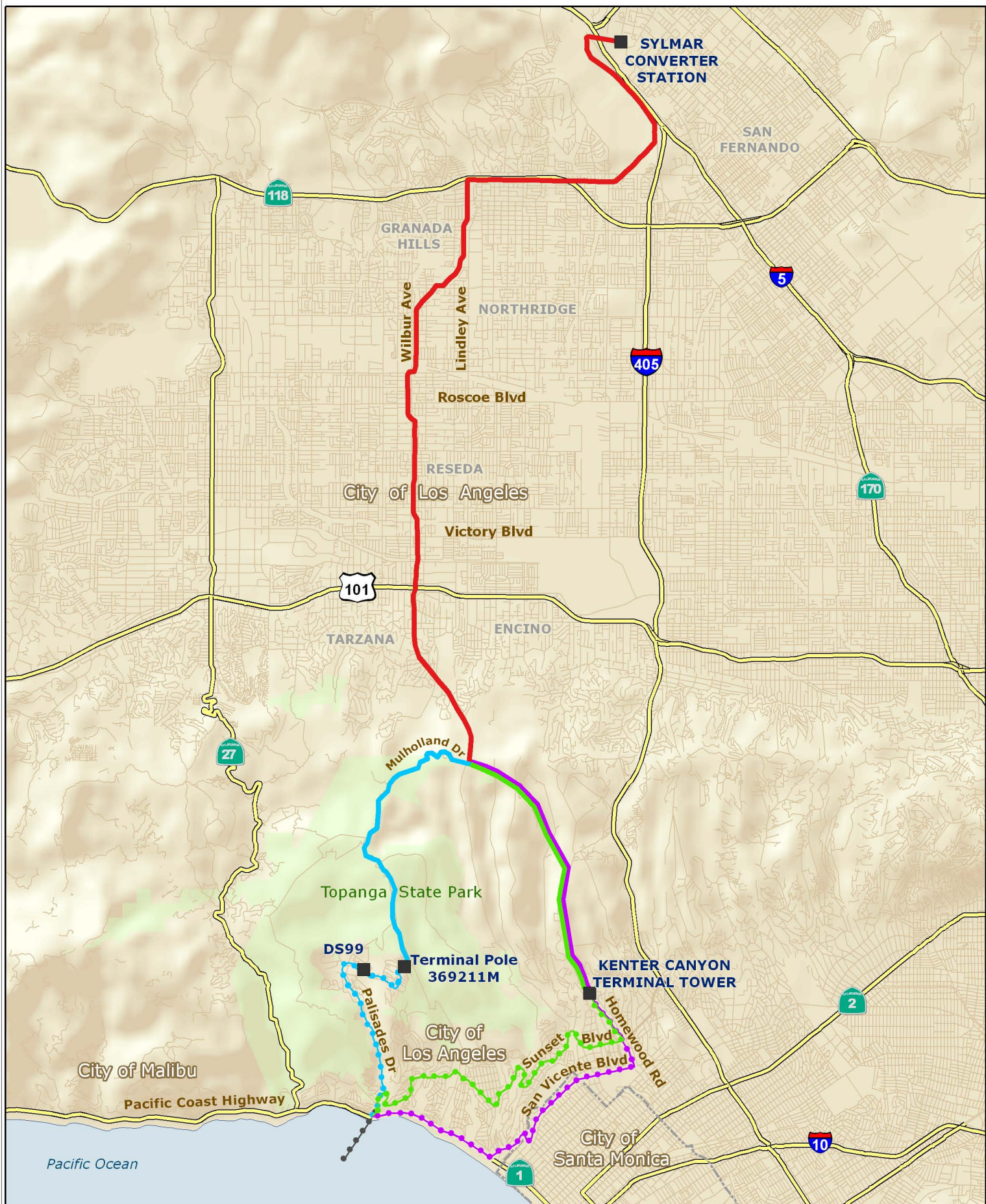
The new overhead, high temperature/low sag lines would support higher electrical ratings. The new overhead lines would have a size and weight substantially similar to the existing lines. The new underground cables would comprise two, new 4,000 Kcmil copper cables insulated with Direct Current Cross Linked Polyethylene (DC-XLPE), a plastic compound designed specifically for DC applications. The DC-XLPE compound is oil-free, unlike the existing oil impregnated paper insulation; as a result, DC-XLPE cables, in general, require substantially less maintenance and fewer inspections. The DC-XLPE insulated cables would be installed in two, 6-inch conduits encased in concrete.

In addition, LADWP is currently studying the submarine portion of the electrode system to assess the existing conditions of the ocean-based facilities, including electrode elements, cables, conduits and vaults. Based on the results of LADWP's findings, upgrades to the submarine portion of the Project could potentially comprise a full replacement of the existing submarine facilities, including the installation of new structures on or below the ocean floor.

1.4.1 Alignment Options

LADWP is currently evaluating three on-land alignments for the Sylmar Ground Return System Replacement Project. The locations of the alignments are described in further detail below and are shown in **Figure 1-3**.

A portion of the existing overhead segment, referred to as the Main Overhead Alignment, and the ocean-based portion of the electrode system, referred to as the Submarine Alignment, are common to all three alignments. The Main Overhead Alignment would originate at the Sylmar Converter Station, and would follow the same path as the existing alignment to the intersection of Mulholland Drive and Sullivan Fire Road. Also common to all three alignments are the relocation of the existing Sunset Vault and the expansion of the Gladstone Vault, located in the Gladstone Restaurant parking lot. The Sunset Vault needs to be relocated to accommodate upgraded equipment required for the Project.



Key to Features	
Overhead	Underground
Main Overhead Alignment (17.4 miles)	San Vicente Alignment (7.1 miles)
San Vicente Alignment (5.1 miles)	Topanga State Park Alignment (4.5 miles)
Topanga State Park Alignment (5.0 miles)	Sunset Alignment (8 miles)
Sunset Alignment (5.1 miles)	Submarine Alignment (1.1 miles)

Date: August 12, 2010

Proposed Project Alignments

Figure 1-3

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Located underground, the Sunset Vault is roughly aligned with the entrance to the Vons Market (17380 West Sunset Boulevard). The vault would be relocated on Sunset Boulevard. The exact location and size of the new Sunset Vault has not yet been determined; however, it is anticipated that the new vault would be located within a few hundred feet of the existing vault. New control, switching, and monitoring equipment would be installed in the relocated vault, which would connect the system to the Gladstone Vault. Equipment inside the existing Sunset Vault would be removed and recycled at the LADWP Investment Recovery Facility in Sun Valley. The existing Sunset Vault would be abandoned in place.

The three alignments under consideration by LADWP diverge from the intersection of Mulholland Drive and Sullivan Fire Road on Conservancy lands. From this portion of the Project site to each respective alignment's transition to the submarine portion of the Project, the three alignments are referred to as the San Vicente Alignment, the Topanga State Park Alignment, and the Sunset Alignment.

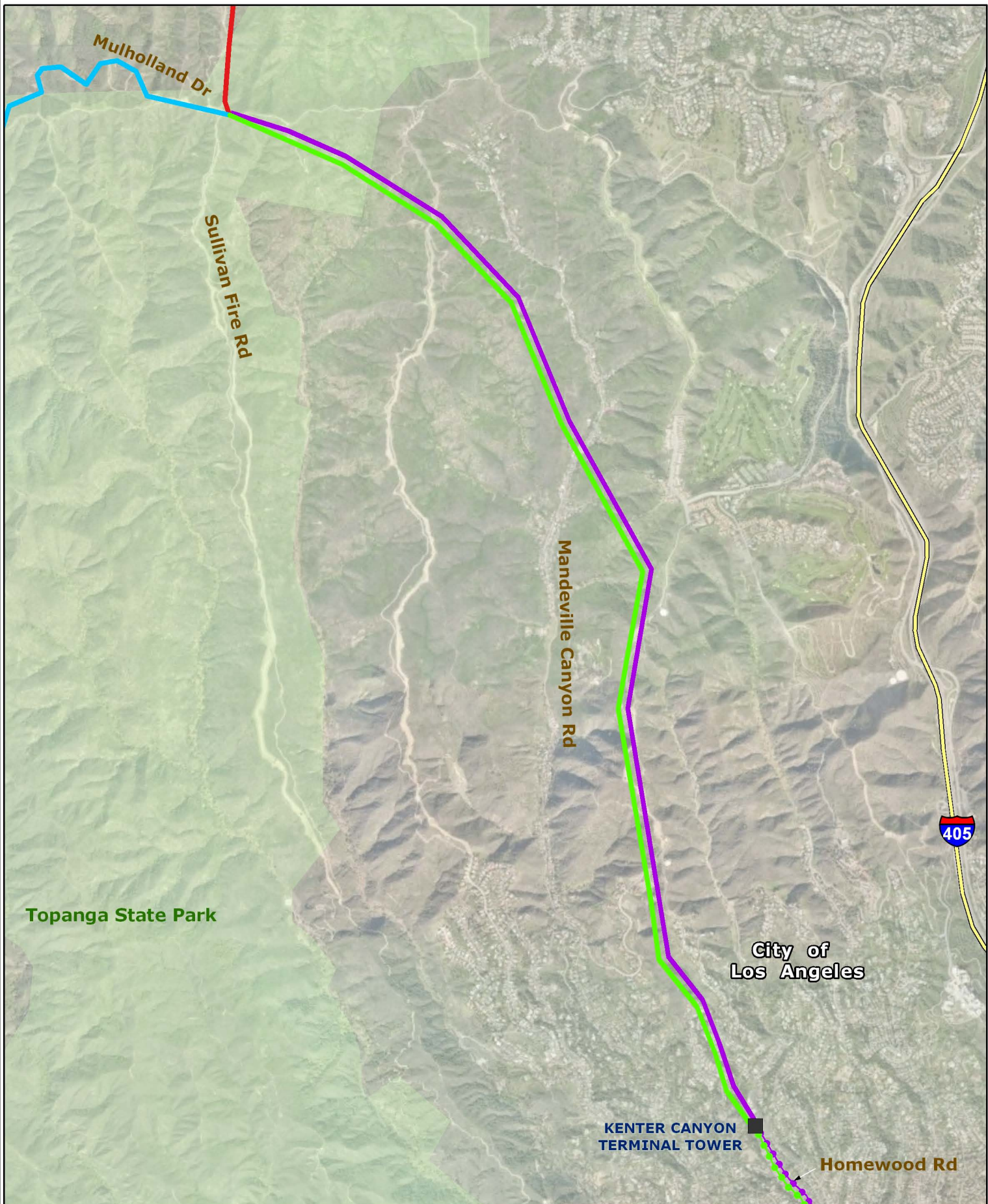
1.4.1.1 San Vicente Alignment

From the point on the Main Overhead Alignment where Mulholland Drive and Sullivan Fire Road intersect, the San Vicente Alignment would extend 5.1 miles in a southeasterly direction (following the same path as the existing alignment) to the Kenter Canyon Terminal Tower. At the Kenter Canyon Terminal Tower, the overhead lines would transition to underground cables (**Figure 1-4**). The underground cables would proceed southward along Homewood Road, south on Kenter Avenue and Gretna Green Way until meeting San Vicente Boulevard (**Figure 1-5**). From San Vicente Boulevard, the alignment would then proceed westward on the north side of San Vicente Boulevard through the City of Santa Monica to Entrada Drive until intersecting with West Channel Road. From the intersection of West Channel Road and PCH, the proposed alignment would be placed in the northernmost lane of the northbound side of PCH for approximately 2.3 miles to the new Gladstone Vault.

Between the Kenter Canyon Terminal Tower and West Channel Road the alignment would be approximately 4.8 miles in length. The PCH segment of the alignment would be approximately 2.3 miles in length. The total proposed length of the alignment would be approximately 7.1 miles.

Up to the intersection of West Channel Road and PCH, the alignment would be placed within existing roads, approximately 1 to 4 feet from sidewalk curbs. Along PCH, the cables would be placed approximately 4 to 5 feet from the northernmost lane's shoulder, depending on the location of existing underground utilities. Final placement of the underground alignment within the lane would be designed to avoid existing underground utilities.

Approximately 17 underground vaults would be placed along the alignment between the Kenter Canyon Terminal Tower and the intersection of West Channel Road and PCH. The outside dimensions of the vaults would be approximately 8 feet wide, 26 feet long and 11 feet high. The vaults would be approximately 1,500 feet apart. The tops of the vaults would be buried approximately 3 feet below the street surface. From West Channel Road, up to eight underground vaults would be constructed along PCH, for a total of 27 vaults along the San Vicente Alignment, including the enlarged Gladstone Vault. The vaults located along PCH would have the same dimensions and depth as the vaults located on surface streets.



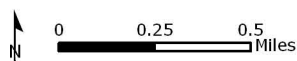
Key to Features

Overhead

- Main Overhead Alignment
- San Vicente Alignment
- Topanga State Park Alignment
- Sunset Alignment

Underground

- San Vicente Alignment
- Sunset Alignment

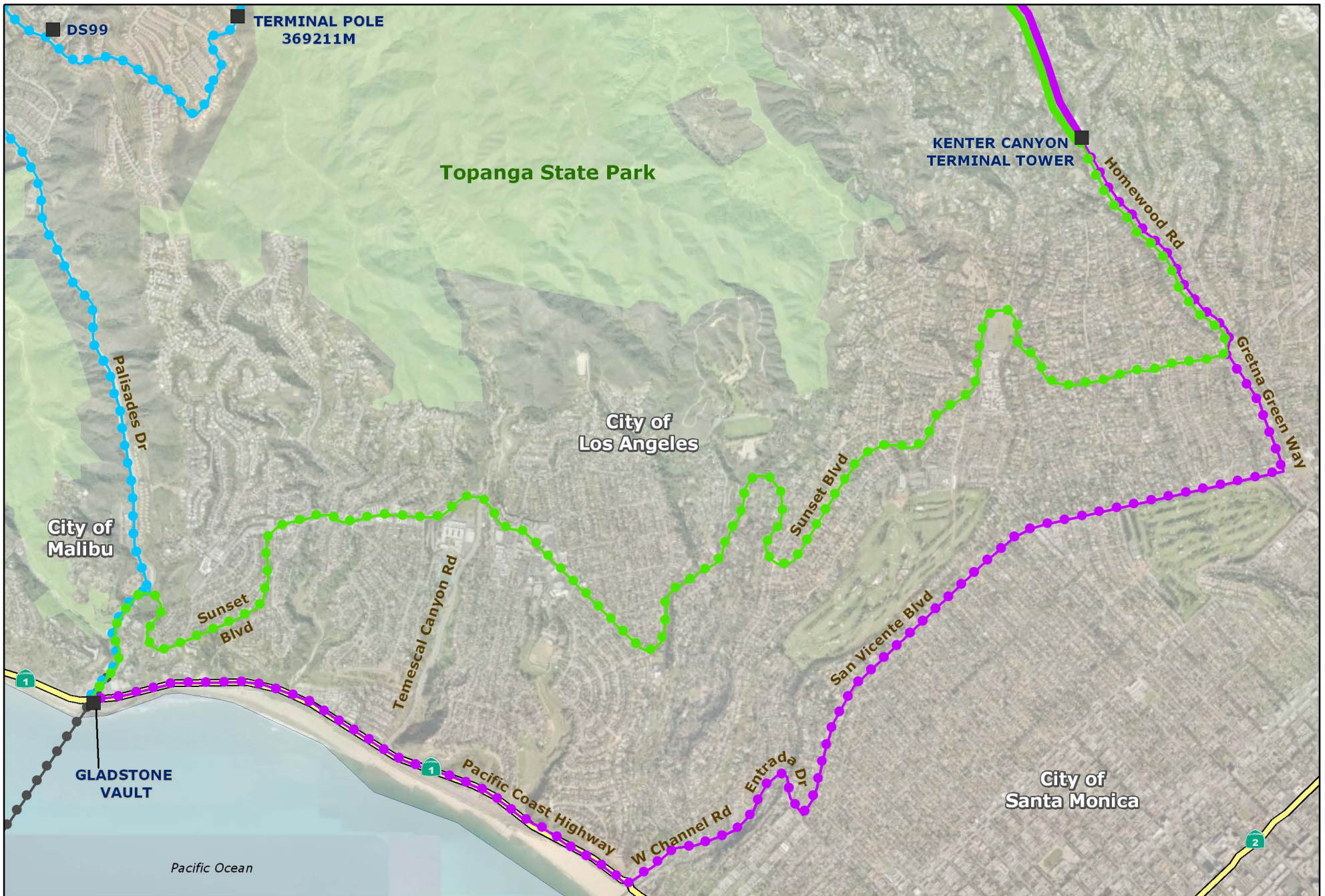


Date: June 14, 2010

San Vicente and Sunset Overhead Alignments

Figure 1-4





Key to Features

Overhead

- San Vicente Alignment
- Topanga State Park Alignment
- Sunset Alignment

Underground

- San Vicente Alignment
- Topanga State Park Alignment
- Sunset Alignment

- Submarine Alignment



Date: June 14, 2010

San Vicente and Sunset Underground Alignments

Figure 1-5



Path Name: Fig1-5_SanVicenteSunsetUC.mxd

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1.4.1.2 Topanga State Park Alignment

From the point on the Main Overhead Alignment where Mulholland Drive and Sullivan Fire Road intersect on Conservancy lands, the overhead portion of the Topanga State Park Alignment would extend westerly from Sullivan Fire Road through Topanga State Park (**Figure 1-6**). Under this alignment, the 210 wood structures (typically two poles per structure) currently supporting existing 34.5-kV lines would be removed, and new 34.5-kV lines would be connected to new cylindrical steel poles.

Approximately 63 new steel poles would be constructed. The poles would be spaced approximately 500 feet apart and would be approximately 120 feet tall, with an average diameter of 4 feet.

The new poles would follow generally the same alignment as the existing poles. The alignment of the new poles, from the intersection of Mulholland Drive and Sullivan Fire Road, would follow Temescal Fire Road, and would terminate near Terminal Pole 369211M, approximately 0.75 miles northeast of Distributing Station (DS) 99, located at 1433 Monte Grande Place in the Pacific Palisades. This portion of the overhead alignment would be approximately 5 miles long. As part of the Topanga State Park Alignment, two new conductors and three to six 34.5-kV conductors would be attached to the newly constructed steel poles.

The overhead line would transition to an underground cable near Terminal Pole 369211M. Four, 6-inch underground conduits would be installed from the terminal pole to DS 99, continue south on Palisades Drive, turn west on Sunset Boulevard, connect to the new Sunset Vault, and then continue to the Gladstone Vault. The underground portion of this alignment would be approximately 4.5 miles long. Final placement of the underground alignment within the Palisades Drive and Sunset Boulevard lanes would be designed to avoid existing underground utilities.

Approximately 14 underground vaults would be placed along Palisades Drive and Sunset Boulevard. The vaults would be spaced an estimated 1,500 feet apart and the outside dimensions of the vaults would be approximately 8 feet wide, 26 feet long, and 11 feet high; the tops of the vaults would be 3 feet below the street surface. In addition, the Sunset Vault would be replaced and the Gladstone Vault would be enlarged, for a total of 16 vaults along the Topanga State Park Alignment.

1.4.1.3 Sunset Alignment

From the point in the Main Overhead Alignment where Mulholland Drive and Sullivan Fire Road intersect on Conservancy lands, the Sunset Alignment would extend 5.1 miles in a southeasterly direction (following the same path as the existing alignment) to the Kenter Canyon Terminal Tower (**Figure 1-4**). At the Kenter Canyon Terminal Tower, the overhead line would transition to underground cables (**Figure 1-5**). The underground cables would proceed southward along Homewood Road, south on Kenter Avenue, and then would turn west on Sunset Boulevard. The underground cables would connect to the new Sunset Vault and continue to the Gladstone Vault. The underground portion of the Sunset Alignment would traverse portions of the communities of Brentwood and the Pacific Palisades in the City of Los Angeles.



Key to Features

Overhead

- Main Overhead Alignment
- San Vicente Alignment
- Topanga State Park Alignment
- Sunset Alignment

Underground

- San Vicente Alignment
- Topanga State Park Alignment
- Sunset Alignment
- Submarine Alignment



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Topanga State Park Alignment

Figure 1-6



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The underground alignment along Homewood Road and Kenter Avenue would be approximately 1 mile in length. The Sunset Boulevard segment would be approximately 7 miles long. Therefore, the underground portion of the Sunset Alignment would be approximately 8 miles in length.

The proposed underground cables would be placed in a trench approximately 5 feet deep and 2 feet wide. Final placement of the underground alignment within a lane would be designed to avoid existing underground utilities. Approximately three underground, pre-cast vaults would be placed 1,500 feet apart on Homewood Road between the Kenter Canyon Terminal Tower and the intersection of Kenter Avenue and Sunset Boulevard. The outside dimensions of the vaults would be approximately 8 feet wide, 26 feet long and 11 feet high. The tops of the vaults would be buried approximately 3 feet below the street surface. Approximately 26 additional vaults would be installed along the Sunset Alignment. In addition, the Sunset Vault would be replaced and the Gladstone Vault would be enlarged, for a total of 31 vaults along the Sunset Alignment.

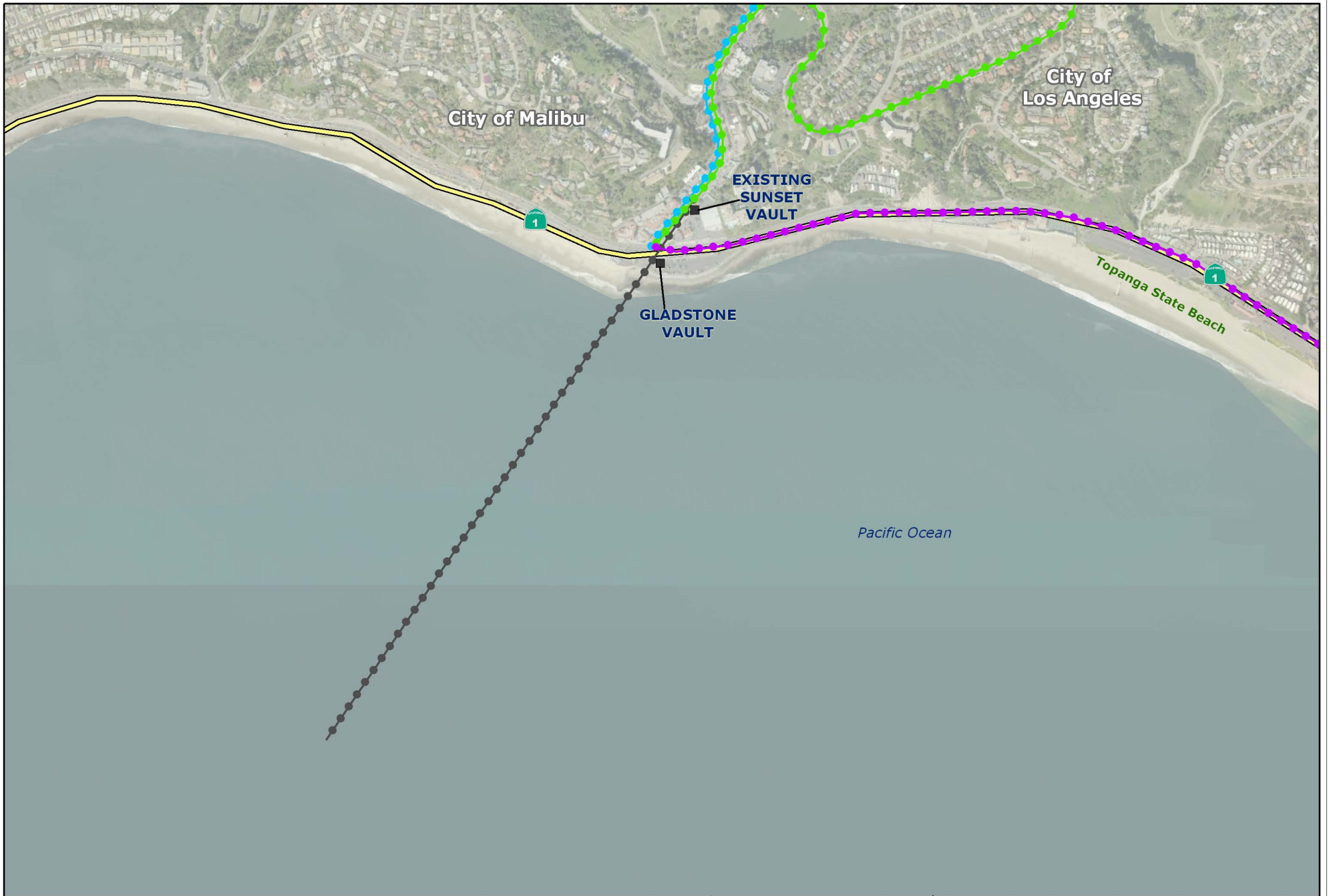
1.4.2 Submarine Alignment

The Submarine Alignment extends from the Sunset Vault to the Gladstone Vault, and then continues 6,000 feet offshore. See **Figure 1-7** for the approximate location of the alignment.

1.4.3 Environmental Setting

The proposed Project would traverse highly urbanized communities, open space areas, and the ocean floor. Summarized below is the environmental setting for each of the potential segments:

- **Main Overhead** – Approximately 17.4 miles, primarily within streets in urban areas of the City of Los Angeles and on State Park and State Conservancy lands
- **San Vicente (Overhead)** – Approximately 5.1 miles, within open space areas and within streets in residential areas in the City of Los Angeles
- **San Vicente (Underground)** – Approximately 7.1 miles, within streets in urban areas of the City of Los Angeles and the City of Santa Monica
- **Topanga State Park (Overhead)** – Approximately 5 miles, within Topanga State Park (adjacent to park roadways and across open space) and within residential areas in the City of Los Angeles
- **Topanga State Park (Underground)** – Approximately 4.5 miles, within residential areas and along a roadway that traverses open space in the City of Los Angeles
- **Sunset (Overhead)** – Approximately 5.1 miles, within open space areas and within streets in urban areas in the City of Los Angeles
- **Sunset (Underground)** – Approximately 8 miles, within streets in urban areas in the City of Los Angeles
- **Submarine** – Approximately 1.1 miles, buried beneath the floor of the Pacific Ocean



Key to Features

Underground

- San Vicente Alignment
- Topanga State Park Alignment
- Sunset Alignment
- Submarine Alignment



Date: August 12, 2010

Submarine Alignment

Figure 1-7



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1.4.4 Project Construction

1.4.4.1 New Electrode System Installation

Overhead Lines

Construction of the overhead portion of the electrode system would involve the installation of new lines on existing steel towers. Several wire-pulling sites would be located along the entire length of the overhead portion of the electrode system. Wire-pulling sites are locations where workers, equipment, and materials (including reels of the replacement wire or line) are staged on a temporary basis. From these sites, the replacement line would be pulled through the attachments on the towers in sections, ultimately stringing the line through the entire aboveground alignment.

The new line would be installed in sections by one, six-person crew. The wire-pulling sites would move along the alignment as the replacement process moved along. Where the line is installed above the road, lane closures would occur. More specifically, in areas where lines parallel the road, lanes below would be closed, along with the adjacent lane(s). Where the lines cross the road, all lanes would be closed. Installation lengths can be varied to minimize road closure durations, but closures would likely occur during the day only.

Overhead construction activities for the Main Overhead Alignment are anticipated to take approximately 6 months to complete. If selected, the overhead portion of the Topanga State Park Alignment would take an additional 6 months to complete. As discussed earlier, construction of the overhead portion of the Topanga State Park Alignment would involve construction of approximately 63 new steel poles.

Underground Cables

The proposed replacement underground cables would be placed in a trench approximately 5 to 7 feet deep and 2 feet wide. Installation of the new underground cables would include trench excavation, the placement of four 6-inch conduits (two with cables, two spares), concrete encasement, backfilling, temporary plating and road resurfacing. Backfilling would occur with cement slurry.

Installation of the new cables into the conduits would likely occur at one or two locations simultaneously. An area of approximately 1,000 square feet around each maintenance hole would be needed for equipment and crews. At a minimum, two crews, comprising 6 to 8 workers, would be needed to pull one span of cable per day. A third crew would take 5 days per vault to mount hardware and splice cables. During construction, it is anticipated that a minimum of two crews would be involved in conduit construction and vault installation, two additional crews would pull cables, and one additional crew would mount hardware and splice cables.

Due to the need for concrete encasement of the conduits and placement of a slurry backfill above the concrete encasement, all excavated material would be removed. Approximately 422,400 cubic feet (cu ft), (15,644 cubic yards [cu yd]), of trenched material would require offsite disposal and an

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additional 38,880 cu ft (1,440 cu yd) of excavated material would be permanently removed and disposed of for the underground vault excavations.

For the offshore transition, which includes the conduit and submarine cables from the new Sunset Vault to the existing Gladstone Vault, the PCH under-crossing would be constructed via a combination of directional boring and trench excavation in the vicinity of the two vaults. During directional boring, PVC or HDPE conduits would be installed at 4- to 20-foot depths through which the new submarine cables would be pulled. The boring equipment would be located on the north side of PCH. An area of approximately 1,000 square feet would be needed during construction to accommodate equipment and vehicles. The submarine cables would be pulled through the conduits under PCH from the Sunset Vault to the Gladstone Vault.

The Kenter Canyon Terminal Tower site, Receiving Station K, and/or DS 66 are possible staging areas for all construction-related equipment and materials for the San Vicente and Sunset Alignments. Receiving Station K is located at 1840 Centinela Avenue in the City of Los Angeles. DS 66 is located at 12200 San Vicente Boulevard in the City of Los Angeles. Possible staging areas for the Topanga State Park Alignment are the Kenter Canyon Terminal Tower site, DS 99, Receiving Station K, and/or DS 29, located at 15345 Sunset Boulevard in the City of Los Angeles. An additional staging area may include DS 135, located at 121 South Church Lane. All staging area sites are owned and operated by LADWP. Public access to the staging areas would be restricted by full fencing around the site with locked gates.

Submarine Cables

LADWP is currently conducting a study to determine upgrades necessary for the submarine portion of the Project for increased reliability. From the Gladstone Vault to 1,000 feet offshore, there are three existing HDPE conduits. Four new HDPE conduits would be directionally bored at a depth of 5 to 20 feet from the Gladstone Vault to 1,000 feet offshore. The new submarine cables would be pushed from the Gladstone Vault through the new conduits. From a minimum of 1,000 feet to approximately 6,000 feet offshore, the new submarine copper cables would be buried approximately 3 feet beneath the ocean floor. The study will determine other upgrades to the submarine portion of the Project, which could include full replacement of the existing facilities and installation of new structures on or below the ocean floor.

1.4.4.2 Removal of the Existing Electrode System

Main Overhead Alignment and Topanga State Park Alignment

Existing overhead lines along the Main Overhead Alignment would be removed as the new overhead lines were being installed using the same wire-pulling sites. In addition, if the Topanga State Park Alignment were selected, existing overhead lines and wood structures would be removed as new overhead lines were installed. Existing lines would be removed by cutting sections and winding them so that the old line could be hauled to the LADWP Investment Recovery Facility in Sun Valley for recycling.

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Underground Cables

While the existing overhead lines would be pulled at the same time as the new overhead lines are mounted, the removal of the existing underground cables would be undertaken following completion of the installation and final inspection and testing of the new underground cables. The existing cables would be removed by pulling them through existing maintenance holes and ducts. The existing maintenance holes are located approximately every 400 to 2,000 feet along the alignment; there are 47 maintenance holes in total. The cable pulling equipment would have a cable-chopping capability to cut the cables into 4- to 5-foot-long pieces during the removal process. The chopped cable pieces would then be transported to the LADWP Investment Recovery Facility, located in Sun Valley, for recycling.

An area of approximately 1,000 square feet around each maintenance hole would be needed for pulling equipment and crews. For each 1,500-foot segment, activities would last for approximately 3 days. One traffic lane along the existing alignment would be temporarily closed to accommodate the cable removal equipment. In total, approximately 7.5 miles (equaling approximately 790,000 pounds) of cable would be removed and recycled. With two construction crews working simultaneously, removal of the existing underground cables is anticipated to take approximately 2 months (40 working days) to complete. While the Department intends to remove all of the underground cable, access constraints and possible failures or breaks in the cable itself may limit the ability of work crews to remove the cable in its entirety. Cable that cannot be removed will remain in conduits or vaults that would be sealed from public access.

Vaults

Abandonment of the Sunset Vault would involve excavation to remove the vault cover. The vault would then be backfilled with slurry, which would take approximately 2 to 3 days to set. Once the slurry hardened, the area above the vault would be paved. Abandonment of the vault would be completed within 4 working days. A work area of approximately 100 feet by 50 feet would be required.

In addition, the existing Gladstone Vault would be expanded in place. The outside dimensions of the existing vault are 5.5 feet wide by 9.5 feet long by 9.2 feet high, and would be enlarged to 8 feet wide, 26 feet long, and 11 feet high to accommodate the electrode system upgrade, including the installation of four, 6-inch new conduits that would extend to the ocean. Construction to enlarge the Gladstone Vault would last approximately 4 to 5 days, and a work area of approximately 100 feet by 50 feet would be required. Some parking spaces could be used for staging during the enlargement of the vault.

Submarine Cables

Offshore, removal of the existing submarine cables would begin with disconnection of the two cables from the switchgear located at the existing Sunset Vault. From shore to 1,000 feet offshore, if feasible and depending on the condition of the conduits, the submarine cables would be removed in the same manner as described for the land cables. From 1,000 feet offshore to the submarine

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vaults (located approximately 6,000 feet offshore), the cables would be abandoned in place to avoid disruption of the marine sediments.

An approximately 100-foot-long work area would be needed at the existing Sunset Vault and an approximately 50-foot-long work area would be needed at the Gladstone Vault to remove the connecting cables. One traffic lane along Sunset Boulevard would be temporarily closed to accommodate the cable removal equipment. The removal operation would be as described for the land cables.

1.4.5 Construction Timeframes

It is anticipated that construction of the overhead and underground portions of the electrode system and removal of the existing system would take approximately 28 months assuming, 20 working days in each month and construction hours of 9:00 am to 3:30 pm weekdays, in accordance with the City of Los Angeles Mayor's Executive Directive No. 2 prohibiting construction during rush hours in the City of Los Angeles. LADWP is in discussions with the Los Angeles Department of Public Works and Bureau of Engineering to evaluate the feasibility of the Bureau granting a variance to Executive Directive No. 2 to allow some construction between the hours of 7:00 am and 5:00 pm. If a variance were to be granted, it would be limited in scope and the majority of the construction would be limited to the hours of 9:00 am to 3:30 pm. If a variance is granted to allow some construction during the hours of 7:00 am to 5:00 pm, the construction duration could be reduced from 28 months to a shorter period, depending on the specifics of the variance.

Each 1,000-foot segment of the underground alignment would take approximately 10 working days to complete, including construction of underground vaults located within the segment (approximately 5 to 7 days are needed to set one vault). Overall, trenching and vault placement would take approximately 18 months to complete. Cable pulling and splicing would occur over 11 months. Cable pulling activities would overlap with trenching and vault placement for an estimated 4-month period. Cable testing and commissioning of the underground cables would take approximately 1 month.

Since LADWP has not yet determined whether the Submarine Alignment will require full or partial replacement, the duration of construction has not yet been determined. Therefore, the construction timeframe for the Submarine Alignment will be further discussed in the EIR.

Inspections for quality control would occur throughout Project construction and would not add to the timeframes outlined above. Final inspection would occur following completion of all underground Project elements and would take approximately 2 weeks to complete.

1.5 PROJECT OPERATION

The completed Sylmar Electrode System would operate in the same manner as the existing facility. Each cable would be tested approximately once per year for approximately 10 to 30 minutes per test. Visual inspections would occur approximately once per year. Approximately five vaults per day would be inspected by a two-person crew.

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Maintenance and repair of the existing electrode system, and associated temporary disturbances, would be reduced due to improved design and materials. The new cables would be oil-free; therefore, the physical vulnerability associated with the existing oil-type cables would be eliminated.

1.6 PROJECT APPROVALS

Depending on the final alignment selected, construction and operation of the proposed Project may require permits and/or approvals from the following agencies:

- U.S. Army Corps of Engineers (USACE)
- National Marine Fisheries Service (NMFS)
- State Lands Commission (SLC)
- California Regional Water Quality Control Board, Los Angeles Region (Regional Board)
- California Department of Fish and Game (CDFG)
- California Coastal Commission (CCC)
- California State Parks
- Santa Monica Mountains Conservancy
- California Department of Transportation (Caltrans)
- City of Los Angeles Department of Transportation (LADOT)
- City of Los Angeles, Department of Public Works, Bureau of Engineering
- City of Los Angeles, Department of Planning
- City of Santa Monica, Planning & Community Development Department
- City of Santa Monica, Department of Public Works

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2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED


The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

<input type="checkbox"/> Aesthetics	<input checked="" type="checkbox"/> Greenhouse Gas Emissions	<input type="checkbox"/> Population and Housing
<input type="checkbox"/> Agricultural Resources	<input checked="" type="checkbox"/> Hazards and Hazardous Materials	<input type="checkbox"/> Public Services
<input checked="" type="checkbox"/> Air Quality	<input checked="" type="checkbox"/> Hydrology and Water Quality	<input type="checkbox"/> Recreation
<input checked="" type="checkbox"/> Biological Resources	<input type="checkbox"/> Land Use and Planning	<input checked="" type="checkbox"/> Transportation and Traffic
<input checked="" type="checkbox"/> Cultural Resources	<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Utilities and Service Systems
<input type="checkbox"/> Geology and Soils	<input checked="" type="checkbox"/> Noise	<input checked="" type="checkbox"/> Mandatory Findings of Significance

2.2 AGENCY DETERMINATION

On the basis of this initial evaluation:

- I find that the project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Signature: 

Title: Project Manager

Printed Name: Irene Paul

Date: September 1, 2010

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2.3 ENVIRONMENTAL CHECKLIST

2.3.1 Aesthetics

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

a) Less Than Significant Impact. Scenic vistas are those that offer high-quality – and often panoramic – views of the natural environment.

The Main Overhead Alignment crosses through highly urbanized areas. In addition, overhead portions of the San Vicente, Topanga State Park, and Sunset Alignments would traverse lands administered by California State Parks (Park lands) and the Santa Monica Mountains Conservancy (Conservancy lands), including portions of Mulholland Drive. Both the Park and Conservancy lands offer open space and wilderness views.

Underground portions of the San Vicente, Topanga State Park and Sunset Alignments also cross through urbanized areas. For the Topanga State Park and Sunset Alignments, the underground cables would cross under PCH. For the San Vicente alignment, underground cables would be installed along State Highway 1 – Pacific Coast Highway (PCH), which offers scenic vistas of the Pacific Ocean.

Scenic and natural resources, as well as the overall character of neighborhoods and communities in the Project area, are protected and regulated by the Mulholland Scenic Parkway Specific Plan, the San Vicente Scenic Corridor Specific Plan, and the Pacific Palisades Community Village and Neighborhood Specific Plan, which are part of the City of Los Angeles General Plan. The Mulholland Scenic Parkway Specific Plan would be germane to the Main Overhead Alignment, while the San Vicente Scenic Corridor Specific Plan, and the Pacific Palisades Community Village and Neighborhood Specific Plan would be relevant to the underground alternatives.

The Mulholland Scenic Parkway Specific Plan designates major vista points and prominent ridges along Mulholland Drive. A major vista point (MVP) is defined by this Specific Plan as an “area in the Mulholland Drive right-of-way...which has exceptional mountain, ocean and/or city

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views and is set aside for public use,” while a prominent ridge is defined as “a mountain ridge which is visible from Mulholland Drive” (City of Los Angeles, 1992).

There are two MVPs located within the Project area. Construction of the overhead portion of the Topanga State Park alignment may be visible in the distance looking southeasterly from the Topanga State Park MVP, while construction of the overhead portions of the San Vicente and Sunset Alignments may be visible in the distance looking southwesterly from the San Vicente Mountain Park MVP. From these locations, views of the Project would primarily consist of a crew pulling overhead lines across existing poles, reels used to store lines, and construction vehicles and equipment.

Construction activities and the use of equipment and vehicles associated with construction of the overhead alignment would result in short-term visual disruptions of the scenic vistas discussed above. However, construction activity would comprise only a small portion of the overall viewshed with regard to the areas along Mulholland Drive. In addition, since the proposed electrode system is a linear facility, construction activities would not occur at any one location for an extended period of time. Therefore, temporary impacts from construction of the Project would be less than significant.

Views within the San Vicente Scenic Corridor in the Project area primarily comprise residential neighborhoods and the Brentwood Country Club. Within the Pacific Palisades Community Village and Neighborhood Specific Plan area, portions of Sunset Boulevard, Palisades Drive, Channel Road and PCH offer residential, commercial and ocean views.

Project-related construction activities such as the use of equipment and vehicles associated with trench excavation and cable installation, reels of cable, and construction vehicles and equipment would result in short-term visual disruptions of scenic areas within the San Vicente Scenic Corridor and the Pacific Palisades Community Village and Neighborhood Specific Plan area. However, since such activities would be temporary, and given the proposed electrode system is a linear facility, construction activities would not occur at any one location for an extended period of time. Therefore, impacts to scenic vistas from construction of the Project would be less than significant.

During Project operation, the overhead portions of the San Vicente and Sunset Alignments would be the same in visual appearance as existing conditions, since replacement lines would look visually the same as existing lines and would be suspended from existing steel towers. Therefore, a less than significant visual impact would occur during Project operation.

As discussed in **Section 1.4, Project Description**, if the Topanga State Park Alignment were selected, the existing wood poles along the overhead portion of the alignment would be removed and new steel poles would be constructed as part of the Project. The new poles would be constructed generally along the same route as the existing alignment. The new poles would be 52 feet taller than the existing poles, which are approximately 48 feet in height. However, given the height of the new poles, fewer poles would be required. In addition, the new poles would be spaced 500 feet apart, which is 350 feet greater than the current spacing between the existing poles. Also, similar to the wood poles, the steel poles would be cylindrical. Therefore, given

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their thin, vertical design, the new poles would neither block nor dominate the viewshed. Rather, the new poles would occupy only a small portion of the overall landscape. The final selection of finish color would be based on community and agency input. Operation of the Topanga State Park Alignment would not present a substantial difference in appearance from existing conditions; the impact to scenic vistas would be less than significant.

Underground portions of the Project would not affect scenic views once completed since the underground cables and associated vaults would be buried. The underground and submarine portions of the electrode system would not be visible during Project operation; therefore, no impact to scenic vistas relative to these portions of the alignment would occur.

b) Less Than Significant Impact. There are no designated State scenic highways in the vicinity of the Main Overhead, San Vicente, Topanga State Park, Sunset, and Submarine Alignments (Caltrans, 2009). While PCH is eligible for designation as a State scenic highway in the area that coincides with the Project site, the roadway is not officially designated (Caltrans, 2009). Therefore, since the Project would not result in any impacts to trees, rock outcroppings, or historic structures within an officially designated State scenic highway, impacts relative to a State scenic highway would be less than significant.

c) Less Than Significant Impact. During construction, the presence of equipment and vehicles along the overhead and underground portions of the Project site would result in short-term visual impacts. However, due to the temporary nature of these changes to the visual quality of the environment, impacts would be less than significant.

During Project operation, the overhead portions of the San Vicente and Sunset alignments would be the same in visual appearance as existing facilities, since replacement lines would look visually the same as existing lines and would be suspended from existing steel towers. Therefore, a less than significant impact would result.

If the Topanga State Park Alignment were selected, the existing wood poles along the alignment would be removed and new cylindrical steel poles would be constructed. However, as discussed above, similar to the existing poles, the new poles would be cylindrical in design and would be located generally along the same route as the existing alignment.

While the new poles would be 52 feet taller than existing poles, the new poles would be spaced 500 feet apart, 350 feet greater than the spacing between the existing poles. As such, fewer poles than current conditions would be required. Since the new poles would not result in a substantial change in the existing visual character or quality of the Project site and its surroundings, a less than significant impact relative to the operation of the Topanga State Park Alignment would occur.

The underground and submarine portions of the electrode system would not be visible during Project operation. Therefore, no permanent changes to visual quality or character would occur for the underground and submarine portions of the alignment; impacts on visual character and quality would be less than significant.

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d) Less Than Significant Impact. As discussed in **Section 1.4.4**, LADWP is in discussions with the LADWP Bureau of Engineering to evaluate the feasibility of the Bureau granting a variance to Executive Directive No. 2 to allow some construction of the underground portion of the alignment during the heavy traffic hours of 7:00 to 9:00 am and 3:30 to 5:00 pm. If a variance were to be granted, the majority of the construction would be limited to the hours of 9:00 am to 3:30 pm; however, some construction could occur between 7:00 am and 5:00 pm. During autumn and winter months when the sun sets in late afternoon, the use of some lighting could be necessary. It is anticipated that any lighting used in late afternoon would be limited to vehicle headlights (e.g., haul trucks) and lights used to directly illuminate construction activities. Lighting used during construction would be directed away from residences and businesses located along the alignment. In addition, the use of lighting during construction would be temporary in nature and limited in duration for each location along the alignment. Therefore, since any new sources of light or glare would be related to short-term construction activities and vehicle travel, these construction impacts would be less than significant.

During Project operation, existing steel towers along the overhead portions of the San Vicente and Sunset Alignments would support lines that would be the same in appearance as existing lines, which do not produce light or glare. Therefore, no new sources of light or glare that could adversely affect day or night time views would result from the overhead portions of the San Vicente and Sunset Alignments.

New steel poles would be constructed under the Project if the Topanga State Park Alignment were selected. Final selection of finish color will be based on community and agency input; impacts relative to light and glare would therefore be less than significant. The new steel poles would support lines that would be the same in appearance as existing lines, which do not produce light or glare. Therefore, operational impacts of the overhead portions of the Topanga State Park Alignment would result in a less than significant impact relative to new sources of light and glare.

The underground and submarine portions of the Project, including vaults, would not be visible during Project operation and therefore would not create new sources of light or glare. Accordingly, during Project operation, no impacts relative to light or glare from the underground and submarine portions of the Project would occur.

2.3.2 Agriculture and Forest Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

Under the Farmland Mapping and Monitoring Program, the California Department of Conservation Division of Land Resources Protection maintains maps of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance to determine impacts to agricultural resources. Agricultural lands are rated and mapped by soil quality and irrigation status (California Department of Conservation, 2009).

The majority of the Main Overhead Alignment is urbanized; however, land traversed by the Main Overhead Alignment, mapped by the Department of Conservation, currently supports farming activities on lands designated as Unique Farmland. No additional Farmland is mapped along the San Vicente, Topanga State Park and Sunset Alignments.

a) Less Than Significant Impact. The Project would traverse Unique Farmland, as shown on the Los Angeles Important Farmland map developed by the California Department of Conservation Division of Land Resources Protection (California Department of Conservation, 2008a). More specifically, the Main Overhead Alignment would cross over five areas mapped as Unique Farmland:

- One of the areas is bounded by San Fernando Mission Boulevard on the north and Tribune Street on the south, with residences bordering the area on the west and a concrete-lined channel bordering the area on the east.
- A second Unique Farmland area is bounded by Tribune Street on the north and Chatsworth Street on the south, with residences bordering the area on the west and industrial buildings bordering the area on the east.
- A third Unique Farmland area is bounded by Lassen Street on the north and Citronia Street on the south, with residences bordering the area on the northwest and a concrete-lined channel bordering the area on the southeast.

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- A fourth area is bounded by Prairie Street on the north and Nordhoff Street on the south, with residences bordering the area on the west and east.
- A fifth area is bounded by Nordhoff Street on the north and Rayen Street on the south, with residences bordering the area on the west and east.

Construction of the Main Overhead Alignment would involve the replacement of overhead lines attached to existing steel towers located above land mapped as Unique Farmland. No portion of the farmland would be physically altered and no additional construction beyond the installment of the new lines and removal of the existing lines would be required. In addition, no Unique Farmland would be converted to non-agricultural use under the Project.

None of the underground portions of the San Vicente, Topanga State Park or Sunset Alignments traverse Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Therefore, Project construction would have a less than significant impact to Unique Farmland, and no impacts to Prime Farmland or Farmland of Statewide Importance would occur.

During Project operation, no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program would be converted to non-agricultural use. As such, no operational impacts would occur.

b) Less Than Significant Impact. No portion of the Project site is subject to a Williamson Act contract (California Department of Conservation, 2006). The Main Overhead Alignment would traverse five farmland areas, as discussed in **Section 2.3.2(a)**. These areas are zoned Agriculture and Public Facility by the City of Los Angeles (City of Los Angeles, 2009). Construction of the Main Overhead Alignment would involve the replacement of lines attached to existing towers. No portion of the Farmland would be physically altered by the Project and no zoning changes are proposed. Therefore, since there would be no conflict with existing zoning for agricultural use or a Williamson Act contract, Project construction and operation would result in a less than significant impact.

c) and d) No Impact. The Project is the upgrade of an existing electrode system for increased reliability. The Project does not propose any zoning changes; the replacement lines and cables would be installed along existing rights-of-way (ROW). In addition, the Project site is not located in areas mapped as forest or woodland (California Department of Forestry and Fire Protection, 2003). As such, the Project would not conflict with existing zoning or result in rezoning of forest or timberland, or result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact would occur to forest land, timberland, and timberland zoned Timberland Production.

e) Less Than Significant Impact. The proposed Project would replace existing overhead lines with new ones and existing underground cables and vaults with new ones. Construction and operation of the proposed replacement electrode system would not provide any facilities or

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services that could induce growth or otherwise change an existing land use that could directly or indirectly result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Project construction may result in a temporary disruption of farming activities with regard to access during installation of the new overhead lines and removal of the existing lines. Such disruption, if any, would be short-term due to the use of construction equipment and vehicles in the vicinity of the farmland. No permanent cessation of farming activities would result from Project implementation, and no conversion of farmland to non-agricultural use or conversion of forest land to non-forest use would occur. Therefore, the impact to farmland and forest land would be less than significant.

2.3.3 Air Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion:

a) through e) Potentially Significant Impact. The Project site is located in the portion of the South Coast Air Basin that is regulated by the South Coast Air Quality Management District (SCAQMD). The area is designated as a “Severe 17” non-attainment area for ozone (8-hour standard), a serious non-attainment area for particulate matter 10 microns or less in diameter (PM10), and a non-attainment area for particulate matter 2.5 microns or less in diameter (PM2.5) (USEPA, 2010).

The Project would involve the use of vehicles and heavy equipment during construction of the Main Overhead Alignment and the overhead and underground portions of the San Vicente, Topanga State Park, or Sunset Alignments. The vehicles and equipment would generate exhaust pollutants and could create nuisance odors. While construction of the Submarine Alignment would occur under water, trucks used to haul materials (i.e., cables, equipment, etc.) to and from an onshore staging area would also emit exhaust pollutants.

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In addition, it is assumed that excess material generated during excavation of the underground portion of the Project, not recycled by LADWP, would be hauled off-site to a yet-to-be-determined facility, thereby creating additional exhaust pollutants along the travel route. Furthermore, trenching during construction of the underground portion of the Project would result in the creation of fugitive dust. Due to the proximity of sensitive receptors such as schools and residences to the Project sites, these receptors may be exposed to both vehicle pollutants and fugitive dust during Project construction.

Given the above, since Project construction could result in a temporary increase in localized emissions that could have a regional effect on air quality and a local effect on sensitive receptors, a potentially significant impact relative to air quality could occur. Therefore, the air quality impacts resulting from Project construction will be analyzed further in an EIR and feasible mitigation measures will be incorporated, as necessary.

During Project operation, no emissions would be generated from the Sylmar Electrode System. As under existing conditions, maintenance workers would inspect Project facilities occasionally. There would be no substantial increase in vehicle trips or resultant air emissions during Project operation. Therefore, operational impacts on air quality would be less than significant.

2.3.4 Biological Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a) through e) Potentially Significant Impact. The Project site comprises urbanized lands and open space, including Santa Monica Mountains Conservancy land, that may support protected or native species or habitats, or other biological resources. Construction activities involving the overhead and underground portions of the San Vicente, Topanga State Park, and Sunset Alignments could adversely impact sensitive biological resources (e.g., direct or indirect disturbance of plant or animal species in the Project area). Therefore, impacts to biological resources will be further analyzed in an EIR. Mitigation measures will be incorporated, as applicable, to reduce impacts. Areas of further study will include potential impacts to wetlands, wildlife migration, raptor nests on existing poles, and protected trees.

In addition, for the Submarine Alignment, replacement or rehabilitation of cables and structures on or buried beneath the ocean floor may involve excavation that could impact marine species or habitats. A survey will be conducted for the submarine portion of the Project to determine potential impacts to marine biological resources; mitigation measures will be incorporated, as applicable. Therefore, construction-related impacts to biological resources are potentially significant and will be analyzed further in an EIR.

Operation of the Project will not differ substantially from existing conditions. The electrode system would not emit noise, and therefore would not disturb biological resources. Additionally, the electrode system facilities would not impede the movement of native or migratory species, since the overhead lines would be supported by steel towers or poles, underground cables and vaults would be buried, and the submarine cables and vaults or others structures would be laid on or beneath the ocean floor. As under existing conditions, on-going activities related to Project operation would be limited to infrequent inspections by maintenance workers. Therefore, no additional operational impacts to biological resources would occur.

f) No Impact. The Project site does not fall within the boundaries of any adopted Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs) (CDFG, 2009). Therefore, proposed construction and operation of the replacement electrode system and removal of the existing electrode system would not conflict with any adopted HCPs or NCCPs. Therefore, no impact would occur.

2.3.5 Cultural Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion:

a) through d) Potentially Significant Impact. Construction activities involving the Main Overhead Alignment, the overhead portions of the San Vicente and Sunset Alignments, and the Submarine Alignment are not expected to disturb known or undiscovered cultural resources. Replacement lines for the Main Overhead, San Vicente and Sunset Alignments would be mounted on existing towers, and therefore no excavation would be necessary. With regard to the Submarine Alignment, sub-sea cables and vaults would be placed offshore where no cultural resources are expected to occur. Therefore, construction of the Main Overhead Alignment, the overhead portions of the San Vicente and Sunset Alignments, and the Submarine Alignment would result in a less than significant impact to cultural resources.

Project construction of the underground portions of all three alignments would involve excavation as part of trenching activities; if the Topanga State Park Alignment were selected, excavation for the installation of the bases of the new steel poles along the overhead portion of the route would also be required. Such excavation could potentially uncover previously undiscovered cultural resources. A field study and records search will be conducted for the Project to determine potential impacts to historical, archeological and paleontological resources. Mitigation measures will be incorporated, as applicable, to reduce impacts to cultural resources. Accordingly, construction-related Project impacts to cultural resources are potentially significant and will be analyzed further in an EIR.

During Project operation, excavation would be limited to emergency maintenance activities along the underground portion of the alignment and such activities are likely to occur only in previously disturbed soils. Notwithstanding, since previously undiscovered cultural resources could be unearthed during maintenance-related excavation, a potentially significant impact could occur. Accordingly, this issue will be analyzed further in an EIR.

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2.3.6 Geology and Soils

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a)-i) Less Than Significant Impact. According to the Department of Conservation California Geological Survey, the Project site is located within areas identified as Alquist-Priolo Earthquake Zones (California Department of Conservation, 2008b). Specifically, faults are shown on the U.S.G.S. Oat Mountain, San Fernando, and Beverly Hills quadrangles in which the San Vicente, Topanga State Park and Sunset Alignments are located.

As with most of Southern California, the proposed Project site is located in a seismically active area and therefore would be subject to ground shaking and potential damage during an earthquake. However, the Project is the replacement of an existing electrode system; no habitable structures are proposed to be constructed. Overhead lines would be replaced on existing steel towers if either the San Vicente or Sunset Alignment were selected, or on new steel

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poles if the Topanga State Park alignment were selected. Underground cables and vaults would be buried. For the Submarine Alignment, cables would be laid on the ocean floor or buried. Furthermore, the proposed Project would be constructed to meet all applicable National Electrical Code (NEC) and seismic safety standards, and all trenched areas would be backfilled to meet proper shear strength requirements. Therefore, hazards associated with ground shaking would be reduced to a less than significant level with incorporation of geotechnical measures into Project design plans and specifications. Accordingly, Project impacts relative to the risk of loss, injury, or death involving earthquake rupture would be less than significant.

a)-ii) Less Than Significant Impact. As with most of Southern California, the proposed Project site would be located in a seismically active area and therefore would be subject to ground shaking and potential damage during an earthquake. However, the proposed Project is the replacement of an existing electrode system; no habitable structures are proposed. For the land-based portion of the Project, overhead lines would be replaced on existing steel towers if either the San Vicente or Sunset Alignment were selected, or on new steel poles if the Topanga State Park alignment were selected. Underground cables and vaults would be buried. For the Submarine Alignment, cables would be laid on the ocean floor or buried. Furthermore, the proposed replacement electrode system would be constructed to meet all applicable NEC and seismic safety standards, and all trenched areas would be backfilled to meet proper shear strength requirements. Therefore, hazards associated with ground shaking would be reduced to a less than significant level with incorporation of geotechnical measures into Project design plans and specifications.

a)-iii) Less Than Significant Impact. Seismic-related ground failures such as liquefaction, lurching, lateral spreading, and differential settlement can result from strong ground shaking. Liquefaction-related phenomena occur when seismic shaking of loose, saturated sand deposits temporarily lose strength and behave as a liquid. Liquefaction-related phenomena generally occur in areas of shallow groundwater (depths of 50 feet or less). The Main Overhead, San Vicente, Topanga State Park, and Sunset Alignments would cross through several areas mapped as either liquefiable, or having the potential for seismically induced liquefaction (City of Los Angeles, 1996b; City of Santa Monica, 1995a).

Seismic ground failure, including liquefaction, could particularly impact the underground portions of the alignments and steel towers in those areas with liquefiable alluvial deposits. However, the proposed electrode system would be designed and constructed to meet all applicable NEC and seismic safety standards. Additionally, all trenched areas would be backfilled to meet shear strength requirements. Removal of the existing underground cables would be completed at existing maintenance hole locations along the existing alignment.

For the San Vicente and Sunset Alignments, replacement of the existing overhead lines would not involve earth-disturbing activities. The overhead portion of the Topanga State Park Alignment is not mapped as crossing through liquefiable areas (City of Los Angeles, 1996b). Therefore, the potential for damage or failure due to liquefaction would be less than significant.

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a)-iv) Less Than Significant Impact. The proposed Project would be located almost entirely within areas mapped as having landslide potential, except for the San Fernando Valley floor portion of the Main Overhead Alignment and the underground portion of the San Vicente Alignment that would be located within the City of Santa Monica (City of Los Angeles, 1996c; City of Santa Monica, 1995b). For the Main Overhead, San Vicente and Sunset Alignments, replacement of the overhead lines would not necessitate earth disturbing activities, since lines would be mounted on existing towers. Removal of the existing underground portion of the electrode system also would not involve earth disturbing activities (e.g. trenching).

Underground cables would be buried and therefore not susceptible to landslide impacts. Furthermore, the proposed electrode system would be constructed to meet all applicable NEC and seismic safety standards, and all trenched areas would be backfilled to meet proper shear strength requirements.

If the Topanga State Park Alignment were selected, new poles would be constructed. However, during construction, each pole would be placed in a 20-foot-deep hole for the foundation pedestal, which would be round and 5 feet in diameter. In addition, the poles would be submerged in concrete to prevent movement. Therefore, the potential for damage or failure due to landslides would be less than significant.

b) Less Than Significant Impact. Removal of the old lines in the overhead portions of the Project site would not involve ground disturbance (i.e., excavation, grading). For the San Vicente and Sunset Alignments, installation of new overhead lines would not necessitate ground disturbance. However, if the Topanga State Park Alignment were selected, new poles would be constructed. Construction of the new poles would involve the excavation of 20-foot-deep holes for the foundation pedestals. During construction, water trucks would be used to keep adjacent areas damp, spoil piles would be covered and excavated soil would be immediately deposited in haul trucks to preclude soil erosion. Therefore, since no substantial soil erosion or loss of topsoil is anticipated during construction of the overhead portion of the Project, a less than significant impact would result.

For the southernmost portions of the San Vicente Alignment along PCH, the underground alignment would be placed approximately 4 to 5 feet from the northernmost lane's shoulder, depending on the location of existing underground utilities. Therefore, since excavation could occur in areas not previously paved, some loss of topsoil could occur. However, trenched areas would be backfilled and restored to previous conditions. In addition, in accordance with the State Water Resources Control Board (SWRCB) General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-0009-DWQ) for projects that disturb areas greater than 1 acre, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared and implemented for the Project. As part of the SWPPP, Best Management Practices (BMPs) would be implemented to control erosion and discharge of any polluted runoff. As such, with implementation of a SWPPP and BMPs, a less than significant impact would occur relative to soil erosion or loss of topsoil.

Construction of all the underground portions of the San Vicente, Topanga State Park and Sunset Alignments would occur in existing, paved City streets or previously disturbed areas. Once

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excavated, trenched areas would be backfilled, compacted and repaved; therefore, no substantial erosion or loss of topsoil would be expected to result and a less than significant impact would occur.

Removal of the existing underground cables would be completed at existing maintenance hole locations and would not involve any earth-disturbing activities that would result in erosion or the loss of topsoil. During Project operation, overhead lines would be suspended from towers, resulting in no earth disturbance, and underground cables would be buried and, as such, no erosion or the loss of topsoil would occur. Accordingly, replacement and removal of the overhead lines and underground cables would be expected to have a less than significant impact on erosion or loss of the topsoil.

c) and d) Less Than Significant Impact. As described above in **Section 2.3.6(a)**, a portion of the proposed Project would be located on soils that are potentially unstable. However, all Project components would be designed and constructed to meet NEC and seismic safety standards. No habitable structures are proposed under the Project. Additionally, all trenches would be backfilled to meet proper shear strength requirements. Removal of the existing electrode system would not involve any earth-disturbing activities. Therefore, potential impacts related to unstable soils, including onsite or offsite landslides, lateral spreading, subsidence, liquefaction, expansive soils, or collapse would be less than significant.

e) No Impact. The proposed Project would not involve the construction or use of septic tanks or alternative wastewater disposal systems. Construction and operation of the Project would not affect any existing septic tanks or alternative wastewater disposal systems, or disturb the soils that support such systems. The existing underground cables are located within existing public utility rights-of-way and their removal would not require any earth-disturbing activities that could affect existing septic tanks or alternative wastewater disposal systems. Access to and removal of the existing underground cables would be accomplished at existing maintenance hole locations. Therefore, there would be no impact relative to septic tanks or alternative wastewater disposal systems.

2.3.7 Greenhouse Gas Emissions

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) and b) Potentially Significant Impact. As discussed above in **Section 2.3.3, Air Quality**, Project construction could result in a temporary increase in localized emissions that could have a

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regional effect on air quality. As such, a potentially significant impact relative to greenhouse gas emissions could occur. Therefore, the air quality impacts resulting from Project construction, as well as a discussion of applicable plans, policies, or regulations relative to reducing greenhouse gas emissions, will be addressed further in an EIR, and feasible mitigation measures will be incorporated, as necessary.

During Project operation, no emissions would be generated from the electrode system. Therefore, no new Project-related sources of pollutants that could cumulatively contribute to greenhouse gas emissions would be introduced to the Project site. Accordingly, operational impacts relative to greenhouse gas emissions would be less than significant.

2.3.8 Hazards and Hazardous Materials

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

a) and b) Less Than Significant Impact. During construction of the proposed Project, small quantities of hazardous materials such as gasoline, oils, lubricants, and solvents would be required to fuel and operate construction vehicles and equipment. These materials would be contained within vessels engineered for their safe storage, and substantial quantities of these materials are not anticipated to be stored along an alignment or in staging areas.

Construction of the proposed electrode system would involve the excavation and transport of soils and paving materials (e.g., asphalt, concrete, road bed fill materials) that could possibly be contaminated by vehicle-related pollution (e.g., oil, gasoline, diesel, and other automotive chemicals) as a result of having been existing roadway underfill. All such soil and paving materials would be transported and disposed of by qualified personnel in accordance with all applicable State and federal codes and regulations.

Proposed removal of existing overhead lines and underground cables would involve chopping the removed cable into segments of 4 to 5 feet long for hauling off site. The removed pieces would then be transported to the LADWP Investment Recovery Facility in Sun Valley for recycling. Up to approximately 45 miles of overhead lines from the existing electrode system (22.5 miles of parallel lines) and nearly 15 miles of underground cable (7.4 miles of two cables) would be recycled. As referenced in **Section 1.2.2**, the existing land-based portion of the electrode system is insulated with oil-impregnated paper and is lead covered; these non-recoverable elements of the existing cables would be considered hazardous and would be handled and disposed of in accordance with the federal Resource Conservation and Recovery Act (RCRA), as well as Title 22 of the California Code of Regulations, as implemented by the California Department of Toxic Substances Control (DTSC), and either recycled or disposed of to an appropriate landfill.

Operation and maintenance of the proposed replacement underground cables would not require the use, storage, or disposal of hazardous substances. The proposed replacement cables would be oil-free.

Therefore, Project construction and operation impacts associated with routine transport, use, or disposal of hazardous materials, as well as impacts relative to reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, would be less than significant.

c) Less Than Significant Impact. Several schools are located within one-quarter mile of the Main Overhead, San Vicente, Topanga State Park, and Sunset Alignments. The removed pieces of the existing cable that would be transported to the LADWP Investment Recovery Facility to be recycled would be considered hazardous, but exposure would be avoided by transporting them in an enclosed vehicle.

The non-recoverable elements of the existing land-based cables would be handled and disposed of in accordance with the federal Resource Conservation and Recovery Act, as well as Title 22 of the California Code of Regulations, which is implemented by the DTSC. Therefore, impacts

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associated with hazardous emissions or the handling of hazardous materials, substances or waste within one-quarter mile of an existing or proposed school would be less than significant.

d) No Impact. Section 65962.5 of the California Government Code requires the California Environmental Protection Agency (CalEPA) to update a list of known hazardous materials sites, which is also called the “Cortese List.” The sites on the Cortese List are designated by the State Water Resources Control Board, the Integrated Waste Management Board, and the DTSC.

A records search of relevant federal, state, and local environmental regulatory databases, including the Cortese List, was conducted for the Project site area (EDR, 2010). The records search meets the requirements of the American Society for Testing and Materials Standard Practice for Environmental Site Assessments. The results of the records search show that there are no known hazardous materials sites that could be encountered during Project construction. Therefore, no impact relative to hazardous materials sites would occur.

e) and f) Less Than Significant Impact. The closest public airport to the Project site is the Van Nuys Airport, which is located approximately 2 miles east of the Main Overhead Alignment. The Van Nuys Airport Plan guides the long-term development of the airport; however, the plan includes only the land within the airport’s boundaries and the Main Overhead Alignment does not cross through and is not directly located adjacent to the airport (Van Nuys Airport Plan, 2006). Therefore, the Project would not be subject to the Van Nuys Airport Plan.

Installation of replacement lines and removal of existing lines along the Main Overhead Alignment would involve the use of construction vehicles and equipment. During operation, the Project would be unmanned, requiring only periodic inspection, testing and maintenance. Given the distance of the Main Overhead Alignment from the Van Nuys Airport, Project construction and operation would not result in a safety hazard for people residing or working in the Project area and, as such, impacts would be less than significant.

In addition, there are no private airports located in the vicinity of the Project. Therefore, Project implementation would have no impact on a private airstrip or result in an aviation safety hazard for people residing in the proposed Project area.

g) Potentially Significant Impact. During construction of the proposed electrode system and removal of the existing underground cables, Project-related activities could temporarily interfere with an adopted emergency response plan or a local, State, or federal agency’s emergency evacuation plan due to roadway traffic lane reductions and restrictions. Therefore, prior to construction, a Traffic Management and Control Plan would be prepared in coordination with the Los Angeles Department of Transportation (LADOT), Caltrans, and the City of Santa Monica Planning & Community Development Department (if the San Vicente alignment is chosen) to minimize impacts relative to transportation and traffic, including those impacts associated with emergency response access. Since project construction impacts relative to emergency response routes and traffic would be potentially significant, this issue will be evaluated further in an EIR.

Once operational, the proposed overhead lines would be attached to steel towers or steel poles, or located underground, and buried beneath the Pacific Ocean. Therefore, the completed electrode

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system would not interfere with emergency response or evacuation plans. Similarly, following removal of the existing underground cables, no surface street obstructions (i.e., construction vehicles) would physically interfere with emergency response or evacuation plans. Therefore, Project operation would have a less than significant impact on an adopted emergency response plan or emergency evacuation plan.

h) Less Than Significant Impact. The Main Overhead Alignment, as well as overhead and underground portions of the San Vicente, Topanga State Park, and Sunset Alignments traverse areas designated as wildland fire hazard areas (City of Los Angeles, 1996d). The northernmost portion of the Main Overhead Alignment traverses a Fire Buffer Zone. The central portion of the Main Overhead Alignment between Chatsworth Street and Ventura Boulevard crosses through urbanized areas that are not mapped as having a high fire danger risk. Between Ventura Boulevard and U.S. Highway 101, the Main Overhead Alignment traverses a Fire Buffer Zone and south of U.S. Highway 101 the alignment crosses through a Mountain Fire District.

The overhead portion of the San Vicente Alignment is located within a Mountain Fire District; the underground portion straddles both a Mountain Fire District and a Fire Buffer Zone. Both the overhead and underground portions of the Topanga State Park and Sunset Alignments traverse a Mountain Fire District.

The proposed Project would not introduce new habitable structures to the area. No welding or use of similar equipment that would produce open flames or sparks would be used during Project construction. Once the Project was completed, operation of the overhead lines and underground cables would be the same as existing conditions, and thus would not expose any people or structures to a significant risk of loss, injury or death involving wildland fires. Therefore, impacts would be less than significant.

2.3.9 Hydrology and Water Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

Surface Waters

The Project area is within the jurisdiction of the California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board), which designates beneficial uses (BU) for surface and groundwaters and identifies water quality objectives (WQO) to protect the BU, presented in a Water Quality Control Plan or Basin Plan. The Basin Plan was adopted in 1995, with amendments adopted through 2006 (Regional Water Board, 2010). The Project area is within the Basin Plan's Malibu Hydrologic Unit and the Los Angeles – San Gabriel Rivers Hydrologic Unit.

The landward section of the project area is traversed by largely intermittent surface streams. The underground portion of the project would cross, from west to east, Santa Ynez Creek, Temescal Creek, Rustic Canyon Creek, and Santa Monica Canyon Creek (Thomas Guide, 2010), all of which drain generally southward from the Santa Monica Mountains to the Pacific Ocean. Surface waters in the San Fernando Valley overhead portion of the project are the Los Angeles River and its tributaries, which flow roughly to the east.

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The coastal areas where the submarine cables would be replaced are off Will Rogers State Beach and Topanga Beach in Santa Monica Bay. BU established for Santa Monica Canyon, Santa Ynez Canyon and coastal waters are listed below.

**Table 2-1
Beneficial Uses for Santa Ynez and Santa Monica Canyons and Coastal Waters**

Beneficial Use	Santa Ynez Canyon	Santa Monica Canyon	Coastal Waters*
MUN	P	P	--
REC 1	I	Ps	E
REC 2	E	I	E
WARM	I	P	--
WILD	E	P	E
RARE	E	--	--
NAV	--	--	E
COMM	--	--	E
MAR	--	--	E
SPWN	--	--	P
SHELL	--	--	E

Source: Regional Water Board, 1995.

MUN = Municipal and Domestic Supply; REC-1 = Water Contact Recreation; REC-2 = Non- Contact Water Recreation; WARM = Warm Freshwater Habitat; WILD = Wildlife Habitat, RARE = Rare, Threatened or Endangered Species; NAV = Navigation; COMM = Commercial and Sport Fishing; MAR = Marine Habitat; SPWN = Spawning, Reproduction and/or Early Development (of fish); SHELL = Shellfish Harvesting.

P = Potential beneficial use; E = Existing beneficial use; I = Intermittent beneficial use. Ps for Santa Monica Canyon = Potential beneficial use, but access is prohibited by Los Angeles County Department of Public Works.

*Topanga Beach and Will Rogers State Beach

The Regional Water Board develops both narrative WQO and waterbody-specific WQO for selected waterbodies. Of the project area streams, the Malibu Creek Watershed and the Los Angeles River have specific WQO, presented below. WQO for coastal waters are presented in the SWRCB *Water Quality Control Plan for Ocean Waters of California (Ocean Plan)* and the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan)* (State Board, 2009). Specific marine water quality criteria are not presented in this IS, however, since marine impacts are considered to be potentially significant and will be subject to additional evaluation and study in the EIR. Waterbody-specific water quality objectives for the study area surface waters are listed below.

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Table 2-2
Waterbody-Specific Water Quality Objectives for Study Area Surface Waters

	Malibu Creek Watershed	Los Angeles River at Pacoima Wash
Total Dissolved Solids (mg/L)	2000	250
Sulfate (mg/L)	500	30
Chloride (mg/L)	500	10
Boron (mg/L)	2.0	--
Nitrogen (mg/L)	10	10

Source: Regional Water Board, 1995.

The Basin Plan also presents narrative WQO for ammonia, coliform bacteria, biochemical oxygen demand, biostimulatory substances, chemical constituents, total chlorine, color, floating material, introduction of exotic vegetation, detergents, nitrogen, oil and grease, dissolved oxygen, pesticides, pH, PCBs, radioactive substances, settleable solids, taste and odor, temperature, toxicity, and turbidity.

Groundwaters

The underground portion of the Project does not overlie a groundwater basin identified in the Basin Plan. The overhead portion overlies the San Fernando Valley groundwater basin, for which designated BU are (for San Fernando Basin west of Highway 405): Municipal and Domestic Supply, Industrial Process Supply, Industrial Service Supply, and Agricultural Supply. Specific WQO are: 800 mg/L TDS, 300 mg/L sulfate, 100 mg/L chloride and 1.5 mg/L boron.

a) and f) Potentially Significant Impact (less than significant for freshwater and groundwater; potentially significant for marine waters).

Site Dewatering. The average depth of excavation for cable installation along the underground portions of the San Vicente, Topanga State Park, and Sunset Alignments would be approximately 5 feet below street surface. The depth of excavation could be up to 11 to 12 feet below street surface at the proposed vaults. If construction occurs in areas having a high groundwater table, it may be necessary to dewater these areas during excavation. If relevant, the Project would then require a temporary SWRCB National Pollutant Discharge Elimination System (NPDES) Permit for dewatering activities during construction. LADWP would comply with all provisions of the dewatering permit to meet waste discharge requirements. Therefore, the impact would be less than significant.

Surface Water Quality. While the underground alignment would cross several streams that have designated beneficial uses and water quality objectives, and while the streams are considered waters of the State and waters of the U.S., it is proposed to use bore and jack construction under all of these drainages. As a result, there would be no impact of construction on water quality of the streams. The impact would therefore be less than significant.

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The aboveground alignment would cross the Los Angeles River and two of its tributaries, Bull Creek and Wilbur Wash, in the San Fernando Valley, but would involve replacement of overhead cables only. The Project would have no impact on river or stream water quality. Excavation of foundations for new power poles along the alignment through Topanga State Park would create soil that potentially could wash into Topanga Creek and increase its turbidity. With the implementation of BMPs in a construction SWPPP, discussed previously, the potential effects would be reduced to a level of less than significant.

Removal of the existing electrode system would be completed by pulling the lines and cables from existing steel towers and maintenance holes, respectively. No earth disturbing (e.g., trenching or grading) activities would be required as part of the electrode system removal process; therefore, activities related to removal of the existing lines and cables would not create conditions that would violate water quality standards or waste discharge requirements.

Marine Water Quality. The existing submarine facilities would be either replaced in full or in part, depending on the results of LADWP's current studies. The replacement could create turbidity, which in turn could locally degrade the benthic marine community in the immediate vicinity of the construction zone. The impact is potentially significant and will be discussed in an EIR.

Groundwater Quality. If dewatering is required for portions of the underground alignment, dewatering would not affect groundwater quality. Groundwater would not be affected in the overhead portion of the alignment and is not an issue for the submarine portion of the Project.

Operation of the proposed replacement system would be limited to periodic inspection, testing, and maintenance activities that would not involve any water discharges. As such, impacts relative to Project operation would be less than significant.

b) Less Than Significant Impact. As addressed above, in the event that groundwater is encountered during excavation for the underground portion of the Project along Sunset Boulevard, site-specific dewatering may be required. However, dewatering would not be expected to involve water quantities that would substantially deplete groundwater supplies (and there are no significant supplies in this area) or interfere with groundwater recharge, due to the short duration of trenching activities at each location along the alignment. Therefore, a less than significant impact to groundwater supplies or groundwater recharge would result during Project construction. No water supplies would be required during Project operation. Accordingly, operation-related impacts would have no impact on groundwater.

c), d), and e) Less Than Significant Impact. The underground portions of the alignments would jack and bore under existing streams and drainages traversed; therefore, there would be no impact on flooding, drainage patterns, or erosion in these watercourses. Therefore, no water bodies would be altered under the Project.

Following installation of the underground cables and vaults, all trenches would be backfilled and re-graded to restore original drainage patterns. As such, construction of the underground portion of the alignment would not permanently change runoff characteristics or alter drainage patterns,

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or result in substantial erosion, siltation, or flooding. If dewatering is required during construction of the underground portion of the alignment, all dewatering activities would be carried out in accordance with the Project's Temporary NPDES Permit. Additionally, since any necessary dewatering would occur at site-specific locations during the construction process, water discharges are not expected to involve substantial water quantities that would exceed the existing or planned capacity of the local stormwater drainage system.

Removal of the existing electrode system would involve pulling the lines and cables from existing steel towers and maintenance holes, respectively. No excavation activities would be required. Therefore, no temporary or permanent changes to the existing drainage pattern or runoff characteristics would occur during removal of the existing lines and cables.

Construction and operation of the overhead lines would not involve any grading activities; as such, existing drainage patterns would not change. Construction of the underground portion of the Project would involve temporary earthwork for trench excavation.

Given the above, proposed construction, removal and operational activities of the Project would result in a less than significant impact relative to drainage patterns and surface runoff. Additionally, since the Project would not contribute to a substantial amount of runoff water that would either exceed the capacity of existing or planned stormwater drainage systems, or create a substantial source of polluted runoff water, the impact would be less than significant impact.

g) and h) Less Than Significant Impact. These issues do not apply to the offshore structures. Portions of the Main Overhead Alignment and underground portions of the San Vicente, Topanga State Park, and Sunset Alignments traverse areas located within a 100-year flood hazard area (City of Los Angeles, 1996e). However, construction and operation of the proposed Project would not involve the construction of any habitable structures nor would it modify the characteristics of a floodplain. Therefore, no housing would be placed within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. The only new structures proposed to be constructed would be underground vaults, which would not be habitable and would be buried; as such, these structures would not impede or redirect flood flows.

Once the underground cables and vaults were installed, all existing roadways would be repaved and existing drainage flows and patterns would be restored to existing conditions. Therefore, no surface-level structures or facilities that could impede or redirect flood flows would be constructed.

Removal of the existing underground cables would not involve the construction of any facilities, above or below ground, and thus would not impede or redirect flood flows. Therefore, impacts relative to the placement of structures within a 100-year flood hazard area would be less than significant.

i) No Impact. The Main Overhead, San Vicente, Topanga State Park, and Sunset Alignments are not located within the vicinity of any levees or dams, and construction of the electrode system and removal of the existing facilities would not involve the development of any levees,

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dams, or water storage facilities. Similarly, this issue does not apply to the offshore structures. Therefore, construction and operation of the proposed Project would not expose people or structures to a significant risk of loss, injury or death involving flooding.

j) Less Than Significant Impact.

Seiches. The Project does not include the development of any bodies of standing water in which seiches (seismic standing waves in a water body) could develop; therefore, there would be no impacts from seiching.

Tsunamis. Portions of the San Vicente, Topanga State Park, and Sunset Alignments in Los Angeles are located in potential tsunami inundation areas, as mapped in the City of Los Angeles General Plan Safety Element (City of Los Angeles, 1996f). The underground portion of the San Vicente Alignment located in the City of Santa Monica would not be subject to tsunami inundation, as mapped by in the Technical Background Report for the City’s General Plan Safety Element (City of Santa Monica, 1995c). During operation of the underground portions of the Project, the underground cables and vaults would be buried and thus would not be vulnerable to the risks of inundation by tsunamis. Any damage would be repaired as required. Tsunamis would not affect the offshore portions of the Project.

Mudflows. The Project does not propose to build any habitable structures that could be affected by mudflow. Mudflows are not known from the proposed Project alignments.

Therefore, no people or structures would be exposed to a significant risk of loss, injury or death involving inundation by tsunami, mudflow, or seiche. Therefore, impacts would be less than significant.

2.3.10 Land Use and Planning

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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Discussion:

The Main Overhead Alignment traverses the communities of Sylmar, Granada Hills, Northridge, Reseda, Tarzana, and Encino, and Conservancy and Park lands. The San Vicente Alignment crosses through Conservancy lands, the Cities of Los Angeles and Santa Monica, as well as the communities of Brentwood and Pacific Palisades. The Topanga State Park Alignment traverses Conservancy and Park lands (which include Topanga State Park) and the Pacific Palisades community. The Sunset Alignment crosses through Conservancy and Park lands, and the communities of Brentwood and Pacific Palisades.

Within the jurisdictional boundaries of City of Los Angeles, the Project site would be subject to the City of Los Angeles General Plan, as well as the Community Plans for Sylmar; Granada Hills-Knollwood; Northridge; Reseda-West Van Nuys; Encino-Tarzana; and Brentwood-Pacific Palisades. Portions of the Project site located within the Coastal Zone within the City of Los Angeles would also be subject to the California Coastal Act. Within the jurisdictional boundaries of the City of Santa Monica, the portion of the San Vicente alignment that traverses the City would be subject to the City of Santa Monica General Plan. In addition, the Topanga State Park alignment would be subject to the Santa Monica Mountains State Parks Resource Management Plans and General Development Plans (California Department of Parks and Recreation, 1977). The Topanga State Park General Development Plan, contained within the Santa Monica Mountains State Parks Resource Management Plans and General Development Plans, is currently in the process of being updated (California State Parks, 2009).

a) Less Than Significant Impact. The proposed Project is the upgrade of an existing electrode system to increase reliability. The Project would have temporary, site-specific impacts on land uses during construction with regard to access for residences and businesses located adjacent to the alignment. However, construction activities would not cause the physical division of an established community. Additionally, no permanent physical barriers between existing land uses are proposed; once constructed, overhead lines would be suspended from existing towers or new steel poles, underground cables and vaults would be buried, and submarine cables and vaults would be located under water. Accordingly, the Project would not physically divide an established community or neighborhood and therefore, the impact would be less than significant.

b) No Impact. The proposed electrode system would be a public utility placed in a public right-of-way. No changes to existing land use plans or zoning ordinances are proposed; the Project would be consistent with the Zoning Ordinances of the City of Los Angeles and its General Plan and Community Plans, and the Zoning Ordinances of the City of Santa Monica (if the San Vicente alignment is chosen). Therefore, no conflicts with adopted land use plans, policies or regulations for the avoidance or mitigation of environmental effects would occur.

c) No Impact. The Project site does not fall within the boundaries of any adopted Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs) (CDFG, 2009). Therefore, proposed construction and operation of the Sylmar Electrode System and removal of the existing electrode system would not conflict with any adopted HCPs or NCCPs.

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2.3.11 Mineral Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a) and b) No Impact. The California Geologic Survey of the California Department of Conservation has classified lands in urban and developing urban areas according to the presence or absence of significant sand, gravel, or stone deposits that are suitable as sources of aggregate. These areas are called Mineral Resources Zones (MRZ). The classification system is intended to ensure that through appropriate State and local policies and procedures, mineral deposits of statewide or regional significance are considered in agency decisions. The MRZ-2 classification includes those areas where adequate information indicates that significant mineral deposits are present, or there is a high likelihood for their presence (City of Los Angeles, 1994).

Based on the map of Areas Containing Significant Mineral Deposits prepared by the City of Los Angeles, the proposed alignments, as well as the areas immediately surrounding them, are not identified as important (MRZ-2) mineral resource areas. Therefore, proposed construction and operational activities would not result in the loss of availability of a known mineral resource classified as MRZ-2, and no impact to mineral resources would occur.

2.3.12 Noise

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a) through d) Potentially Significant Impact. Construction of the Project would involve the use of heavy equipment for the transport of materials and for excavation during construction of the underground portion of the Project. All three alignment options would require excavation activities within residential and school areas, considered to be sensitive receptors. Impacts regarding noise and vibration would be potentially significant and will be analyzed further in an EIR.

e) and f) No Impact. The Project would not be located in the vicinity of a public or private airport. Therefore, the Project would not expose people living or working in the Project area to excessive noise levels.

2.3.13 Population and Housing

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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Discussion:

a) through c) No Impact. The Project is the upgrade of an existing electrode system; no extension of the existing electricity grid or an increase in electricity supply is proposed. The proposed Project would allow for energy to be safely conducted to protect existing electric systems and other structures. No habitable structures would be constructed and no housing or persons would be displaced by Project construction or operation. As such, since the Project is neither growth-inducing nor growth-accommodating, no impact relative to the displacement of housing or people that would necessitate the construction of replacement housing elsewhere would occur. Therefore, there would be no impact on population and housing.

2.3.14 Public Services

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

a)-i) Less Than Significant Impact. As discussed in **Section 2.3.7(h), Hazards and Hazardous Materials**, the Main Overhead Alignment, as well as overhead and underground portions of the San Vicente, Topanga State Park, and Sunset Alignments traverse areas designated as wildland fire hazard areas (City of Los Angeles, 1996d). Nonetheless, no habitable or other structures for human occupation are proposed under the Project that could increase the need for additional fire service in the Project area. In addition, as discussed in **Section 2.3.12, Population and Housing**, since the Project is neither growth-inducing nor growth-accommodating, no need for additional fire protection facilities or services, or changes in service ratios beyond that which currently exist, would be required. Therefore, impacts relative to maintaining current levels of fire service and the provision of new or physically altered facilities would be less than significant. A more detailed discussion of the locations of fire stations relative to the Project alignments will be addressed in an EIR to address temporary construction impacts on access.

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a)-ii) Less Than Significant Impact. As discussed above, the Project is neither growth-inducing nor growth-accommodating, and does not propose the construction of habitable or other structures for human occupation. Therefore, the Project would not reduce existing officers to population ratios or increase the demand for public police protection services. Therefore, impacts to police services would be less than significant. A more detailed discussion of the locations of police stations relative to the Project alignments will be addressed in an EIR to address temporary construction impacts on access.

a)-iii) and a-iv) No Impact. The demand for new or expanded schools or parks is generally associated with an increase in housing or population. As described above, the proposed Project would neither induce nor accommodate population growth that would require new or expanded schools or parks. In addition, the Project does not propose to construct new housing or displace existing housing or persons. Therefore, no impact to schools and parks would result from Project implementation. A more detailed discussion of the locations of schools and parks relative to the Project alignments will be addressed in an EIR to address temporary construction impacts on access.

a)-v) Less Than Significant Impact. The demand for new or expanded public facilities such as hospitals, libraries, power/data lines, and roadways is generally associated with an increase in housing or population. As discussed above, the proposed Project would neither induce population growth nor result in new housing that would necessitate the construction of new or expansion of existing public facilities, utilities or infrastructure services.

Construction of the overhead portions of the alignment would involve the installation of new lines on existing poles; the construction of additional utility poles would be required only if the Topanga State Park Alignment is selected. Final placement of the underground alignment within existing City streets would be designed to avoid any existing underground utilities; utility searches and coordination with other providers will be conducted during final design of underground facilities. Following construction of the underground portions of the Project, each segment would be backfilled, the pavement replaced, and traffic delineation (striping) restored to previous conditions. Therefore, since no permanent change to the existing roadway networks or existing utilities would occur or be required, impacts would be less than significant.

2.3.15 Recreation

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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Discussion:

a) and b) Less Than Significant Impact. The Project would not involve the construction of recreational facilities, nor require the construction or expansion of such facilities. However, the Project would be constructed adjacent to several recreational facilities in the Project area. (A more detailed discussion of the locations of recreational facilities relative to the Project alignments will be addressed in an EIR). During proposed construction activities, users of these recreational facilities would be subject to temporary disturbances, such as increased noise and traffic. These disturbances may discourage some recreational users from accessing these facilities, and as such, these users may seek out similar opportunities at other nearby recreational areas. Notwithstanding, construction disturbances would be short-term. As such, it is not anticipated that the temporary disturbances caused by construction would cause substantial physical deterioration of other parks and recreational facilities in the Project area. In addition, once operational, the Project would have no affect on recreational users or facilities; overhead lines would be suspended from existing poles and the underground and submarine portions of the alignment would be buried and under water, respectively. Accordingly, since the Project would not result in substantial physical deterioration of existing recreational facilities, or require the construction or expansion of recreational facilities, impacts would be less than significant.

2.3.16 Transportation and Traffic

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion:

a), b), d) through f) Potentially Significant Impact. Construction of the proposed Project would place construction-related vehicles on existing City streets, and include excavation in City streets to install new underground cables and vaults. The addition of vehicles and construction activities could cause an increase in traffic and could affect emergency access. For example, construction would require periodic, shifting lane closures – in some cases along streets that pass through or adjacent to residential communities. Such closures have the potential to significantly impact traffic. In addition, as discussed in **Section 1.4.4**, LADWP is in discussions with the LADWP Bureau of Engineering to evaluate the feasibility of the Bureau granting a variance to Executive Directive No. 2 to allow some construction of the underground portion of the alignment between the hours of 7:00 am and 5:00 pm (outside the hours of 9 am through 3:30 pm). Construction activities that could occur during morning and evening peak commuting times could result in additional traffic impacts. Given the Project’s anticipated effect on transportation and traffic, a potentially significant impact could occur. Therefore, traffic impacts will be analyzed further in an EIR.

c) No Impact. The project would have no impact on air traffic, because construction equipment would be below air traffic height constraints and the Project overhead segments are not near any airfields.

2.3.17 Utilities and Service Systems

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

a) Less than Significant Impact. The Project is the upgrade of an existing electrode system for increased reliability and would not require any connections to an existing sewer system. Therefore, no increase in wastewater demand would occur. Consequently, Project implementation would not result in the exceedance of wastewater treatment requirements of the Los Angeles RWQCB, since no additional wastewater would require treatment beyond current conditions. Site dewatering would be in compliance with a Temporary NPDES permit from the Regional Board. Accordingly, impacts would be less than significant.

b) and d) Less Than Significant Impact. As discussed above, construction of the Project would not result in increased wastewater treatment demand, and therefore no additional wastewater treatment beyond existing conditions would be required. The Project could require the use of limited quantities of water on a short-term basis during construction of the underground portion of the alignment for dust control; however, no water supply would be necessary during removal of the existing electrode system or during Project operation. Accordingly, the existing water supply available to the proposed Project area would not be substantially affected, and no new or expanded water supply entitlements would be needed. Impacts to water and wastewater treatment facilities would therefore be less than significant.

c) Less Than Significant Impact. Since the construction of the overhead portions of the electrode system would not require any earth disturbance, no impact to stormwater drainages would occur. Construction of the underground portions of the alignments would jack and bore under existing streams and drainages; accordingly, there would be no impact to these watercourses, and the construction of new or additional stormwater facilities would not be necessary. Therefore, a less than significant impact would occur. Removal of the existing underground cables would occur at existing maintenance hole locations and would not affect stormwater drainage facilities. Therefore, no existing drainage patterns would be permanently altered, and no new or expanded stormwater drainage facilities would be required that could cause significant environmental effects. The Project would have less than significant impact on stormwater drainage facilities.

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e) **No Impact.** Project construction and operation would not require wastewater treatment; therefore there would be no impact.

f) **Less Than Significant Impact.** The Project would generate debris during construction of the underground portions of the alignment, primarily in the form of soil spoils and pavement from roadways. Within the City of Los Angeles, solid waste management (including collection and disposal services and landfill operation) is administered by various public agencies and private companies.

While the Project would generate construction debris, recycling and on-site re-use of construction materials would occur, where feasible, to minimize the amount of construction solid waste generation. As discussed in **Section 1.4, Project Description**, during removal of the existing overhead lines and underground cables would be chopped into pieces and transported to the LADWP Investment Recovery Facility located in Sun Valley for recycling.

Upon completion of the proposed Project, no new solid wastes would be generated, and no permanent increase in solid waste generation would occur. The proposed Project would be an unmanned electrode system and would not require any additional staff to oversee facility operations. Therefore, operation of the proposed Project would not introduce any increase in solid waste contribution to the landfill facilities serving the proposed Project area. Therefore, the impact would be less than significant.

g) **Less Than Significant Impact.** Existing solid waste facilities serving the proposed Project area are anticipated to continue to provide solid waste disposal services in compliance with existing federal, State, and local statutes and regulations. As standard practice, LADWP complies with all applicable laws and regulations related to solid waste generation, collection, and disposal. Although construction and removal activities associated with the proposed Project would temporarily increase solid waste generation, these activities would not, directly or indirectly, affect the routine solid waste operations of any given landfill facility, which, by permit, must comply with applicable federal, State and local statutes and regulations. Standard LADWP recycling practices during construction and removal activities would ensure that the proposed Project would be in compliance with the California Integrated Waste Management Act of 1989 (AB 939), the County of Los Angeles Source Reduction and Recycling Element, and the County of Los Angeles Countywide Integrated Waste Management Plan. Operation of the proposed electrode system would not generate solid waste, and thus would not affect operations of the landfill facilities which serve the Project area, or their compliance with federal, State or local statutes and regulations related to solid waste. Therefore, the impact would be less than significant.

2.3.18 Mandatory Findings of Significance

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have impacts that are individually limited, but cumulatively considerable (“cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and the effects of probable future projects.)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion:

a), c) and d) Potentially Significant Impact. The Project has potentially significant impacts on air quality, biological resources, cultural resources, greenhouse gas emissions, noise, and transportation and traffic (including emergency access). These potentially significant impacts may be site-specific and/or cumulative. Accordingly, these issue areas will be analyzed further in an EIR.

b) Less than Significant Impact. The Project would result in short-term impacts from construction necessary to upgrade the existing electrode system. Project operation would have less than significant impacts on the environment. The Project would meet a long-term goal of maintaining a reliable utility service.

Section 3

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3.2 ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AC	Alternating Current
ACSR	aluminum conductor steel reinforced
Amps	Amperes
BMPs	Best management practices
BU	beneficial uses
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CCC	California Coastal Commission
CARB	California Air Resources Board
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
cu ft	cubic feet
cu yd	cubic yard
DC	Direct Current
DC-XLPE	Direct Current Cross Linked Polyethylene
DOC	California Department of Conservation
DS	Distributing Station
EDR	Environmental Data Resources, Inc.

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EIR	Environmental Impact Report
EPR	Ethylene Propylene Rubber
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
GHG	Greenhouse gas
HCP	Habitat Conservation Plan
HDPE	high-density polyethylene
IS	Initial Study
Kcmil	kilo-circular mils
kV	kilovolt
LADOT	(City of) Los Angeles Department of Transportation
LADWP	(City of) Los Angeles Department of Water and Power
mg/L	milligrams per liter
MRZ	Mineral Resource Zone
msl	mean sea level
MVP	Major vista point
MW	megawatts
NCCP	Natural Communities Conservation Plan
NPDES	National Pollution Discharge Elimination System
NEC	National Electrical Code
NMFS	National Marine Fisheries Service
PCH	Pacific Coast Highway
PDCI	Pacific Direct Current Intertie
PM2.5	particulate matter 2.5 microns or less in diameter
PM10	particulate matter 10 microns or less in diameter
psig	per square inch gauge
PVC	Polyvinyl Chloride
ROW	Right-of-way
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SLC	State Lands Commission

SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
WQO	water quality objectives

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