Initial Study/Mitigated Negative Declaration

Toluca-Hollywood Line 1 Upgrade Project

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

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CEQA Initial Study and Mitigated Negative Declaration

Toluca-Hollywood Line 1 Upgrade Project

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Acronyms and Abbreviations

AB	Assembly Bill
ACSR	aluminum conductor steel reinforced
AQMP	Air Quality Management Plan
BERD	California State Built Environment Resource Directory
BFD	Burbank Fire Department
BMC	Burbank Municipal Code
BMP	Best Management Practice
BPD	Burbank Police Department
BSA	Biological Survey Area
BWP	Burbank Water and Power
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CHL	California Historical Landmarks
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRMP	cultural resources monitoring plan
CRPR	California Rare Plant Ranks
CWA	Clean Water Act
cy	cubic yards
dB	decibel
dBA	A-weighted decibel scale
DTSC	Department of Toxic Substance Control
FESA	federal Endangered Species Act
FP	Fully Protected
FTA	Federal Transit Administration
GHG	Greenhouse Gas Emissions
GO95	General Order Number 95
HPD	Historic Properties Directory
HPPT	High-Pressure Pipe Type
HRI	Historic Resources Inventory
IPaC	Information for Planning and Consultation
kV	kilovolt
LACFD	Los Angeles County Fire Department
LADOT	City of Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
L_{eq}	Equivalent Noise Level
LAHCMs	Los Angeles Historic Cultural Monuments
LAMC	Los Angeles Municipal Code
LAPD	Los Angeles Police Department

LASD	Los Angeles County Sherriff's Department
LCY	loose cubic yards
LRA	Local Responsibility Area
LST	Localized Significance Threshold
MBTA	Migratory Bird Treaty Act
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
MVA	Megavolt-amperes
$MTCO_2e$	metric tons of carbon dioxide equivalents
NO_X	nitrogen oxide
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OHP	California Office of Historic Preservation
OSHA	Occupational Safety & Health Administration
PF	Public Facilities
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PM_{10}	particulate matter 10 microns or less in diameter
PPV	peak particle velocity
PRC	Public Resources Code
PVC	polyvinyl chloride
ROW	right-of-way
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SO_X	sulfur dioxide
SR	State Route
SRA	source receptor area
SSC	Species of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminants
TOL-HWD L1	Toluca–Hollywood 230 kV Transmission Line 1
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VdB	vibration velocity decibels
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compounds
WL	Watch List
XLPE	cross-linked polyethylene insulation

SECTION 1
PROJECT DESCRIPTION

1.1 OVERVIEW OF THE PROJECT

The City of Los Angeles Department of Water and Power (LADWP) proposes to upgrade the approximately 1.8-mile underground portion of the existing Toluca–Hollywood 230 kilovolt (kV) Transmission Line 1 (TOL–HWD L1) cable, which runs from the Nichols Canyon Terminal Tower to the Hollywood Receiving Station.

All work would be located within the road right-of-way (ROW), the confines of LADWP property, or within an easement. The proposed Toluca–Hollywood Line 1 Upgrade Project (proposed project) would include the following work:

- Trenching and installing a new underground cable adjacent to the existing underground TOL-HWD L1 alignment from Hollywood Boulevard southeast to the Hollywood Receiving Station.

- Trenching and removing the existing underground TOL-HWD L1 pipe and cable and installing a new underground pipe and cable inside the same trench alignment within Nichols Canyon Road, north of Hollywood Boulevard to the Nichols Canyon Terminal Tower.

- Splicing the new cable in Nichols Canyon Road together with the new cable south of Hollywood Boulevard and transferring the circuit to the new cable. The existing pipe south of Hollywood Boulevard would be abandoned in place.

- Raising an existing transmission tower along the existing TOL-HWD L1 and lowering a portion of an existing Burbank Water and Power (BWP) distribution line that crosses under the TOL-HWD L1.

- Making modifications to the Nichols Canyon Terminal Tower and the Hollywood Receiving Station to accommodate the system upgrade.

The proposed project would maintain the reliability of energy supply within the power system while providing the capacity to accommodate imported renewable energy coming from outside of the Los Angeles Basin. Further, the proposed project is essential to support LADWP's planned reduced reliance on its in-basin combustion-turbine electrical generation facilities while substantially increasing the use of renewable resources in an effort to achieve the long-term City goal of 100 percent clean energy by 2035.

1.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA; California Public Resources Code Section 21000 et seq.) applies to proposed projects initiated by, funded by, or requiring discretionary approvals from state or local government agencies. The proposed project constitutes a project as defined by CEQA. The CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387) Section 15367 states that lead agency "means the public agency which has the principal responsibility for carrying out or approving a project."

Therefore, as a municipal utility that will implement the proposed project, LADWP is the lead agency responsible for compliance with CEQA.

As the lead agency, LADWP must complete an environmental review to determine if implementation of the proposed project would result in significant adverse environmental impacts and to propose measures, as feasible, to eliminate or reduce any such identified impacts. LADWP has prepared a CEQA Initial Study (IS) to assist in making this determination. Based on the nature and scope of the proposed project and the evaluation contained in the IS environmental checklist (included herein), LADWP, as the lead agency, has concluded that a Mitigated Negative Declaration (MND) is the proper level of CEQA environmental documentation for the project. The IS shows that impacts caused by the proposed project are either less than significant or significant but mitigable to a less-than-significant level with incorporation of appropriate mitigation measures as defined herein. This conclusion is supported by CEQA Guidelines Section 15070, which states that an MND can be prepared when:

> …the initial study identifies potentially significant effects, but (1) revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and (2) there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

1.3 PROJECT LOCATION AND SETTING

The proposed project is made up of three components: the underground alignment, Tower 584, and BWP line. They are located south of, within, and north of the Hollywood Hills, respectively. The proposed project is situated near Interstate 5, United States (U.S.) Highway 101, California State Route (SR) 134 (SR-134), and SR-170 within Los Angeles County, California. Figure 1 displays the vicinity map of the project area and Figures 2 and 3 display overview and detailed maps for the locations of the three components. Collectively, the three components are referred to as the ‘project area’, which is the footprint of all proposed project activities.

- Underground Alignment (Figure 3a)
  - The southern portion of the proposed project (referred to as the “underground alignment”) is the approximately 1.8-mile segment of the TOL-HWD L1, which is located between the Hollywood Receiving Station and Nichols Canyon Terminal Tower just south of the Hollywood Hills and west of U.S. Highway 101.
- Tower 584 (Figure 3b)
  - The central portion of the proposed project (referred to as “Tower 584”) is located at Tower 584, adjacent to Mulholland Drive within the Hollywood Hills.
- BWP Line (Figure 3c)
  - The northern portion of the proposed project (referred to as the “BWP line”) is in the City of Burbank, west of Hollywood Way at a crossing of the BWP line located north of SR-134.

The existing TOL-HWD L1 is a 230 kilovolt (kV) circuit that spans approximately 8.5-miles and runs primarily north-south. The transmission line begins at the Toluca Receiving Station and terminates at the Hollywood Receiving Station, transitioning from an overhead to an underground conductor at the Nichols Canyon Terminal Tower (Figure 3a). The proposed project would primarily focus on an approximately 1.8-mile segment that runs underground from the Nichols Canyon Terminal Tower to the terminus at the Hollywood Receiving Station. The proposed project would raise an existing tower located along the TOL-HWD L1 and require lowering of a portion of an existing BWP distribution line that crosses under the TOL-HWD L1. Additionally, the proposed project would require modifications to the Nichols Canyon Terminal Tower and the Hollywood Receiving Station.

The Nichols Canyon Terminal Tower is located on Nichols Canyon Road, just north of Courtney Avenue, in the Hollywood Community Plan Area of the City of Los Angeles (City). The underground alignment would run from the Nichols Canyon Terminal Tower, southbound along Nichols Canyon Road to where the road intersects Hollywood Boulevard, and then continue south along North Genesee Avenue. At Fountain Avenue, the underground alignment enters the City of West Hollywood and turns east, until North Fuller Avenue. At that point, the underground alignment turns south on North Fuller Avenue until it reaches Romaine Street, where it turns east and terminates at the Hollywood Receiving Station, located at 936 North Poinsettia Place in the Hollywood Community Plan Area of the City (Figure 3a).

The trench for the new underground cable alignment would occur entirely within the public ROW, within or immediately adjacent to the existing underground alignment. The underground alignment would be situated beneath developed streets that are generally bounded by densely populated commercial and residential properties, with land uses that are typical for an urbanized area.

The existing tower (Tower 584) that is proposed to be raised is situated in the Hollywood Hills near the intersection of Mulholland Drive and Macapa Drive in the Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan Area of the City. The existing tower is located on a hillside in an area zoned for public facilities, and is generally surrounded by single-family residential uses (Figure 3b).

The existing BWP distribution line to be lowered, that crosses under the TOL-HWD L1 (i.e., between Towers 555 and 556), is situated approximately 1 mile southeast of the Toluca Receiving Station, between North Kenwood Street and North Screenland Drive, along the backyard property lines of single-family residences in the City of Burbank. LADWP owns empty lots adjacent to these residences and the BWP line is within an easement (Figure 3c).

1.4 PROJECT BACKGROUND

1.4.1 L.A.100 and LADWP Long-Term Transmission Assessment

The establishment of the LA100 Advisory Group in 2017 commenced an effort by the City to transform its electrical power supply to 100 percent renewable resources over the next two decades. LA100: The Los Angeles 100% Renewable Energy Study, jointly prepared by the National Renewable Energy Laboratory and LADWP, identified adequate transmission systems, achieved partially through new transmission facilities and partially through upgrades to existing transmission lines, as essential to the attainment of this goal. Even prior to the LA100 initiative, The LADWP 2016 Long-Term Transmission Assessment determined that upgrades to TOL-HWD L1 were needed to address system reliability, congestion management, and overload mitigation issues related to meeting demand for electrical energy. This demand is anticipated to increase substantially in coming years as various processes

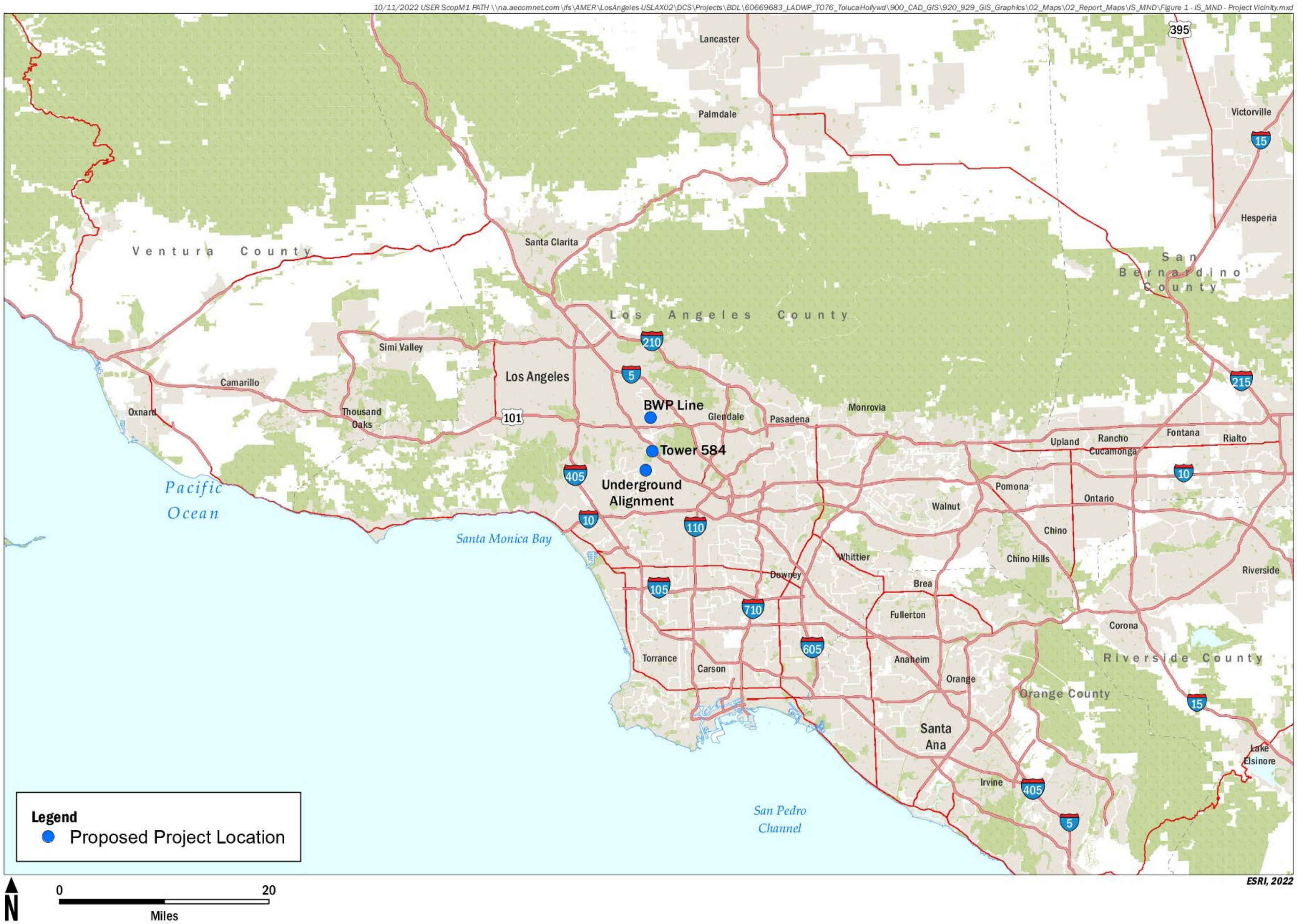

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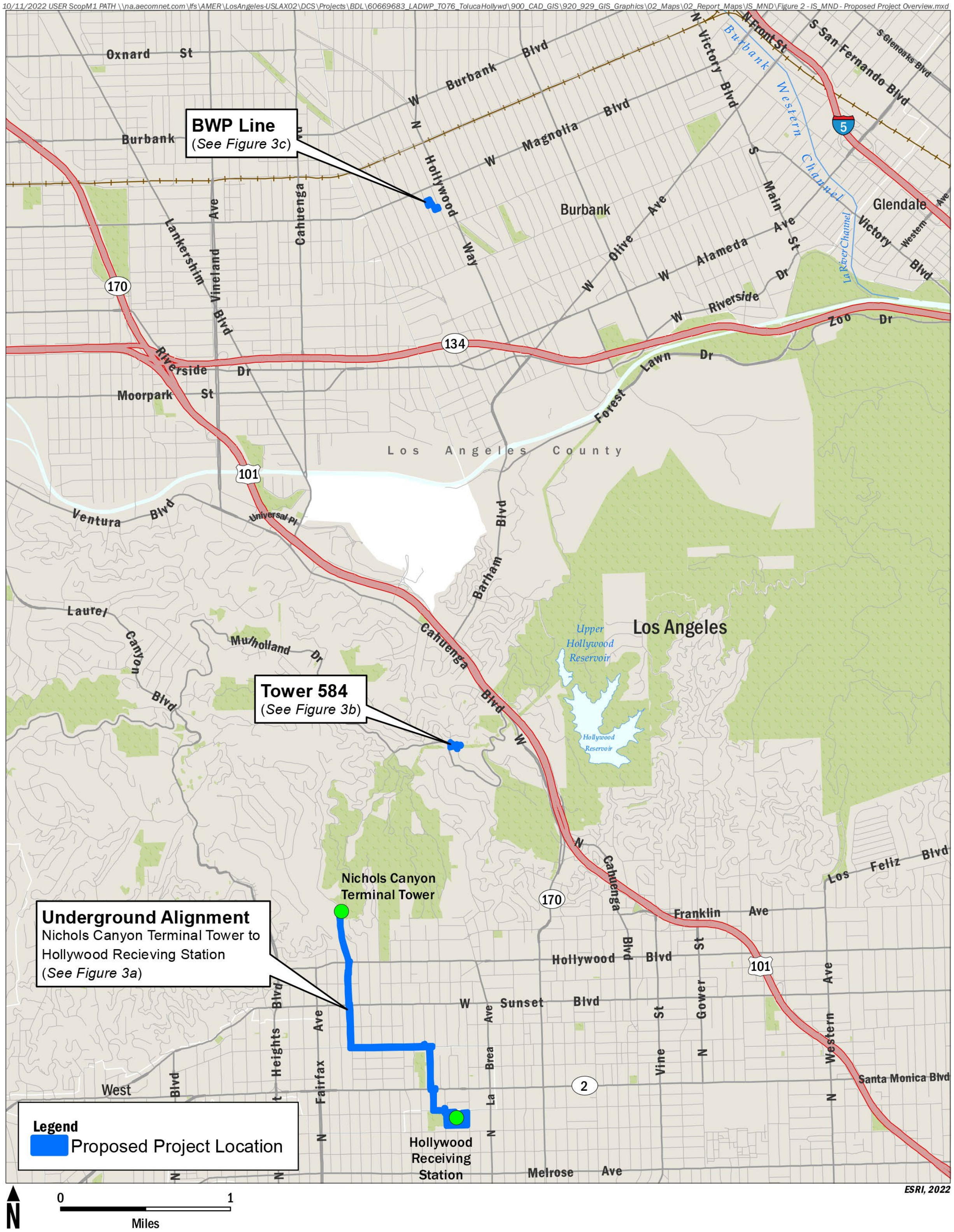
FIGURE 1

Project Vicinity Map

10/11/2022 USER ScopM1 PATH \\na.aecomnet.com\lfs\AMER\LosAngeles-USLAX02\DCS\Projects\BDL\60669683_LADWP_TO76_TolucaHollywd\900_CAD_GIS\920_929_GIS_Graphics\02_Maps\02_Report_Maps\IS_MND\Figure 2 - IS_MND - Proposed Project Overview.mxd



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LOS ANGELES COUNTY, CALIFORNIA

FIGURE 2
Proposed Project Overview

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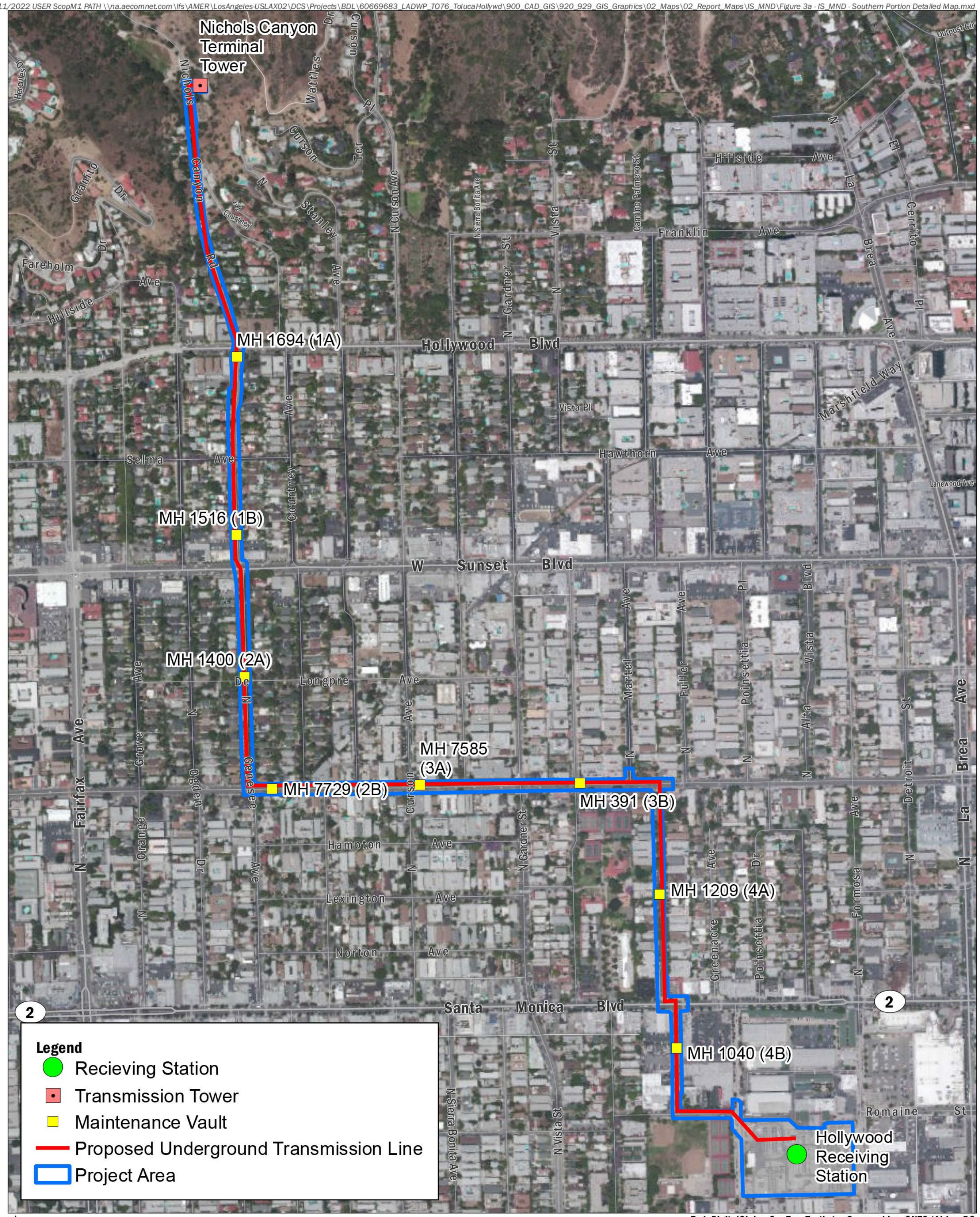

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Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, 2022

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FIGURE 3A

Detailed Map - Underground Alignment

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FIGURE 3B

Detailed Map - Tower 584

10/12/2022 USER ScopM1 PATH \\na.aecomnet.com\lfs\AMER\LosAngeles-USLAX02\DCS\Projects\BDL\60669683_LADWP_TO76_TolucaHollywd\900_CAD_GIS\920_929_GIS_Graphics\02_Maps\02_Report_Maps\IS_MND\Figure 3c - IS_MND - Northern Portion Detailed Map.mxd

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Toluca-Hollywood Line 1 Upgrade Project

LOS ANGELES COUNTY, CALIFORNIA

FIGURE 3C

Detailed Map - BWP Line

currently powered by the combustion of fuel (e.g., cooking, space heating, water heating, and the transportation sector) are electrified. Based on the commitment by the City to transition to 100 percent renewable energy resources, with a corresponding reduction in the use of combustion-turbine power generation resources, the proposed project is considered critical to maintain the reliability of the City's electrical grid.

In order to increase the use of renewable resources to meet energy demand in the central area of the City and reduce stress on the Fairfax-Hollywood transmission pathway (which is fed from the LADWP Scattergood and Harbor Generating Stations), energy must be delivered along transmission pathways connected to renewable resource generation. Renewable energy for the LADWP system currently comes predominately from sources outside the Los Angeles basin, and these sources will continue to expand to meet the future renewable energy goals of the City. Much of this renewable energy is delivered to the basin via the Rinaldi and Valley Receiving Stations in the north and east ends of the San Fernando Valley. Energy is transmitted from Valley Receiving Station via Toluca Receiving Station to Hollywood Receiving Station. Therefore, by increasing the capacity of the existing TOL-HWD L1, additional renewable energy can be delivered to Hollywood Receiving Station and the Hollywood neighborhoods of the City.

1.4.2 Existing TOL-HWD L1 Setting

The existing TOL–HWD L1 is a 230 kV circuit with 313 Megavolt-amperes (MVA) continuous rating. Volts (V) (one kilovolt, or kV, is equal to one-thousand V) represent the force used to send amperes through a conductor. MVA is a unit used for measuring apparent power. The apparent power is the product of the current and the voltage in an electrical circuit, which represents the total Active and Reactive power in an electrical circuit. The first approximately 6.7 miles (between the Toluca Receiving Station and the Nichols Canyon Terminal Tower) is an overhead aluminum conductor steel reinforced (ACSR) cable. A cable, also referred to in this document as a conductor, is one or more wires bundled together to conduct an electric current. The remainder of the transmission line, the portion which comprises the majority of the proposed project, is a circuit within an underground High-Pressure Pipe Type (HPPT) cable system. The HPPT cable system is a rigid steel pipe that contains three conductors in a pressurized oil-filled environment, and acts as both a cable and a conduit. The oil within the HPPT serves to maintain operating temperatures for the existing cable. A conduit is a tube or pipe used to protect electrical wiring, in this instance an underground transmission line.

1.5 PURPOSE AND OBJECTIVES

The proposed project is essential to support LADWP's planned reduced reliance on its in-basin combustion-turbine electrical generation facilities while substantially increasing the use of renewable resources in an effort to achieve the long-term City goal of 100 percent clean energy by 2035.

The purpose of the proposed project is to increase the overall circuit rating of TOL-HWD L1 from 313 MVA to 405 MVA continuous rating. A circuit rating is the maximum current a circuit can safely withstand for a specified time. In order to increase the circuit rating, LADWP proposes to replace aging cable infrastructure of the underground portion of the TOL-HWD L1 in approximately the same location as the existing TOL-HWD L1 HPPT cable system. The higher circuit rating of TOL-HWD L1 would result in higher conductor temperature and sag of the overhead line originating at the Toluca Receiving Station (in the North Hollywood-Valley Village Community Plan Area of the City) and spanning to Nichols Canyon Terminal Tower. The anticipated increase in temperature and resulting sag on the overhead line necessitates an increase in height for one tower and a lowering of a BWP distribution line to address California Public Utilities Commission (CPUC) General Order Number 95 (GO95) clearance requirements. The increased circuit rating of the new cable would provide greater capacity to respond to Hollywood area load requirements and would reduce stress on the Toluca-Hollywood and other (e.g., Fairfax-Hollywood, etc.) transmission pathways while providing the capacity to accommodate imported renewable energy coming from outside the Los Angeles Basin.

1.6 DESCRIPTION OF THE PROPOSED PROJECT

1.6.1 Underground Alignment

The underground alignment component of the proposed project encapsulates the following:

- Trenching and installing the new cable and associated maintenance vaults.
- Removing and replacing the existing HPPT within Nichols Canyon Road.
- Modifying the Nichols Canyon Terminal Tower and Hollywood Receiving Station.

The primary component of the proposed project is the 1.8 miles of new 230 kV cable, which would replace the existing HPPT TOL-HWD L1 cable system. This underground transmission line would consist of cross-linked polyethylene insulation (XLPE) copper conductor, an external metallic covering for moisture protection, and an outer polyethylene jacket for corrosion protection.

The new XLPE cable would be routed entirely within the public ROW, either immediately adjacent to the existing alignment (south of Hollywood Boulevard) or within the existing alignment (north of Hollywood Boulevard). Because the existing TOL-HWD L1 HPPT cable system must remain in service for as long as practical during construction of the proposed project, the proposed XLPE cable would be installed in a new trench parallel to the existing line (except for the portion of the underground alignment north of Hollywood Boulevard along Nichols Canyon Road where this is not possible, discussed further below).

South of Hollywood Boulevard, the proposed XLPE cable would be trenched underground within a concrete-encased bank, known as duct banks, and a new maintenance vault system. Eight (8) maintenance vaults would be required to splice together segments of cable during installation and provide a means for inspecting the integrity of the underground cable system during the operational phase of the line. Maintenance vaults would be spaced approximately 850 to 1,100 feet apart along the proposed underground alignment.

Between maintenance vaults, the underground alignment would be trenched to install 8-inch polyvinyl chloride (PVC) conduits, which would be encased within a concrete duct bank. Once the system of vaults and duct banks is complete, the proposed XLPE cable would be installed.

North of Hollywood Boulevard along Nichols Canyon Road the existing underground alignment would be used for the proposed XLPE cable due to space constraints from a number of existing underground utilities within Nichols Canyon Road. This would require draining and cleaning the HPPT section with heavy detergent; excavating, removing, and disposing of (recycling) the HPPT section; and then installing a new 12-inch PVC conduit and XLPE cable within the same trench. A short-term outage of approximately 5 months would be required during this work and to connect the XLPE cable to the terminal ends and to the portion of the line that is south of Hollywood Boulevard. This outage will not impact power supply to LADWP customers. The proposed XLPE cable would then be tested and energized.

Lastly, the remainder of the existing HPPT (south of Hollywood Boulevard) would be depressurized, drained, and abandoned in place.

To accommodate the system upgrade, modifications within the Nichols Canyon Terminal Tower property and the Hollywood Receiving Station would be required to connect the underground portion of the cable to associated above ground equipment. This would include the replacement of a concrete pad, subsurface support structure, and an aboveground rack at both locations. The existing pump houses and accompanying tanks would be demolished and removed at both locations, as they would no longer be supporting the HPPT. Within the Hollywood Receiving Station property, the existing pipe and cable would be abandoned and trenching for a new pipe/cable alignment (approximately 350 feet in length) would be required.

1.6.2 Tower 584 and BWP Line

The higher transmission line rating of the new underground transmission line would result in higher conductor temperature and sag of the overhead line. Analysis of operation of the increased rating identified two GO95 clearance violation locations: the first location would be from TOL-HWD L1 bottom conductor to the BWP distribution line crossing under the TOL-HWD L1 between Towers 555 and 556; and the second location would be of TOL-HWD L1 bottom conductor to ground between Towers 583 and 584. In order to resolve conductor clearance to the BWP line, BWP would lower the line (i.e., move the distribution line and other wires to a lower position on their poles). In order to resolve conductor clearance to ground between Towers 583 and 584, Tower 584 would be raised in 5-foot segments (a maximum of 15 feet) using a proprietary process that employs hydraulic jacks to lift an upper portion of the tower, requiring some foundation work at the tower footings.

1.7 CONSTRUCTION SCHEDULE

Construction for the proposed project would span approximately 3 years and is scheduled to begin in mid-2023 with an in-service date of Spring 2026. Within the approximate 3-year span, construction of the underground alignment is anticipated to occur in two parts: (1) an approximately 2-year period for the trench/conduit and vault installation (south of Hollywood Boulevard) and the Tower 584 raise, anticipated between mid-2023 and mid-2025; and (2) an approximate 6-month period (with a 5-month transmission line outage[1]) for the Nichols Canyon Road pipe replacement, the modifications at the terminal tower and receiving station, along with final connections, commissioning, and testing anticipated between late 2025 and early 2026. It should be noted the BWP line lowering would occur in advance of the approximate 3-year construction period. The BWP line lowering would be a short-duration activity of approximately 30 days.

1.8 CONSTRUCTION PROCESS

Construction of the proposed project would generally involve the sequence listed below:

1.8.1 BWP Distribution Line Lowering

1.8.2 Excavate for and install maintenance vaults

[1] It should be noted the outage of the TOL-HWD L1 would not affect electrical service to any LADWP customers. The outage has been scheduled during the winter timeframe when electricity demands are much lower as is typical practice for scheduled transmission line maintenance. During the outage customers would be served by other LADWP transmission lines.

1.8.3 Trench duct banks for new XLPE circuit alignment adjacent to existing HPPT alignment

1.8.4 Install new XLPE conduit, pull cables, and backfill trenches

1.8.5 Raise Tower 584

1.8.6 Trench existing cable and clean section of HPPT in Nichols Canyon Road and clean and remove; install new XLPE conduit in the trench and pull new cable Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station

1.8.7 Modifications to Nichols Canyon Terminal Tower and Hollywood Receiving Station

1.8.8 Connect underground alignment sections and at terminal ends, test and energize new XLPE cable, and drain and abandon remaining portion of HPPT (south of Hollywood Boulevard)

1.8.1 BWP Distribution Line Lowering

BWP would lower the distribution line by moving the distribution line and other wires to a lower position on their poles and cutting off the pole tops. All engineering, procurement and construction work would be performed by BWP. LADWP Real Estate and Right-of-Way would coordinate communication between LADWP and BWP. A crew of approximately 12 average daily workers would perform this work using tool trucks, bucket trucks, and lifts. This activity is anticipated to take approximately 30 days.

1.8.2 Maintenance Vault Installation (Underground Alignment)

The maintenance vaults would be installed within the roadway, between approximately 850 and 1,100 feet apart, along the proposed transmission line alignment. The vaults would initially be used to pull the cables through the conduits and splice cables together. During operation, maintenance vaults would provide access to the underground cables for maintenance, inspections, and repairs. Maintenance vaults would be constructed of steel-reinforced, precast concrete sections. The vaults' inside dimensions would be approximately 32 feet long, 10 feet wide, and 11 feet 4 inches deep. The walls would be approximately 12 inches thick and designed to withstand heavy traffic loading.

The typical excavation of the maintenance vault would be approximately 36 feet long (including perimeter shoring), 14 feet wide, and 15 feet deep. The top of the vault would be approximately 23 inches below the street surface. The precast sections of the maintenance vault would be delivered, lifted from the transport truck, lowered, and assembled in the excavated hole with a crane.

Each vault would take approximately 72 hours total to install, which includes excavation, shoring, base work, installation of prefabricated vaults, backfilling and plating. Installation of each vault would require a workspace the width of a road lane; utilization of flag personnel would help maintain one lane with two-way traffic flow. This would allow residents to access their homes. In some cases, street parking may be temporarily inaccessible, or sidewalk removal may be necessary on smaller residential roads in order to maintain one lane open for traffic Vault excavations would be covered with steel plates every evening until complete to allow for full usage of the affected roadway outside of work hours.

Approximately 350 cubic yards (cy) of soil would be excavated for each maintenance vault by large trucks and hauled away to an approved off-site location for disposal or reuse. As trucks are filled with the soils, they would leave the site and be replaced by empty trucks. Assuming each truck can hold 15 cy, soils from each maintenance vault would fill approximately 24 trucks. Jackhammers would be used sparingly to break up any sections of concrete that could not be reached with the saw-cutting and pavement-breaking machines.

Following installation of the maintenance vault, thermal-select or controlled backfill consisting of concrete would be poured over in the area surrounding the vault and compacted. A road base backfill or slurry concrete cap would be installed, and the road surface would be restored. Each maintenance vault would have two access openings sealed with cast iron covers that would be visible from the street.

1.8.3 **Trenching for Duct Banks** (Underground Alignment)

The underground transmission line would be installed using open-cut trenching techniques that would require an approximately 10- to 15-foot-wide temporary construction corridor. The excavation would start with the removal of the concrete/asphalt by saw-cutting and breaking.

The typical trench for duct bank installation would be approximately 30 inches wide and 72 inches deep; trench depths vary depending on soil stability and presence of existing substructures. The trench would be widened and shored where needed to meet California's Occupational Safety and Health Administration safety requirements.

Each construction crew would trench an approximately 0.5-mile segment per week. Up to three crews would conduct trenching operations so that concurrent trenching would occur along various points of the transmission line alignment; a length of approximately 525 feet of trenching per day is anticipated. Areas that are trenched or excavated would be covered with steel plates every evening until the road surface is restored; this would allow for full usage of the affected roadway outside of work hours. When segments of the trench are restored, more trenching would occur further down the street until the conduit system is installed for the entire alignment. Provisions for emergency vehicle and local access would be provided.

Approximately 5,348 total cy of soil would be removed from the trench excavations along the underground alignment (south of Hollywood Boulevard) by large trucks and hauled away to an approved off-site location for disposal or reuse. Similar to installation of maintenance vaults, as trucks are filled with the soils, they would leave the site and be replaced by empty trucks. Approximately 357 total truck trips would be required to export the soil associated with this trenching. Jackhammers would be used sparingly to break up any sections of concrete that could not be reached with the saw-cutting and pavement-breaking machines.

As the duct bank trench for the underground transmission is excavated, the conduits, reinforcement bar, and concrete conduit encasement would be installed. Similar to the maintenance vaults, thermal-select or controlled backfill consisting of concrete would be poured over the conduits and compacted. A road based backfill or slurry concrete cap would be installed, and the road surface would be restored. The conduit bank would be approximately 30 to 42 inches below ground surface, measured from the street surface to the top of the conduit bank, and encased in concrete.

1.8.4 **Cable Pulling** (Underground Alignment)

Once the conduit is in place, cable segments between two maintenance vaults would be pulled into the ducts. A cable reel would be placed at one maintenance vault, and a winch truck would be placed at the other maintenance vault. With a rope, a larger steel line would be pulled into the duct. The steel line would be attached to a cable-pulling eye for pulling. To ease pulling tensions, a lubricant would be applied to the cable as it enters the duct. Generally, three cable spans between two maintenance vaults would be installed per day and would require the closure of up to two lanes.

1.8.5 Tower 584 Raise

The tower located near the intersection of Mulholland Drive and Macapa Drive (Figure 3b) would be raised in 5-foot segments (to a maximum 15 feet) through the use of a proprietary process that employs hydraulic jacks (cylinders) to lift an upper portion of the tower from a position attached to the interior of the main tower column. The necessary components used in this process, including hydraulic cylinders and structural bracing members, would be delivered to the tower site on a flatbed truck or trailer. A boom truck would be used to raise materials and equipment up to the tower pad from Macapa Drive.

Foundation work at Tower 584 would also be required to accommodate the raise. Approximately 30 cy of soil would be excavated, requiring 5 dump truck trips to export soil from the site and 5 concrete trucks to pour a new foundation.

Approximately 30 construction workers over a period of about 50 working days would be required for this work. The action of raising Tower 584 would occur over a period of 6 days. The Sunnydell Trail street area (just north of Macapa Drive) would be used for equipment and materials laydown. Macapa Drive would be restricted as needed for material unloading and staging of equipment; however, utilization of flag personnel will ensure local and emergency access is maintained.

1.8.6 **Trench Existing Section of HPPT in Nichols Canyon Road and Clean and Remove; Install New XLPE Conduit in the Trench and Pull New Cable** (Underground Alignment)

The following work would occur during the short-term outage of TOL-HWD L1:

North of Hollywood Boulevard along Nichols Canyon Road, the existing underground alignment would be used for the proposed XLPE cable due to space constraints from a number of existing underground utilities within Nichols Canyon Road. This would first require accessing the HPPT from two endpoints (one at Nichols Canyon Terminal Tower and one at N. Genessee Ave at the intersection of Hollywood Boulevard) to cut and remove the existing cable, drain the pipe section, followed by cleaning the pipe section with heavy detergent. The existing HPPT alignment within Nichols Canyon Road would then be trenched (a length of approximately 1,600 linear feet between Hollywood Boulevard and the Nichols Canyon Terminal Tower) and the drained and cleaned HPPT pipe section would be removed and recycled at an approved off-site location.

The trenching details for this section of the pipe would be similar to that described above in subsection 1.8.3. The Nichols Canyon section of the pipe will include: open-cut trenching requiring a 10 to 15-foot-wide construction corridor for a trench of approximately 30 inches wide and 72 inches deep; trenching of approximately 0.5-mile segments per week; use of steel plates every evening until the road surface is restored; incremental installation of conduit, reinforcement bar, and final backfilling and road surface restoration; etc.). However, instead of concrete-encasement around 8-inch PVC conduits (as would be installed south of Hollywood Boulevard), the new XLPE cable within Nichols Canyon Road would instead be installed within a 15-inch PVC conduit due to the space constraints. Because no concrete encasement would be installed within this section, there would be no need to export the excavated soil from the trench or to import any concrete. Excavated soil would temporarily be stockpiled within the construction corridor/street while the new PVC conduit is installed, which would be protected from erosion through the use of waddles, gravel bag barriers, etc., and would be used to backfill the trench following incremental installation of the PVC conduit.

1.8.7 Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station (Underground Alignment)

The following work tied to the Nichols Canyon Terminal Tower and Hollywood Receiving station modifications would require approximately 6 months, the majority of which would need to occur within the same short-term (5-month) outage of the TOL-HWD L1 that is required for construction of the proposed project:

Within the Nichols Canyon Terminal Tower property, some modifications would be required for connection of the proposed upgraded underground portion of the TOL-HWD L1 cable to associated above ground equipment. In addition to trenching the HPPT and replacing it with a new pipe and cable (discussed above), the modifications at Nichols Canyon Terminal Tower include replacement of the existing concrete pad and support structure of the existing TOL-HWD L1 rack, removal and replacement of the aboveground TOL-HWD L1 rack/equipment, and subsurface structural supports. For the replacement of the concrete pad and support structure of the existing Nichols Canyon Terminal Tower structures, the above ground equipment would be disassembled, removed, and disposed of at the closest facility that is able to accept such materials. An area of concrete that is 15 feet by 30 feet and one foot thick would be removed and replaced, which would require approximately 450 cy of material to be hauled off site (approximately 30 truck trips). A new concrete foundation would be poured (approximately 450 cy) and the TOL-HWD L1 rack would be reconstructed with new equipment that would be rated for the upgraded line (e.g., new potheads, rack, trifurcator, etc.). In order to support the new pothead structure, four 3-foot diameter concrete piers would be embedded into the ground, between 12 and 15 feet deep.

Additionally, the existing pump house and accompanying tank within the Nichols Canyon Terminal Tower would be demolished and removed, as they would no longer be supporting an oil-filled cable. The pump house and tank equipment would be disconnected from the existing pipe and disposed of in accordance with applicable rules and regulations for the handling of such materials. The pump house would be taken apart or demolished, and the tank would be removed and disposed of accordingly.

Within the Hollywood Receiving Station property the existing, approximately 360 feet of HPPT would be drained, the cable removed, and pipe abandoned. Draining of the HPPT would be performed by vacuum and tanker trucks and the oil would be disposed of in conformance with applicable federal, state, and local regulations. Trenching for a new pipe/cable alignment (approximately 350 feet in length) would be performed. The new pipe/cable work would include replacement of the concrete pad and support structure of the existing TOL-HWD L1 rack (which would be demolished and replaced) for connecting the underground portion of the cable to associated above ground equipment. Trenching within the Hollywood Receiving

Station would require similar excavation dimensions as discussed previously for the underground alignment (i.e., trench of approximately 30 inches wide and 72 inches deep). The new pipe/cable alignment (approximately 350 linear feet) would require the same conduit installation described for the underground alignment that would be south of Hollywood Boulevard (i.e., concrete-encased bank), which would result in the removal of approximately 244 cy of excavated soil from the Hollywood Receiving Station. Soil would be hauled away to an approved off-site location for disposal or reuse. Approximately 17 truck trips would be required to export the soil associated with this trenching. For the replacement of the concrete pad and support structure of the existing TOL-HWD L1 rack, the above ground equipment would be disassembled, removed, and disposed of at the closest facility that is able to accept such materials. An area of concrete that is 15 feet by 30 feet and one foot thick would be removed and replaced, which would require 450 cy of material to be hauled off site (approximately 30 truck trips). A new concrete foundation would be poured (approximately 450 cy) and the TOL-HWD L1 rack would be reconstructed with new equipment that would be rated for the upgraded line (e.g., new potheads, rack, trifurcator, etc.). In order to support the new pothead structure, four 3-foot diameter concrete piers would be embedded into the ground, between 12 and 15 feet deep.

The existing pump house and accompanying tank within the Hollywood Receiving Station would be demolished and removed, as they would no longer be supporting an oil-filled cable. The pump house and tank equipment would be disconnected from the existing pipe and disposed of in accordance with applicable rules and regulations for the handling of such materials. The pump house would be taken apart or demolished, and the tank would be removed and disposed of accordingly.

1.8.8 Connect Underground Alignment Sections and at Terminal Ends, Test and Energize New XLPE Cable, and Drain and Abandon Remaining Portion of HPPT (Underground Alignment)

Following installation of the new XLPE conduit within Nichols Canyon Road and within the Hollywood Receiving Station, the underground alignment segments would be spliced together and the XLPE cable would be connected to the terminal ends. Following the connections the proposed XLPE cable would then be energized and tested and the remainder of the existing HPPT cable system (from Hollywood Boulevard to the Hollywood Receiving Station) would be depressurized, drained, and abandoned in place (i.e., capped at both ends). In total approximately 1,900 cubic feet of oil would be drained from the HPPT. Draining of the HPPT would be performed by vacuum and tanker trucks and the oil would be disposed of in conformance with applicable federal, state, and local regulations.

Commissioning and testing (at the very end of the short-term outage) would occur over the whole extent of the underground alignment with testing conducted between two to four maintenance vaults at a time. These activities require a lane closure at each vault for approximately two to three hours.

1.9 CONSTRUCTION DURATION, WORKFORCE, AND EQUIPMENT

The City of Los Angeles Rush Hour Ordinance limits in-street construction on weekdays to the hours of 9:00 a.m. through 3:30 p.m. Construction hours would be Monday through Friday from 9:00 a.m. to 3:30 p.m., and Saturday from 8:00 a.m. to 6:00 p.m.

To maintain traffic flow, minimum 12-foot-wide corridors would be maintained for traffic to pass. It is anticipated that up to two traffic lanes would be closed for the installation of the conduit bank and/or maintenance vaults. A Traffic Control Plan would be prepared to minimize disruption to traffic flow. Table 1-1 lists the anticipated lane closures for these construction activities.

Table 1-1. Estimated Lane Closure Durations for Installation of Conduit Bank, Maintenance Vaults, and Cables

Affected Street	Approximate Duration (Trenching/Conduit Bank/Cable Installation-related Closures)	Approximate Duration (Maintenance Vault Installation-related Closures)
Nichols Canyon Road	26 days	--
North Genesee Avenue	44 days	45 total days (3 vaults)
Fountain Avenue	44 days	45 total days (3 vaults)
North Fuller Avenue	26 days	30 total days (2 vaults)
Santa Monica Boulevard	9 days	--
Romaine Street	9 days	--
North Poinsettia Place	9 days	--

The type of equipment used, personnel, and activity timing/duration for the various construction activities of the proposed project are summarized in Table 1-2.

Table 1-2. Equipment, Personnel, and Duration Required for Construction Activities

ACTIVITY	BWP Line Lowering	Maintenance Vault Installation	Trenching and Duct Bank Installation	Installation of New XLPE Cable, Cable Pulling, and Splicing	Tower 584 Raise	Nichols Canyon Road (Trench Existing HPPT, Clean and Remove Pipe, Install Conduit New XLPE Cable/Pull New XLPE Cable, and Splicing)	Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station	Cable Splicing, Connect Terminal Ends, Drain and Abandon Remaining HPPT, Commissioning and Testing
EQUIPMENT	3 Tool Trucks 2 Bucket Trucks 2 Lifts	2 Excavators 24 Dump Trucks 1 Water Truck 8 ¾-ton Pickup Trucks 1 Asphalt Paver 2 Compaction Rollers 1 Crane (250 ton hydraulic) 20 Concrete Pump Trucks 8 Backhoes 8 Tool Trucks 2 Stake Beds	2 Excavators 24 Dump Trucks 1 Water Truck 8 ¾-ton Pickup Trucks 1 Asphalt Paver 2 Compaction Rollers 20 Concrete Pump Trucks 8 Backhoes 8 Tool Trucks 2 Stake Beds	¾-ton Pickup Trucks 3 tool trucks 1 Crane 1 Pulling truck 1 Tractor/trailer with reel carrier	10 pickup trucks 2 cranes 1 flatbed truck 1 backhoe Concrete trucks Man lifts Flatbed truck with hydraulic lift equipment and EQ Boom lift truck Patrol trucks	2 Excavators 1 Water Truck 8 ¾-ton Pickup Trucks 1 Asphalt Paver 2 Compaction Rollers 8 Backhoes 8 Tool Trucks 2 Stake Beds	Excavator 24 Dump Trucks 1 Water Truck 8 ¾-ton Pickup Trucks 1 Asphalt Paver 2 Compaction Rollers 20 Concrete Pump Trucks 8 Backhoes 8 Tool Trucks 2 Stake Beds 1 Crane 1 Pulling truck 1 Tractor/trailer with reel carrier Skid steer Boom lift truck	1 Man lift 1 Crane 2 Tractor/trailers with 230 kV generator + test control house 3 tool trucks ½-ton flatbed truck
PERSONNEL	12 (average daily workers)	40 (average daily workers)	40 (average daily workers)	40 (average daily workers)	30 (average daily workers)	40 (average daily workers)	40 (average daily workers)	40 (average daily workers)
DURATION[1]	30 days	4 months	20 months	5 months	50 days	2 months	6 months	3 months

[1] Note: Durations shown are the general total duration for that activity, not considering overlap of various activities. Overall construction for the proposed project would span approximately 3 years and is scheduled to begin in mid-2023 with an in-service date of Spring 2026.

1.10 OPERATION AND MAINTENANCE PROCEDURES

Inspection of the transmission line, instrumentation and controls, and support systems is critical for project operation. Routine maintenance on an XLPE circuit would be performed regularly to ensure the cables operate normally. Early identification of items needing maintenance, repair, or replacement would ensure reliable operation of the transmission line.

Annual inspections of the integrity of the transmission line would be performed and would include the inspection of all of the equipment at the stations and maintenance vaults for corrosion and misalignment. The maintenance activities listed below may require the temporary closure of a single roadway lane for the duration of the activity. No other operational activities resulting from the proposed project would occur.

Routine maintenance and inspection would include the following:

- **Maintenance Vaults –** Maintenance vaults would be inspected annually to ensure that the cables are securely fastened to the brackets/clamps, that ground connections are intact, and that brackets are securely attached to the walls of the maintenance hole. Where practical and feasible, any water that has accumulated inside vaults would be removed using a water pump and vacuum truck. Electrical equipment would also be checked for corrosion.

1.11 BEST MANAGEMENT PRACTICES AND REGULATORY REQUIREMENTS

The following best management practices (BMPs) and regulatory requirements would be employed during construction of the proposed project, to help minimize or eliminate potential impacts to the environment. BMPs and regulatory requirements are distinguished from mitigation measures because they are existing practices or measures required by law, regulation, or policy, and/or they are ongoing, regularly occurring practices, and they are not unique to the proposed project.

1.11.1 Air Quality

The proposed project would comply with SCAQMD Rule 401 (Visible Emissions) and Rule 402 (Nuisance) to prevent the occurrence of public nuisances and visible dust plumes traveling off-site, and would implement Rule 403 dust control measures required by the South Coast Air Quality Management District (SCAQMD), which would include the following:

- Water shall be applied to exposed surfaces at least two times per day to prevent generation of dust plumes.
- The construction contractor shall utilize at least one of the following measures at each vehicle egress from the project site to a paved public road:
  - Pave the surface extending at least 100 feet and at least 20 feet wide;
  - Utilize a wheel shaker/wheel spreading device consisting of raised dividers at least 10 feet wide to remove bulk material from tires and vehicle undercarriages; or

- Install a wheel washing system to remove bulk material from tires and vehicle undercarriages.

    - All trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).

    - Construction activity on exposed or unpaved dirt surfaces shall be suspended when wind speed exceeds 25 miles per hour (mph).

    - A community liaison shall be identified concerning on-site construction activity including resolution of issues related to dust generation.

    - Non-toxic soil stabilizers shall be applied according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).

    - Streets shall be swept at the end of the day if visible soil is carried onto adjacent public paved roads. If feasible, water sweepers with reclaimed water shall be used.

1.11.2 Stormwater and Erosion Control

A Storm Water Pollution Prevention Plan (SWPPP), which will include erosion and sedimentation BMPs, shall be developed and implemented for construction activities. The SWPPP may include, but would not be limited to, the following:

- Minimizing the extent of disturbed areas and duration of exposure;
- Stabilizing and protecting disturbed areas;
- Keeping runoff velocities low; and
- Retaining sediment within the construction area.

Construction erosion control BMPs may include the following:

- Temporary desilting basins;
- Silt fences;
- Gravel bag barriers;
- Temporary soil stabilization with mattresses and mulching;
- Temporary drainage inlet protection; and
- Diversion dikes and interceptor swales.

1.11.3 Biological Resources

Because project construction activities would be continuous during the 3-year construction period, nesting bird season (which generally occurs February 1 through September 1, and as early as January for raptors) could not be avoided. Therefore, the following BMPs shall be employed to avoid and minimize impacts to nesting birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC):

- **BMP-BIO-1** A pre-construction nesting bird survey shall be conducted by a qualified biologist within 3 days prior to the start of construction activities during the nesting season to determine whether active nests are present within or directly adjacent to the construction zone. All nests found shall be recorded.

- **BMP-BIO-2** In the event an active nest is detected, a qualified biologist shall monitor the nest to determine if a nest avoidance buffer zone is necessary to restrict construction activities in proximity to the nest to protect the nest from failing. Any buffer zone, within which construction activities may not occur, shall be established in coordination with the qualified biologist, who shall take into account existing baseline conditions (e.g., topography, buffering buildings or other structures, etc.). In addition, observed avian response to ambient conditions (e.g., existing traffic noise and human activity) shall factor into the requirement for and size of a nest avoidance buffer.

- **BMP-BIO-3** The qualified biologist shall monitor all active nests, including those with and without an established buffer, at least once per week to determine whether birds are being disturbed. If signs of disturbance or stress are observed, the qualified biologist shall implement adaptive measures to reduce disturbance. These measures could include establishing or increasing buffer distances, or placing visual screens or sound dampening structures between the nest and construction activity until fledging is confirmed. The qualified biologist shall monitor each active nest until they determine that nestlings have fledged and dispersed, or the nest is no longer active.

- **BMP-BIO-4** Should an active nest of any federal or state-listed bird species be detected during pre-construction surveys or subsequent construction monitoring, construction activity in the immediate area shall not commence or shall cease if already underway, and the applicable federal and/or state agency (United States Fish and Wildlife Service, California Department of Fish and Wildlife) shall be notified. Work in other areas of the project site may continue until the active nests has been evaluated.

1.11.4 Cultural and Tribal Cultural Resources

BMP-CUL-1 All field supervisors and all construction workers shall participate in training on cultural resources awareness prior to the initiation of project construction on project sites that involve ground-disturbing activities. The training shall include a description of the types of cultural resources (including tribal cultural resources and human remains) that could inadvertently be encountered during ground-disturbing activities, the sensitivity of the resources, the legal basis for protection of the resources, and the penalties for unauthorized collection of or knowingly damaging the resources. The training shall address the proper procedures in the event of an inadvertent discovery of a cultural resource, including the immediate halting of work in the area of the discovery, notification of appropriate individuals of the discovery, the establishment of appropriate protective buffer zones around the discovery, and the continued avoidance of the protected area until the resource has been evaluated by qualified individuals and an appropriate treatment plan has been developed and implemented. These procedures shall be documented in a cultural resources monitoring plan (CRMP) that shall establish, in the event of inadvertent discovery of cultural resources, monitoring procedures (including potential Native American monitors), notification procedures, key staff, and preliminary treatment measures for potential discoveries. The CRMP shall be written to ensure compliance with appropriate state and federal laws. The training presentation and CRMP shall be available to additional supervisory or construction personnel who may join after project construction has begun.

1.11.5 Paleontological Resources

BMP-GEO-1 In the event previously unknown paleontological resources are encountered, the construction manager would halt construction activities in the immediate area in accordance with CEQA Guidelines Section 15064.5(f). LADWP would retain a qualified paleontologist to make an immediate evaluation of the significance and appropriate treatment of the resource. Construction activities may continue on other parts of the construction site while evaluation and any necessary treatment of paleontological resources take place.

1.11.6 Transportation and Traffic

BMP-TRA-1 Residences and businesses near the underground alignment would be notified prior to the start of construction (e.g., via flyers) of lane closures and parking restrictions in their vicinity. The notices would include a telephone number for comments or questions related to construction activities.

BMP-TRA-2 LADWP would coordinate with all applicable agencies regarding construction schedules and worksite traffic control and detour plans, including but not limited to the City of Los Angeles Department of Transportation, the City of Los Angeles Department of Public Works, Bureau of Engineering, the City of Los Angeles Fire Department, and the City of Los Angeles Police Department.

1.11.7 Utilities and Service Systems

BMP-UTL-1 The proposed project construction would incorporate source reduction techniques and recycling measures and maintain a recycling program to divert waste in accordance with the Citywide Construction and Demolition Debris Recycling Ordinance.

1.12 REQUIRED PERMITS AND APPROVALS

Numerous approvals and/or permits would be required to implement the proposed project. The environmental document for the proposed project would be used to facilitate compliance with federal and state laws and the granting of permits by various state and local agencies having jurisdiction over one or more aspects of the project. These approvals and permits may include, but may not be limited, to the following

City of Los Angeles Department of Public Works, Bureau of Engineering

- Excavation Permit

City of Los Angeles

- Traffic Control permit

City of Los Angeles Department of Transportation

- Approval of Traffic and Signal Control Plan
- Approval of temporary lane closures

City of West Hollywood

- Approval of traffic and signal control plan and temporary lane closures

State of California State Water Resources Control Board

- State wide General Permit for Storm Water Associated with Construction Activities

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SECTION 2
INITIAL STUDY CHECKLIST

The following discussion of potential environmental effects was completed in accordance with Section 15063(d)(3) of the CEQA Guidelines (2022) to determine if the proposed project may have a significant effect on the environment.

CEQA INITIAL STUDY FORM

Project Title:
Toluca-Hollywood Line 1 Upgrade Project

Lead Agency Name and Address:
Los Angeles Department of Water and Power
Environmental Planning and Assessment
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Contact Person and Phone Number:
Marshall Styers
Environmental Planning and Assessment
Los Angeles Department of Water and Power
(213) 367-3541

Project Sponsor's Name and Address:
Los Angeles Department of Water and Power
111 North Hope Street
Los Angeles, CA 90012

Project Location:
The proposed project is made up of three components: the underground alignment, Tower 584, and BWP line. They are located south of, within, and north of the Hollywood Hills area, respectively. The proposed project is situated near Interstate 5, United States (U.S.) Highway 101, California State Route (SR) 134 (SR-134), and SR-170 within Los Angeles County, California. The southern portion of the proposed project (the “underground alignment”) is an approximately 1.8-mile segment of the TOL-HWD L1, which is located between the Hollywood Receiving Station and Nichols Canyon Terminal Tower just south of the Hollywood Hills and west of U.S. Highway 101. The central portion of the proposed project (Tower 584) is located adjacent to Mulholland Drive within the Hollywood Hills. The northern portion of the proposed project (the BWP line) is in the City of Burbank, west of Hollywood Way at a crossing of the BWP line located north of SR-134. Collectively, the three components are referred to as the ‘project area’, which is the footprint of all proposed project activities.

General Plan Designation:
The underground alignment would be located entirely within the existing road right-of-way. The properties adjacent to the underground alignment include the following designations: public facilities, low residential, medium residential, neighborhood office commercial, and open space within the City of Los Angeles, and low density residential, public facilities,

multi-family medium density residential, community commercial, and regional center commercial in the City of West Hollywood. The Nichols Canyon Terminal Tower, Hollywood Receiving Station, and Tower 584 are located on LADWP-owned land designated for Public Facilities. The BWP line that would be lowered is within an easement adjacent to residential uses with medium density residential designation.

Zoning:
The properties along the underground alignment are zoned: Public Facilities (PF), One-Family (R1), Residential Estate (RE), Multiple Dwelling (R3 and R4), Limited Commercial (C1), and Open Space (OS) within the City of Los Angeles, and Low Density Residential (R2), Multi-family Medium Density Residential (R3B), Public Facilities (PF), Community Commercial 1 (CC1), Community Commercial 2(CC2), Movietown Specific Plan (MSP), and Regional Center Commercial (CR) within the City of West Hollywood. The Nichols Canyon Terminal Tower, Hollywood Receiving Station, and Tower 584 are located on LADWP-owned land zoned for Public Facilities. The BWP line that would be lowered is within an easement adjacent to residential uses zoned for Single Family Residential (R-1) and Low Density Residential (R-2).

Description of Project:
The proposed project is essential to support LADWP's planned reduced reliance on its in-basin combustion-turbine electrical generation facilities while substantially increasing the use of renewable resources in an effort to achieve the long-term City goal of 100 percent clean energy by 2035. The purpose of the proposed project is to increase the overall circuit rating of TOL-HWD L1 from 313 MVA to 405 MVA continuous rating. The increased circuit rating of the new cable would provide greater capacity to respond to Hollywood area load requirements and would reduce stress on the Toluca-Hollywood and other (e.g., Fairfax-Hollywood, etc.) transmission pathways while providing the capacity to accommodate imported renewable energy coming from outside the Los Angeles Basin.

The underground alignment component of the proposed project encapsulates the following:

- Trenching and installing the new cable and associated maintenance vaults.
- Removing and replacing the existing HPPT within Nichols Canyon Road.
- Modifying the Nicholas Nichols Canyon Terminal Tower and Hollywood Receiving Station.

Refer to Section 1 of this Initial Study for the complete project description.

Surrounding Land Uses and Setting:
All work would be conducted from, and located within, existing road ROW, LADWP-owned land designated for Public Facilities, and a BWP easement adjacent to residential uses. These activities would occur in the urbanized and fully developed City of Los Angeles Community Plan Areas of Hollywood and Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass, City of West Hollywood, and City of Burbank, adjacent to residential, commercial, office, open space, and public facilities uses.

Other Public Agencies whose approval is required:

- City of Los Angeles Department of Public Works, Bureau of Engineering
- City of Los Angeles
- City of Los Angeles Department of Transportation
- City of West Hollywood
- State of California State Water Resources Control Board

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

Pursuant to California Public Resources Code Section 21080.3.1, LADWP contacted the following eight tribes: Fernandino Tataviam Band of Mission Indians, Gabrieleño Band of Mission Indians - Kizh Nation, Gabrielino/Tongva San Gabriel Band of Mission Indians, Gabrielino/Tongva Nation, Gabrielino Tongva Indians of California Tribal Council, Gabrielino-Tongva Tribe, Santa Rosa Band of Cahuilla Indians, Soboba Band of Luiseño Indians. One Tribe, the Gabrieleño Band of Mission Indians – Kizh Nation, requested consultation with LADWP on the potential impact of the proposed project, and consultation has been initiated. Additional discussion about tribal consultation conducted for this proposed project can be found in Section XVIII, Tribal Cultural Resources, of this IS/MND.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

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 Environmental Impacts discussion in Section 3.

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

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an environmental impact report is required.

☐ I find that the proposed project may have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Jane Hauptman FOR 11/30/22

Signature Date

Charles C. Holloway
Manager of Environmental Planning and Assessment
Los Angeles Department of Water and Power

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	**AESTHETICS**. Except as provided in Public Resources Code Section 21099, would the project:				
a.	Have a substantial adverse effect on a scenic vista?			X	
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d.	Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?			X	
II.	**AGRICULTURE AND FORESTRY RESOURCES**. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b.	Conflict with existing zoning for agricultural use, or a Williamson act contract?				X
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))?				X
d.	Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?				X

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
III.	**AIR QUALITY**. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a.	Conflict with or obstruct implementation of the applicable air quality plan?			X	
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality?			X	
c.	Expose sensitive receptors to substantial pollutant concentrations?			X	
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	
IV.	**BIOLOGICAL RESOURCES**. Would the project:				
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c.	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
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?				X
V.	**CULTURAL RESOURCES**. Would the project:				
a.	Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?				X

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?			X	
c.	Disturb any human remains, including those interred outside of formal cemeteries?			X	
VI.	**ENERGY.** Would the project:				
a.	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				X
VII.	**GEOLOGY AND SOILS**. Would the project:				
a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to California Geological Survey Special Publication 42.			X	
	ii) Strong seismic ground shaking?			X	
	iii) Seismic-related ground failure, including liquefaction?			X	
	iv) Landslides?			X	
b.	Result in substantial soil erosion or the loss of topsoil?			X	
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?			X	
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X
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?				X
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
VIII.	**GREENHOUSE GAS EMISSIONS**: Would the project:				
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
IX.	**HAZARDS AND HAZARDOUS MATERIALS**: Would the project:				
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
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?			X	
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
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?				X
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	
X.	**HYDROLOGY AND WATER QUALITY**. Would the project:				
a.	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b.	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner that would:				
	i) Result in substantial erosion or siltation on- or off-site?			X	
	ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?				X
	iii) Create or contribute runoff water which would exceed the capacity of existing or planner stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
	iv) Impeded or redirect flood flows?				X
d.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X
XI.	**LAND USE AND PLANNING**. Would the project:				
a.	Physically divide an established community?				X
b.	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	
XII.	**MINERAL RESOURCES**. Would the project:				
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
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?				X
XIII.	**NOISE**. Would the project result in:				
a.	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c.	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
XIV.	**POPULATION AND HOUSING**. Would the project:				
a.	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

	Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES.				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?			X	
ii) Police protection?			X	
iii) Schools?				X
iv) Parks?				X
v) Other public facilities?				X
XVI. RECREATION.				
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?				X
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				X
XVII. TRANSPORTATION. Would the project:				
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?				X
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d. Result in inadequate emergency access?			X	
XVIII. TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.1(k)?				X

	Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of the Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?				X
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X
c. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
d. Generate solid waste in excess of state or local standards, or in excess of the future capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
b. Due to slope, prevailing winds, and other factors, exacerbate wildland fires risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may result in temporary or ongoing impacts to the environment?			X	
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI.	**MANDATORY FINDINGS OF SIGNIFICANCE**.				
a.	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b.	Does the project have impacts that are individually limited, but cumulatively considerable? “Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.			X	
c.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

SECTION 3
ENVIRONMENTAL IMPACT ASSESSMENT

INTRODUCTION

The following discussion addresses impacts to various environmental resources per the Initial Study checklist questions contained in Appendix G of the CEQA Guidelines.

I. AESTHETICS

Would the project:

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

Less Than Significant Impact. Scenic views or vistas are typically panoramic public views of various natural features, including the ocean, striking or unusual natural terrain, or unique urban or historic features. Public access to these views may be from park lands, private and publicly owned sites, and public ROW. The proposed project would increase the overall circuit rating of an existing transmission line by replacing the aging, underground cable portion of the line and addressing two CPUC GO95 clearance issues of the overhead portion of the line that would occur as a result of the increased transmission line rating. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. All work would be conducted from, and located within, existing road ROW, LADWP-owned land designated for Public Facilities, and a BWP easement adjacent to residential uses. The proposed replacement cable would be located entirely underground and therefore would have no impacts to aesthetic resources.

Modifications to aboveground equipment at the Nichols Canyon Terminal Tower and Hollywood Receiving Station would occur within the confines of LADWP property having limited to no public views: the Nichols Canyon Terminal Tower is upslope from Nichols Canyon Road and is surrounded by dense trees and vegetation; and the Hollywood Receiving Station is surrounded by a concrete wall with two gate-controlled access locations for ingress/egress. Modifications at these two locations would involve the removal and then replacement of similar appearing (but newer) equipment, and the permanent removal of small existing pump houses and accompanying tanks that would no longer be needed as they are associated with the existing underground oil-filled pipe. All of these improvements would occur adjacent to other similar-appearing electrical infrastructure and related equipment, would appear substantially the same as the equipment to be replaced, and would not be apparent from outside the property boundaries. As such, the proposed terminal tower/receiving station modifications would have no impacts to aesthetic resources.

Because the underground cable replacement would increase the transmission line rating of the overhead portion of the TOL-HWD L1 it would result in higher conductor temperature and sag of the overhead line, which would result in insufficient line clearance at two locations. As such the proposed project would raise one existing

TOL-HWD L1 tower (Tower 584), and lower a short section of an existing, intersecting distribution line (BWP line). The location of the BWP line to be lowered is within the City of Burbank and has a south-oriented view of the Santa Monica Mountains, which is considered scenic by the City of Burbank.[2] However, proposed improvements to the BWP line would lower the distribution line (i.e., move the distribution line and other wires to a lower position on their poles and cut off the pole tops), which would appear substantially the same as existing and as such would have no impacts to aesthetic resources.

Tower 584 is situated in the Hollywood Hills near the intersection of Mulholland Drive and Macapa Drive in the Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan Area of the City. This location is within the inner corridor of the Mulholland Scenic Parkway Specific Plan (Specific Plan) area (i.e., the Mulholland Road ROW and 500-foot buffer on both sides of the ROW). The purpose of this Specific Plan is to "assure maximum preservation and enhancement of the parkway's outstanding and unique scenic features and resources… [and] assure that the design and placement of buildings and other improvements preserve, complement and/or enhance views from Mulholland Drive." [3] Tower 584 is located on an upslope lot and is situated approximately 75 feet from the edge of the roadway ROW. The Specific Plan limits the height of structures based on distance from the Mulholland Drive ROW, which for an upslope lot within the first 100 feet from the Mulholland Drive ROW is an allowable building height of 15 feet. Currently, Tower 584 stands at 108 feet in height; which would be raised in 5-foot segments by a maximum 15 feet, for a new height of 123 feet. However, Tower 584 is an existing structure (pre-dating the Specific Plan) that is situated on LADWP-owned land designated for Public Facilities with the express intent of supporting electricity transmission. The foundation work at the footing of Tower 584 (i.e., removal of up to 30 cy of soil followed by the addition of concrete) would not be visible from Mulholland Drive after construction. The appearance of the tower itself would be the same and in the same location, but taller in height, which would not be a significantly perceptible change compared to existing conditions. Additionally, no construction would occur within the Mulholland Drive ROW. Therefore, the proposed project would not have an adverse effect on the Specific Plan or a scenic vista, and impacts would be less than significant.

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

Less Than Significant Impact. Implementation of the proposed project would not damage scenic resources within a state scenic highway. No state highways within the project vicinity are designated as California Scenic Highways by the California Department of Transportation.[4] However, under the City of Los Angeles' Mobility

2 City of Burbank, 2013, Burbank2035 General Plan: Open Space and Conservation Element. Website: https://www.burbankca.gov/documents/173607/0/Burbank2035+General+Plan.pdf/139656b0-80e9-3b11-dc6d-751642c85b38?t=1612301807431, February 15, 2022.

3 City of Los Angeles Department of City Planning, 1992, Mulholland Scenic Parkway Specific Plan. Website: https://planning.lacity.org/odocument/1ca45b19-cbf5-40ec-b169-1735878beca2/Mulholland_Scenic_Parkway_Specific_Plan_.pdf, February 15, 2022.

4 State of California Department of Transportation, State Scenic Highway Program. Website: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed January 21, 2022.

Plan 2035, Mulholland Drive is designated as a Scenic Highway.[5] Tower 584 would be raised in 5-foot segments (a maximum of 15 feet) using hydraulic lift equipment, requiring some minor foundation work (i.e., removal of a limited amount of existing material and the addition of concrete) at the tower footings. However, the scope of construction at this location would not involve a substantial change that would damage or alter any scenic resources; as stated above, Tower 584 already exists. No construction would occur within the Mulholland Drive ROW and after construction, the tower would remain in the same location and would have the same, but taller, appearance compared to existing conditions. As such, no scenic roadway or scenic resources would be altered as a result of implementation of the proposed project, and impacts would be less than significant.

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

Less Than Significant Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. All work would be conducted from, and located within, existing road ROW, LADWP-owned land designated for Public Facilities, and a BWP easement adjacent to residential uses. The proposed replacement cable would be located entirely underground and therefore would have no impacts to aesthetic resources. The Tower 584 raise would occur in the Hollywood Hills near the intersection of Mulholland Drive and Macapa Drive in the Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan Area of the City, and is subject to the Mulholland Scenic Parkway Specific Plan. As discussed in Section I(a) above, Tower 584 is an existing structure that is situated on LADWP-owned land designated for Public Facilities. The scope of construction at this location would not involve a substantial change that would substantially degrade the existing visual character or quality of the site and its surroundings; as stated above, Tower 584 already exists. No construction would occur within the Mulholland Drive ROW and after construction, the tower would remain in the same location and would have the same, but taller, appearance compared to existing conditions. As discussed in Section I(a), the proposed improvements to the BWP line, located in the City of Burbank on land where BWP has an easement, would involve lowering the distribution line (i.e., by moving the distribution line and other wires to a lower position on their poles and cutting off the pole tops) and as such would have no impacts to aesthetic resources. Proposed modifications at the Hollywood Receiving Station and Nichols Canyon Terminal Tower would occur within the interior of the facilities (zoned for public facilities) and would not be apparent from outside the property boundaries. The impact would be less than significant.

[5] City of Los Angeles Department of City Planning, 2016, General Plan Mobility Element, Mobility Plan 2035. Website: https://planning.lacity.org/odocument/523f2a95-9d72-41d7-aba5-1972f84c1d36/Mobility_Plan_2035.pdf, February 15, 2022.

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

Less Than Significant Impact. Implementation of the proposed project would not create a new source of light or glare that would adversely affect day or nighttime views. The proposed project would be constructed only during daylight hours, so no nighttime construction lighting would be required. No permanent new sources of light or glare would be added to the project area, and no change in lighting or glare is anticipated as a result of operation of the proposed project. The impact would be less than significant.

II. AGRICULTURE AND FORESTRY RESOURCES

Would the project:

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

No Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. The project area is designated as either Urban and Built-Up Land or Other on the "Important Farmland in California" map prepared by the California Resources Agency pursuant to the Farmland Mapping and Monitoring Program.[6] The proposed project would not be located on or near Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the proposed project would not convert Farmland to a non-agricultural use, and no impact to farmland would occur.

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

No Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. All work would be located within the road ROW, within LADWP-owned land designated PF[7], or within a BWP easement adjacent to residential uses[8]. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

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6 State of California Department of Conservation, Division of Land Resource Protection, 2016, Farmland Mapping & Monitoring Program, Important Farmland in California. Website: https://maps.conservation.ca.gov/DLRP/CIFF/, February 9, 2022.

7 City of Los Angeles, Department of City Planning, 2022, Sherman Oaks Community Plan Intermap. Website: https://ladcp.maps.arcgis.com/apps/View/index.html?appid=b079f32356374406bddca7d0fb6691f8, February 10, 2022.

8 City of Burbank, 2019, Zone Map. Website: https://www.burbankca.gov/documents/173607/0/20210101_Zoning_Map.pdf/c8bc55ed-98cf-505d-3892-7e1657bca8f1?t=1618866483006, February 10, 2022.

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

No Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. All work would be located within the road ROW, within LADWP-owned land designated PF[9], or within a BWP easement adjacent to residential uses[10]. The project area is not zoned for or developed as forest land or timberland as defined in Public Resources Code Section 12220(g) and Government Code Section 4526, respectively.[11] Therefore, the proposed project would not conflict with existing zoning for or cause a rezoning of forest or timberland, and no impact would occur.

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

No Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. The project area is not developed as forest land or located within or adjacent to forest lands.[12] Therefore, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use, and no impact would occur.

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

No Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles. No portion of the project area or surrounding area is identified as Farmland. No forest lands exist within or adjacent to the project area. Therefore, the proposed project would not change the existing environment in a way that would result in the conversion of farmland to non-agricultural use or forest land to non-forest use, and no impact would occur.

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[9] City of Los Angeles, Department of City Planning, 2022, Sherman Oaks Community Plan Intermap. Website: https://ladcp.maps.arcgis.com/apps/View/index.html?appid=b079f32356374406bddca7d0fb6691f8, February 10, 2022.

[10] City of Burbank, 2019, Zone Map. Website: https://www.burbankca.gov/documents/173607/0/20210101_Zoning_Map.pdf/c8bc55ed-98cf-505d-3892-7e1657bca8f1?t=1618866483006, February 10, 2022.

[11] City of Los Angeles Zoning Information and Map Access System (ZIMAS), 2022. Website: http://zimas.lacity.org/, accessed February 16, 2022.

[12] ZIMAS, 2022. Website: http://zimas.lacity.org/, accessed February 16, 2022.

III. AIR QUALITY

Potential impacts related to air quality associated with the proposed project were determined from the results presented in the Air Quality Impacts Assessment prepared for the proposed project, which is included as Appendix A to this IS/MND.

Would the project:

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

Less Than Significant Impact. The following analysis addresses the consistency with applicable South Coast Air Quality Management District (SCAQMD) and Southern California Association of Governments (SCAG) policies, including the SCAQMD's 2016 Air Quality Management Plan (AQMP) and growth projections within the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). In accordance with the procedures established in the SCAQMD's CEQA Air Quality Handbook, the following criteria are required to be addressed in order to determine the consistency with applicable SCAQMD and SCAG policies:

- Would the proposed project result in any of the following?
    - An increase in the frequency or severity of existing air quality violations;
    - Cause or contribute to new air quality violations; or,
    - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Would the proposed project exceed the assumptions utilized in preparing the AQMP?
    - Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
    - Does the project include air quality mitigation measures; or,
    - To what extent is project development consistent with the AQMP land use policies?

The proposed project would not introduce any new permanent sources of air pollutant emissions to the SCAB, and would not spur any growth in population, housing, or employment. Therefore, the proposed project would not result in any potential impacts related to the underlying growth projections that are incorporated into the AQMP attainment demonstration that are addressed in the second portion of the consistency criteria. The analysis of potential air quality impacts related to AQMP consistency that could occur from implementation of the proposed project was based on the possibility of air pollutant emissions during construction activities exacerbating the frequency or severity of air quality violations, which occur when ambient concentrations of air pollutants exceed the established SCAQMD air quality significance thresholds.

Construction

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips by construction workers and haul and delivery trucks traveling to and from the project site. Fugitive dust emissions would primarily result from roadway stripping, excavation, and truck loading activities, as well as vehicle travel on the regional roadway network. NO_X emissions would be generated in off-road equipment exhaust and on-road vehicle exhaust. Fugitive VOC emissions would be associated with repaving of the disturbed roadway areas with fresh asphalt. The assessment of construction air quality impacts considered all of these emissions sources. Throughout the course of the three-year construction period, the equipment and vehicle activity would vary substantially from day to day; the analysis utilized reasonably conservative estimates of vehicle travel and equipment usage to address potential impacts.

It is mandatory for all construction projects in the SCAB to comply with SCAQMD Rule 403 for Fugitive Dust. Rule 403 control strategies include measures to prevent the generation of visible dust plumes. The following BMPs for fugitive dust control would be employed during all activities to minimize the emissions produced:

- Water shall be applied to exposed surfaces at least three times per day to prevent generation of dust plumes;
- All trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).
- A community liaison shall be identified concerning on-site construction activity including resolution of issues related to dust generation.
- Streets shall be swept at the end of the day if visible soil is carried onto adjacent public paved roads. If feasible, water sweepers with reclaimed water shall be used

Compliance with the provisions and BMPs promulgated by Rule 403—such as the application of water as a dust suppressant to excavated stockpiles, tarping of debris hauling trucks, and street-sweeping—would reduce on-site fugitive dust PM_{10} and $PM_{2.5}$ emissions associated with construction activities by approximately 61 percent. Daily emissions of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ that would be generated during construction of the proposed project were estimated using CalEEMod.

Table 3-1 presents the daily emissions that would be generated during each activity involved in construction of the proposed project. Disclosure of the maximum combined daily activity emissions is presented in the bottom portion of the table, followed by the localized and regional emissions analyses. As shown in Table 3-1, maximum daily emissions from the highest combined activity intensity scenarios would remain below the applicable SCAQMD regional mass daily thresholds and LST screening values. The maximum daily emissions from individual activities would also remain substantially below the corresponding SCAQMD regional and LST screening values. Therefore, construction of the proposed project would not have the potential to result in emissions that would exceed thresholds established to prevent the occurrence of new or exacerbated air quality violations.

Table 3-1: Estimated Daily Emissions – Proposed Project Construction

Phase and Source Location	Maximum Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
(1) Road Surface Stripping						
On-Site Emissions	0.5	4.4	6.8	<0.1	0.3	0.2
Off-Site Emissions	0.2	2.8	2.0	<0.1	0.8	0.2
Total	***0.7***	***7.2***	***8.8***	***<0.1***	***1.1***	***0.4***
(2) Maintenance Vault Excavations (I)						
On-Site Emissions	0.9	8.7	12.3	<0.1	0.4	0.4
Off-Site Emissions	0.4	5.1	4.0	<0.1	1.6	0.5
Total	***1.3***	***13.8***	***16.3***	***<0.1***	***2.0***	***0.9***
(3) Maintenance Vault Installations (I)						
On-Site Emissions	0.4	3.5	5.5	<0.1	0.2	0.2
Off-Site Emissions	0.2	4.6	2.5	<0.1	1.1	0.3
Total	***0.6***	***8.0***	***8.1***	***<0.1***	***1.2***	***0.5***
(4) Trench Excavation						
On-Site Emissions	0.9	8.1	9.8	<0.1	0.4	0.4
Off-Site Emissions	0.1	0.5	0.8	<0.1	0.3	0.1
Total	***0.9***	***8.6***	***10.6***	***<0.1***	***0.7***	***0.4***
(5) Tower 584 Foundation						
On-Site Emissions	0.8	7.2	8.2	<0.1	0.3	0.3
Off-Site Emissions	0.1	0.5	1.5	<0.1	0.5	0.1
Total	***0.9***	***7.7***	***9.7***	***<0.1***	***0.9***	***0.5***
(6) Tower 584 Structure						
On-Site Emissions	0.4	4.2	4.8	<0.1	0.2	0.2
Off-Site Emissions	0.1	0.5	0.8	<0.1	0.3	0.1
Total	***0.5***	***4.7***	***5.6***	***<0.1***	***0.5***	***0.3***
(7) Roadway Repaving						
On-Site Emissions	0.6	5.5	6.5	<0.1	0.3	0.2
Off-Site Emissions	0.1	0.4	0.8	<0.1	0.3	0.1
Total	***0.7***	***5.9***	***7.2***	***<0.1***	***0.6***	***0.3***
(8) Maintenance Vault Excavation (II)						
On-Site Emissions	0.3	2.9	5.5	<0.1	0.1	0.1
Off-Site Emissions	0.1	3.2	1.5	<0.1	0.7	0.2
Total	***0.4***	***6.1***	***7.0***	***<0.1***	***0.8***	***0.3***
(9) Maintenance Vault Installation (II)						
On-Site Emissions	0.7	6.2	8.1	<0.1	0.3	0.3
Off-Site Emissions	0.1	0.8	0.9	<0.1	0.4	0.1
Total	***0.8***	***7.1***	***9.0***	***<0.1***	***0.6***	***0.4***
(10) Roadway Restriping						
On-Site Emissions	0.5	2.3	3.6	<0.1	0.1	0.1
Off-Site Emissions	0.1	<0.1	<0.1	<0.1	0.2	0.1
Total	***0.6***	***2.3***	***4.2***	***<0.1***	***0.3***	***0.2***

Table 3-1: Estimated Daily Emissions – Proposed Project Construction

Phase and Source Location	Maximum Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
(11) Nichols Canyon Road Pipe Replacement						
On-Site Emissions	0.7	6.4	11.1	<0.1	0.3	0.3
Off-Site Emissions	0.1	0.4	0.8	<0.1	0.3	0.1
Total	***0.8***	***6.9***	***11.9***	***<0.1***	***0.6***	***0.4***
(12) Nichols Canyon Terminal Tower and Hollywood Receiving Station						
On-Site Emissions	1.1	10.0	14.6	<0.1	0.5	0.4
Off-Site Emissions	0.1	0.5	1.1	<0.1	0.4	0.1
Total	***1.2***	***10.5***	***15.7***	***<0.1***	***0.9***	***0.5***
Concurrent Activity Scenarios						
(1) + (2) + (3) + (4) + (5) + (7)						
On-Site Emissions	4.1	37.4	49.0	0.1	1.9	1.7
Off-Site Emissions	1.0	13.9	11.7	0.1	4.6	1.3
Total	***5.1***	***51.3***	***60.7***	***0.2***	***6.4***	***3.0***
(1) + (2) + (3) + (4) + (6) + (7)						
On-Site Emissions	3.7	34.4	45.6	0.1	1.7	1.6
Off-Site Emissions	1.0	13.8	11.0	0.1	4.3	1.2
Total	***4.7***	***48.2***	***56.6***	***<0.1***	***6.1***	***2.8***
(1) + (2) + (3) + (4) + (5) + (7) + (10)						
On-Site Emissions	4.6	39.6	52.7	0.1	2.0	1.8
Off-Site Emissions	1.1	13.9	12.3	0.1	4.8	1.4
Total	***5.7***	***53.6***	***64.9***	***0.2***	***6.8***	***3.2***
(11) + (12)						
On-Site Emissions	1.8	16.5	25.7	<0.1	0.8	0.7
Off-Site Emissions	0.2	0.9	1.8	<0.1	0.7	0.2
Total	***2.0***	***17.4***	***27.6***	***<0.1***	***1.5***	***0.9***
Regional Emissions Analysis						
Maximum Regional Emissions	**5.7**	**53.6**	**64.9**	**0.2**	**6.8**	**3.2**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Localized Emissions Analysis						
Maximum On-Site Emissions	-	**39.6**	**52.7**	-	**2.0**	**1.8**
SCAQMD LST Screening Value	-	74	498	-	4	3
Threshold Exceeded?	-	***No***	***No***	-	***No***	***No***

Note: Emissions modeling files and phase, source, and concurrent activity assumptions can be found in Appendix A to this IS/MND. For the air quality analysis, the first six maintenance vaults were assumed to be installed toward the beginning (first four-to-six months) of the 2-year period for the trench/conduit and vault installation (south of Hollywood Boulevard) and the remaining two vaults were assumed to be excavated and installed in 2025 at the end of the 2-year period. Emissions analysis focused on phases involving highest amount of daily source activity; therefore, components that would require minimal equipment and heavy-duty vehicles (e.g., BWP line lowering) were excluded from the analysis.

Source: TAHA, 2022

Based on the results of the combined activities analysis, construction of the proposed project would not have any potential to conflict with or obstruct implementation of the AQMP based on the air quality violation criterion. When considering up to seven overlapping activities—comprising a total of up to 31 pieces of off-road construction equipment, 40 haul truck round trips, and 30 concrete and material deliveries on a given day—total regional and localized NO_X emissions would be less than 54 percent of the applicable corresponding thresholds. Localized particulate matter emissions from the combined sites would remain below the lowest LST values that apply to a singular one-acre construction site within source receptor area (SRA) 1 or SRA 7. Therefore, this impact would be less than significant, and no mitigation measures are required.

Upon completion of construction activities, vehicle and equipment sources employed to implement the proposed project would no longer be active and producing emissions. The construction workforce would comprise LADWP crews and contractors assembled from the local area and is not anticipated to introduce new permanent job growth to the region. As discussed previously, construction of the proposed project would have no impact related to the second AQMP consistency criterion related to assumptions incorporated into the regional growth forecasts for population, housing, and employment within the City of Los Angeles.

Operations

Operational activities associated with the proposed project would be minimal, and no new permanent sources of air pollutant emissions would be introduced to the project area. Implementation of the proposed project would not expand the LADWP workforce. The occasional vehicle trips would produce negligible emissions of air pollutants at the regional level. Operation of the proposed project would not have any potential to exacerbate the frequency or severity of air quality violations and would result in a less-than-significant air quality impact related to air quality violations.

The second consistency criterion requires that the proposed project not exceed the assumptions in the AQMP, thereby rendering the regional emissions inventory inaccurate. Implementation of the proposed project would not introduce new population, housing, and employment projections for the region would not be affected. The proposed project would not have any potential to result in growth that would exceed the projections incorporated into the AQMP or the RTP/SCS. The proposed project would not interfere with air pollution control measures listed in the 2016 AQMP and would not conflict with the goals of the City of Los Angeles General Plan Air Quality Element.

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

Less Than Significant Impact. The SCAB is currently designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ under the State standards and nonattainment for O_3 and $PM_{2.5}$ under the federal standards. Therefore, a project may result in a cumulatively considerable air quality impact under this criterion if daily emissions of ozone precursors (VOC and NOX) or particulate matter (PM_{10} and $PM_{2.5}$) exceed applicable air quality thresholds of significance established by the SCAQMD. The SCAQMD designed the regional mass daily thresholds and LST values to prevent projects from exceeding the ambient air quality standards and potentially resulting in air quality violations that could obstruct or delay implementation of the AQMP. The SCAQMD suggests that if any quantitative air quality significance threshold is exceeded by an individual project during construction activities or operation, that project is considered cumulatively considerable and would be required to implement effective and feasible mitigation measures to reduce air quality impacts. Conversely, the SCAQMD promulgates that if an individual project would not exceed the regional mass daily thresholds or LST values, then its emissions are generally considered to not be cumulatively considerable, and the impact would be less than significant. This method of impact determination allows for the screening of individual projects that would not represent substantial new sources of emissions in the SCAB; it also serves to exclude smaller projects from the responsibility of identifying potentially concurrent new or proposed construction and operation emissions nearby since the incremental contribution to regional emissions is minor.

Construction

As shown in Table 3-1, construction of the proposed project would not generate emissions in excess of any of the applicable regional or localized thresholds established by the SCAQMD. All construction activities would be conducted in accordance with the BMPs pursuant to SCAQMD Rule 403 to minimize fugitive dust emissions. Emissions produced during construction activities associated with the proposed project would not be cumulatively considerable, and this impact would be less than significant. Therefore, the proposed project would not generate cumulatively considerable emissions of ozone precursors or particulate matter during construction and impacts would be less than significant.

Operations

Following the completion of construction activities, all major components of the proposed project would be located underground and would not generate emissions of air pollutants. Implementation of the proposed project would not introduce any land use developments or LADWP facilities that would generate new vehicle trips or install new stationary sources of emissions. Therefore, the proposed project would not generate cumulatively considerable emissions of ozone precursors or particulate matter during operations and impacts would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact.

Construction

The SCAQMD devised its LST values to prevent the occurrence of localized hot spots of criteria pollutant concentrations at sensitive receptor locations surrounding the project site. The LST values were determined using emissions modeling based on ambient air quality measured throughout the SCAB. If maximum daily emissions remain below the LST values during construction activities, it is highly unlikely that air pollutant concentrations in ambient air would reach levels sufficient to create public health concerns for sensitive receptors. As shown in Table 3-1, maximum daily emissions of criteria pollutants and O_3 precursors from sources located on the project site would not exceed any applicable LST values. Additionally, the use of construction equipment in any particular location would be intermittent and temporary, such that nearby sensitive receptors would not be exposed to recurring high levels of emitted pollutants.

With regards to toxic air contaminant (TAC) emissions, off-road equipment exhaust would contain diesel particulate matter, which is the most prevalent air toxic in the greater Los Angeles region. However, each individual piece of equipment would only be in operation for a portion of the workdays. Carcinogenic risks are typically assessed on timescales of several years to multiple decades, as the risk accumulates over extended periods of exposure. Given that construction activities would only be occurring during the daytime when the atmospheric inversion layer is at its highest and the greatest amount of pollutant dispersion occurs, there is little potential for TAC concentrations to reach levels that would be hazardous for nearby sensitive receptors. Therefore, construction of the proposed project would not result in exposure of sensitive receptors to substantial concentrations of air pollution. This impact would be less than significant, and no mitigation is required.

Operations

Following the completion of construction activities, operation of the proposed project would not involve any active sources of air pollutant emissions. There would be no potential for sensitive receptors to be exposed to substantial pollutant concentrations resulting from sources associated with the proposed project. Operation of the proposed project would result in no impact related to sensitive receptor exposures to pollutant concentrations, and no mitigation measures would be warranted.

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

Less Than Significant Impact.

Construction

Odors are the only potential construction emissions other than the sources addressed above. Potential sources that may produce objectionable odors during construction activities include equipment exhaust, application of asphalt and architectural coatings, and other finishes. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site and would be temporary in nature and would not persist beyond the termination of construction activities. In addition, as construction-related emissions dissipate away from the construction area, the odors associated with these emissions would also decrease and would be quickly diluted. LADWP will ensure that activities comply with SCAQMD Rules 402 (Nuisance) and 401 (Visible Emissions) to prevent the occurrence of public nuisances and visible dust plumes traveling off-site. Therefore, the proposed project would result in a less-than-significant impact related to construction odors and other nuisances.

Operations

Odors are the only potential operational emissions other than the sources addressed above. Given the nature and location of the project facilities, the project has no potential to generate new, adverse odors. Therefore, the proposed project would result in a less-than-significant impact related to operational odors or other emissions that may have the potential to cause a public nuisance.

IV. BIOLOGICAL RESOURCES

Potential impacts to biological resources associated with the proposed project were determined from the results presented in the Biological Resources Technical Memorandum prepared for the proposed project, which is included as Appendix B to this IS/MND.

A search of relevant regional databases for special-status biological resources in the vicinity of the project area was conducted prior to conducting a field survey. The underground alignment occurs entirely within the northwest corner of the Hollywood 7.5-minute United States Geological Survey Quadrangle (quadrangle). Additional areas of the project, which include the area surrounding Tower 584 and the empty lots around BWP poles 1 and 2, occur in the center northern portion of the Hollywood quadrangle and the southwest corner of the Burbank quadrangle, respectively. A search of the Hollywood quadrangle and the surrounding eight quadrangles—Van Nuys, Burbank, Pasadena, Los Angeles, Beverly Hills, Venice, Inglewood, and South Gate—was made of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB)[13] and the California Native Plant Society's (CNPS) on-line Inventory of Rare and Endangered Plants of California.[14] Additionally, the United States Fish and Wildlife Service's (USFWS) online Information for Planning and Consultation (IPaC)[15] database was queried for special-status species, sensitive natural communities, and protected areas known from the project vicinity.

The project area evaluated for biological resources included the proposed underground transmission line alignment in the Hollywood Community of the City of Los Angeles and in the City of West Hollywood, existing Tower 584 in the Hollywood Hills, and the empty lots surrounding BWP distribution lines in the City of Burbank, plus a 500-foot survey buffer around the aforementioned areas, combined with the Biological Survey Areas (BSAs). Field surveys were conducted in April 2020 and again on December 15, 2021, to document existing biological resources that occur or have the potential to occur within and adjacent to the BSAs surrounding the project components, and to evaluate the potential for special-status plant and wildlife species to occur within the BSAs. The entire BSA along the underground alignment is urbanized or has otherwise been previously disturbed, primarily by residential development, with some areas of commercial development.

[13] California Department of Fish and Wildlife. *California Natural Diversity Data Base (CNDDB).* Full report for the Hollywood, Van Nuys, Burbank, Pasadena, Los Angeles, Beverly Hills, Venice, Inglewood, and South Gate quadrangles. Generated December 8, 2021.
[14] California Native Plant Society, Rare Plant Program, 2021, Inventory of Rare and Endangered Plants (online edition, v9-01 0.0). Website: http://www.rareplants.cnps.org/, December 8, 2021.
[15] Information for Planning and Consultation, 2021, U.S. Fish and Wildlife Service. Website: https://ecos.fws.gov/ipac/, December 8, 2021.

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 Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant Impact. A significant impact could occur if the proposed project removed or modified the habitat for, or otherwise directly or indirectly affected, any species identified or designated as a candidate, sensitive, or special status species in local or regional plans, policies, or regulation, or by the CDFW or USFWS.

Special-Status Plants

Special-status plant species include those listed as Endangered, Threatened, Rare or those species proposed for listing by the USFWS under the federal Endangered Species Act (FESA), those listed by CDFW under the California Endangered Species Act (CESA), and or those listed by the CNPS.[16,17,18] The CNPS inventory is sanctioned by the CDFW and essentially serves as the list of candidate plant species for state listing. CNPS's California Rare Plant Ranks (CRPR) 1B and 2 species are considered eligible for state listing as endangered or threatened.

A total of 67 plant species were identified from the CNDDB and CNPS database searches to have historically been recorded from the Hollywood and surrounding eight quadrangles (a land area of nearly 100 square miles), and from a search of IPaC for the project area and vicinity, including 14 federal and/or State-listed species. However, no records of special-status plant species coincided with the BSA of the proposed underground transmission line alignment within the cities of Los Angeles and West Hollywood or the BSA surrounding the parcels where the BWP line would be lowered in the City of Burbank. One record of a special-status plant species, mesa horkelia (*Horkelia cuneata* var. *puberula*), from 100 plus years ago coincides with the BSA surrounding Tower 584. This species is expected to be extirpated from the area and was not observed during the field survey. Habitats potentially suitable for this species, and for all other special-status plant species identified during the database reviews, are absent from the BSA and special-status plant species are not expected to occur within the BSAs.

Vegetation within the BSA consists primarily of plantings of non-native ornamental trees and shrubs and areas of lawn associated with residential landscapes. Poinsettia Park occurs at the southern end of the underground alignment, across from the Hollywood Receiving Station. The BSA surrounding the Nichols Canyon Terminal Tower captures some steep undisturbed hillside habitats composed of native shrub species; however, non-native grasses cover most of this habitat. Tower 584 is located in the Hollywood Hills (Sherman Oaks-Studio City-Toluca

16 Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (Title 50 Code of Federal Regulations [CFR] 17.12 [listed plants], Title 50 CFR 17.11 [listed animals] and includes notices in the Federal Register for proposed species).

17 Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (Title 14 California Code of Regulations 670.5).

18 Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 *et seq.*).

Lake-Cahuenga Pass Community Plan Area of the City of Los Angeles) and sits atop a rocky hill along Mulholland Drive. Vegetation around the tower consists of wild oat, with occasional native laurel sumac shrubs. The surrounding BSA consists of residential parcels with ornamental landscapes that include occasional native tree or shrub species. Occasional tall mature pine, palm, and eucalyptus trees occur within the BSA. The BWP line that would be lowered occurs in the City of Burbank. The parcels consist of patchy low-growing grasses and weedy species. No trees or shrubs occur on these parcels. The surrounding BSA consists of dense residential development with landscaping of primarily non-native ornamental species. Most trees are small or medium-sized, with few tall mature trees occurring in the BSA.

Mature southern California walnut trees are protected under the City of Los Angeles Native Tree Protection Ordinance. Southern California black walnut trees were observed in the BSA of Tower 584, on a private residential property at the end of Sunnydell Trail and outside the public road right-of-way where they will not be impacted. In addition, no USFWS-designated Critical Habitat for any special-status plant species coincides with the BSA.

Construction

No federal or State-listed plant species were identified during the field surveys, and special-status plants are generally not expected to occur in the BSA due to a lack of potentially suitable habitat. A few individuals of non-listed southern California black walnut were identified within the BSA of Tower 584; however, they occur outside the project footprint of the tower and associated staging areas and would not be directly impacted. As a result, significant direct impacts on special-status plants are not anticipated.

Indirect impacts to special-status plant species occurring outside the project area footprints could result during surface disturbance, increasing the potential for fugitive dust and during a storm event, erosion, and sediment deposition beyond the project area footprints. If such impacts were to occur, they would be considered significant. Suitable habitat for special-status plants is not present in the urbanized environments of the BSAs. In the instance where southern California black walnut trees occur downslope from Sunnydell Trail within the BSA of Tower 584, proposed staging activities are not anticipated to indirectly impact these individuals. Further, implementation of BMPs related to fugitive dust and erosion control would reduce the potential for significant indirect impacts to vegetation outside the project footprints. As a result, significant indirect impacts to special-status plants are not anticipated.

Operations

No vegetation, including introduced specimens of southern California black walnut, would be impacted during operations and routine maintenance of the proposed project, which would be conducted within the paved road right-of-way or previously disturbed areas and would not change conditions from those present prior to project implementation.

Sensitive Wildlife Species

Special-status wildlife species include those listed by USFWS under FESA and by CDFW under CESA. USFWS and CDFW officially list species as either threatened, endangered, or as candidates for listing. Additional species receive federal protection under the Bald Eagle Protection Act (e.g., bald eagle, golden eagle), the MBTA, and state protection under CEQA Section 15380(d).

All birds, except European starlings, English house sparrows, rock doves (pigeons), and non-migratory game birds such as quail, pheasant, and grouse are protected under the MBTA. However, non-migratory game birds are protected under CFGC Section 3503. Many other species are considered by CDFW to be California Species of Special Concern (SSC) and others are on a CDFW Watch List (WL). The CNDDB tracks species within California for which there is conservation concern, including many that are not formally listed, and assigns them a CNDDB Rank.[19] Although CDFW SSC and WL species and species that are tracked by the CNDDB but not formally listed are afforded no official legal status, they may receive special consideration during the environmental review process under CEQA. CDFW further classifies some species as "Fully Protected" (FP), indicating that the species may not be taken or possessed except for scientific purposes, under special permit from CDFW. Additionally, CFGC Sections 3503, 3505, and 3800 prohibit the take, destruction, or possession of any bird, nest, or egg of any bird except English house sparrows and European starlings unless authorization is obtained from CDFW.

A total of 57 wildlife species were identified from the CNDDB search of the Hollywood and surrounding eight quadrangles and from a search of IPaC for the project vicinity, including 17 federal and/or State-listed wildlife species. No records of special-status wildlife species coincide with the BSAs of any of the project components. Although habitats potentially suitable to support the special-status wildlife species identified during the database reviews are generally absent from the BSAs, potentially suitable habitat for southern rufous-crowned sparrow (*Aimophila ruficeps canescens*) occurs at Tower 584, where steep, rocky hillside habitat covered by a mix of shrubs and grasses preferred by this species is present. Additionally, trees within the BSA of the tower provide potentially suitable nesting habitat for Cooper's hawk (*Accipter cooperii*), a special-status raptor species not identified during the database searches, but one known to successfully nest throughout urban environments within the Los Angeles Basin.[20] This species has some potential to occur in the BSAs; however, Swainson's hawk, identified during the database search, is not expected to occur within the BSA. No USFWS-designated Critical Habitat for any special-status wildlife species coincides with the BSA.

<u>*Construction*</u>

No federal or State-listed wildlife species have been identified in the BSAs, and potentially suitable habitat for such species is generally absent from the BSAs. However, as discussed above, southern California rufous-crowned sparrow and Cooper's hawk, both CDFW WL species, could occur within the BSA of Tower 584.

[19] California Department of Fish and Wildlife. 2019. California Natural Diversity Database (CNDDB). Special Animals List.
[20] Cooper, Daniel S. and Courtney McCammon. 2021. Los Angeles Raptor Study. Final Report. Prepared for Friends of Griffith Park. September 4. 31 pp.

No vegetation suitable for nesting by these species would be removed, and by adhering to the MBTA BMPs BIO-1 through BIO-4 - outlined in Section 1.11 of this IS/MND - related to pre-construction surveys and providing qualified biological monitors as necessary, direct impacts to special-status wildlife are not anticipated. Further, as discussed in Section 1.11 of this IS/MND, implementing BMPs related to fugitive dust, noise, and vibration, and by adhering to the MBTA BMPs BIO-1 through BIO-4, indirect impacts to non-listed special-status bird species, such as southern California rufous-crowned sparrow and Cooper's hawk, would be reduced to less than significant.

Operations

Significant impacts to biological resources during operations and routine maintenance of the project are not anticipated. Operational and maintenance activities would be conducted within paved roadways or previously disturbed areas and would not change conditions from those present prior to project implementation.

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 Wildlife or U.S. Fish and Wildlife Service?

No Impact. Sensitive natural communities are those that are designated as rare in the region by the CNDDB, support special-status plant or wildlife species, or receive regulatory protection (i.e., Section 404 of the Clean Water Act [CWA] and/or Sections 1600 et seq. of the CFGC). Rare communities are given the highest inventory priority.[21,22]

Based on a review of the CNDDB, eight sensitive vegetative communities have been recorded within the Hollywood and surrounding eight quadrangles: California Walnut Woodland, Riversidian Alluvial Fan Sage Scrub, Southern Coast Live Oak Riparian Forest, Southern Coastal Salt Marsh, Southern Cottonwood Willow Riparian Forest, Southern Dune Scrub, Southern Sycamore Alder Riparian Woodland, and Walnut Forest.

No sensitive natural vegetation communities or natural communities that may receive regulatory protection occur within the BSAs of Tower 584 and the vacant parcels in the City of Burbank. Some native vegetation occurs within the BSA north of the Nichols Canyon Terminal Tower at the northern terminus of the underground transmission line alignment, where steep hillside habitat consists of native shrub species, but also includes a high coverage of non-native fountaingrass. Additionally, Nichols Canyon Wash and a debris basin along the wash occur along the west side of Nichols Canyon Road, across the road from the Nichols Canyon Terminal Tower. These features likely constitute jurisdictional waters and receive regulatory protection under the CWA and CFGC. The wash undergrounds approximately 600 feet south of the Nichols Canyon Terminal Tower and drains farther south towards Hollywood Boulevard; as a result, no project construction or maintenance would

21 Holland, R. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game. The Resources Agency. 156 pp.
22 California Department of Fish and Wildlife. 2010. List of California Terrestrial Natural Communities Recognized by the Natural Diversity Data Base. Natural Heritage Division. The Resources Agency. September.

occur in or impact the wash. Therefore, there would be no impact to sensitive natural communities.

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

No Impact. Wetlands are defined as areas that are inundated by surface or ground water with a frequency sufficient to support under normal circumstances a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands do not occur within the BSA. Therefore, there would be no impacts to state or federally protected wetlands.

d) **Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery/breeding sites?**

No Impact. In an urban context, a wildlife migration corridor can be defined as a linear landscape feature of sufficient width and buffer to allow animal movement between two comparatively undisturbed habitat areas or between a habitat area and some vital resource that encourages population growth and diversity. Habitat fragments are isolated patches of habitat separated by otherwise foreign or inhospitable areas, such as urban tracts or highways. Two types of wildlife migration corridors seen in urban settings are regional corridors, defined as those linking two or more large areas of natural open space, and local corridors, defined as those allowing resident wildlife to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development.

The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. The BSA does not occur within or intersect a recognized/established regional wildlife corridor.

Ornamental trees within and adjacent to the BSAs provide some opportunities for cover, resting, foraging, and nesting to localized bird populations; however, they do not provide functions as a significant wildlife movement corridor.

Construction

The BSA does not serve as a regional wildlife corridor. As a result, there would be no impact from project construction activities to a wildlife movement corridor.

Operations

Significant impacts to biological resources during operations and routine maintenance of the project are not anticipated. Operational and maintenance activities would be conducted within paved roadways or previously disturbed areas and would not change conditions from those present prior to project implementation.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?

No Impact. In response to the City's declining oak tree population, the City enacted an oak tree protection ordinance in 1982. To further slow the decline of native trees, the City amended the two City Municipal Code sections pertaining to oak trees in April 2006 to include southern California black walnut, western sycamore, and California bay (*Umbellularia californica*) (Section 17.02 of City Municipal Code).

California black walnut trees protected under the City of Los Angeles Native Tree Protection Ordinance were identified in the BSA during the field survey, however these species occur on a private residential property at the end of Sunnydell Trail and outside the public road right-of-way where they will not be impacted. In addition, no trees are currently proposed for removal as part of the project. As a result, no impacts would occur to ordinance-protected trees.

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

No Impact. The proposed project is not located within an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan area. Therefore, no impact would occur.

V. CULTURAL RESOURCES

Potential impacts related to cultural resources resulting from implementation of the proposed project were determined from the results presented in the Cultural Resources Technical Report prepared for the proposed project, which is included as Appendix C to this IS/MND.

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations Section 15064.5?

No Impact. Archival research for the proposed project was conducted in March 2020, which examined records kept at the South Central Coast Information Center (SCCIC), local cultural resource listings, historical maps, contemporary archaeological literature, local prehistoric land use patterns and resource availability. The research focused on the identification of previously recorded cultural resources within the project area as well as within a 1/2-mile radius of the project area for archaeological resources, and a 500-foot radius for historical built resources (study area). Inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the Built Environment Resource Directory (BERD), Historic Properties Directory (HPD), California State Historic Resources Inventory (HRI), California Historical Landmarks (CHL), California Points of Historical Interest, and Los Angeles Historic Resources Inventory (Los Angeles HRI; *HistoricPlacesLA, SurveyLA*) were also reviewed to identify cultural resources within both the project and study areas.

A resource is generally considered “historically significant” if the resource meets at least one of the four criteria for listing on the CRHR (Public Resources Code Section 5024.1[a]). The CRHR is used as a guide by state and local agencies, private groups, and citizens to identify the state historical resources and to include which properties are to be protected, to the extent prudent and feasible, from substantial adverse change. The CRHR evaluation criteria are similar to the NRHP criteria. For a property to be eligible for inclusion in the CRHR, it must meet one or more of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California history and cultural heritage;
2. It is associated with the lives of persons important in our past;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. It has yielded, or may be likely to yield, important information in prehistory or history.

The CRHR may also include various other types of historical resources that meet the criteria for eligibility, including the following:

1. Individual historic resources
2. Resources that contribute to a historic district
3. Resources identified as significant in historic resource surveys
4. Resources with a significance rating of Category 3 through Category 5 in the State Inventory (Categories 3 and 4 refer to potential eligibility for the NRHP; Category 5 indicates a property with local significance)

Although the NRHP standard includes the evaluation of resources that are 50 years old or older, the California Office of Historic Preservation (OHP) endorses recording and evaluating resources over 45 years of age to accommodate the five-year lag in the planning process.

Previously Recorded Cultural Resources

The records search results revealed nine cultural resources within the entire study area. Of these nine, two are historic-era archaeological resources within the 0.5-mile area and seven are historic-period built resources within the 500-foot radius area. None overlap the project area.

California State Historic Resources Inventory

Study of the OHP’s BERD, the HPD, and the Los Angeles HRI identified 76 built environment resources that are adjacent to or face the project area. Of these, six are eligible or potentially eligible. The BERD listed two historical resources at 7300 and 7546 Fountain Avenue (individually eligible for local listing), the HPD listed two at 1135 and 1243 North Fuller Avenue (contributors to a multicomponent resource that appears eligible for local listing or designation), and the Los Angeles HRI listed two at 7750 West Sunset Boulevard and 1401 North Spaulding Avenue. Because the project will have only temporary above-ground impacts and construction will take place in only the road at this location, no impacts to the character-defining features of these historical resources are anticipated.

California Historical Landmarks

The list of CHLs was searched to identify CHLs located within 0.5 mile of the project area. This search identified one landmark within 0.5 mile: Plummer Park, Monument Number CHL-160 located at 7377 Santa Monica Boulevard, Hollywood, California. No CHLs overlap with the project components themselves.

Los Angeles Historic-Cultural Monuments

Los Angeles Historic Cultural Monuments (LAHCMs) are sites in Los Angeles that have been designated by the Los Angeles Cultural Heritage Commission as worthy of preservation based on their architectural, historic, and cultural merits. Two were located within 0.5 mile of the project area. These are the Roland E. Hill House, LAHCM-917, located at 3268 North Bennett Drive, Los Angeles; and the Margaret and Harry Hay House, LAHCM-981, located at 3132 North Oakcrest Drive, Los Angeles, California. No LAHCMs overlap with the project components.

Based on the above assessment of historical resources in relation to the project area and the fact that all project facilities would be located within paved roadways or previously disturbed areas and would not change conditions from those present prior to project implementation, there would be no adverse change in the significance of the 76 inventoried built resources adjacent to or facing the project area. Potential project impacts near these resources would be subsurface and would not have indirect visual, audible, or atmospheric impacts.

Two built resources were surveyed and identified within the project area, the Nichols Canyon Terminal Tower (constructed in 1974) located along the east side of Nichols Canyon Road, and the Hollywood Receiving Station (constructed in 1954) located at 940 N. Poinsettia Place. Both resources were recorded and evaluated on California Department of Parks and Recreation (DPR) forms as two built resources in the project area that would be altered by the project (Appendix A of Appendix C to this IS/MND). Neither resource meets the eligibility criteria for the NRHP or CRHR and are not considered historical resources for the purposes of CEQA.

Therefore, there would be no adverse change in the significance of a historical resource as a result of the project and no impact would occur.

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

Less Than Significant Impact. An archaeological field survey of the study area was conducted on December 15, 2021, which involved a windshield survey along paved road segments of the underground alignment between the Hollywood Receiving Station and the Nichols Canyon Terminal Tower, on Nichols Canyon Road north of Hollywood Boulevard, including parts of North Fuller Avenue, Fountain Avenue, North Genesee Avenue, and Nichols Canyon Road. Although many road alignments within the project area are historic in age, the roads were not recorded as historical resources because the character and visible attributes of these actively maintained and paved roadways would not be altered by the proposed project. Unpaved segments of the project area were subject to an intensive pedestrian survey in linear transects spaced between 5 and 15 meters apart, which include at Tower 584 and the BWP line.

No archaeological resources were identified within the study area during the field survey, or the archival search discussed in response V(a), above. The study area has varying soil visibility; however, much of the study area is within the road right-of-way, which is paved with asphalt. Targeted inspections of exposed soil were conducted, and no archeological resources were noted.

Based on the results of the archival research and field survey, there is low potential that archaeological resources would be encountered during ground-disturbing activities for construction of the proposed project. The vicinity of the BWP line contained younger alluvial fans; however, this area was highly disturbed. The vicinity of Tower 584 was composed of shallow rocky soils. Excavation for the underground alignment, while also including some alluvial deposits, would take place entirely underneath a road and adjacent to previously placed underground transmission lines. Therefore, the results of the archival research and survey indicate a low probability that archaeological resources will be discovered during ground-disturbing activities for the proposed project. Therefore, the proposed project would not be expected to cause a substantial adverse change in the significance of a known archaeological resource.

To reduce impacts to unanticipated archaeological resources BMP-CUL-1, discussed in Section 1.11 of this IS/MND, would be implemented to provide training to construction personnel to identify such resources, followed by the proper procedures for handling such resources after discovery. This training and these procedures would be documented as part of the proposed projects' CRMP. Although not expected to occur due to the low potential in the APE, in the event of an inadvertent discovery of archaeological resources during construction activities, the proposed project would be subject to California Public Resources Code (PRC) Section 21083.2(i) regarding provisions related to the accidental discovery of archaeological resources. These provisions include immediately halting construction work in the vicinity of the find (within a 50-foot buffer), and LADWP retaining a qualified archaeologist meeting Secretary of Interior standards to evaluate the significance of and determine appropriate treatment for the resource in accordance with the provisions of CEQA Guidelines Section 15064.5 and the National Historic Preservation Act. If the resource is determined to be potentially of Native American in origin, **Mitigation Measure (MM) TCR-1** would be required to mitigate potential impacts to a less-than-significant level (see Section XVIII of this IS/MND). If the resource is determined to be non-Native American in origin and is determined to be potentially significant, a treatment or avoidance plan shall be developed within 48-hours of the discovery. Work in the area may not resume until evaluation and treatment of the resource is completed or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while the evaluation and treatment of archaeological resources take place. For non-Native American archaeological resources, compliance with PRC Section

21083.2(i) as well as the implementation of the BMP-CUL-1 as outlined in Section 1.11 of this IS/MND, would ensure that the impact would be less than significant.

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

Less Than Significant Impact. There are no cemeteries or known burial grounds located within the project area and vicinity. Based on the results of the archival research and field survey, there is low potential for such sites to be encountered during ground-disturbing activities. Additionally, soils throughout the underground alignment have been substantially disturbed by previous subsurface construction activities, including road and utility construction.

In the unlikely event human remains are discovered, the CRMP required as part of BMP-CUL-1 would include BMPs for handling human remains. Included in these procedures would be compliance with the provisions of the California Health and Safety Code Section 7050.5, which states that in the event that human remains are discovered during project construction, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains would occur, and the Los Angeles County Coroner would be notified. The coroner would provide recommendations concerning the treatment and disposition of the human remains within two working days. If the remains and/or related resources, such as funerary objects, are determined to be of Native American origin, the coroner would contact the Native American Heritage Commission within 24 hours. In accordance with California Public Resources Code Section 5097.98, the Native American Heritage Commission would immediately notify the person it believes to be most likely descended from the deceased Native American. The most likely descendent would be given access to the site where the remains were discovered and may make recommendations for the treatment and disposition of the remains and related resources, as well as provide input regarding the potential for other remains to be present. Work at the discovery site may commence only after consultation with the most likely descendent and treatment of the remains and any associated resources have been concluded. Work may continue on other parts of the project site while consultation and treatment are conducted. Implementation of the proposed project's CRMP, as part of BMP-CUL-1 in Section 1.11 of this IS/MND, would ensure that the impact to human remains, including Native American remains, would be less than significant.

VI. ENERGY

Potential impacts related to energy resulting from implementation of the proposed project were determined in part from construction fuels consumption energy calculations, which are included as Appendix D to this IS/MND.

Would the project:

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

Less Than Significant Impact. The following analysis discusses short-term (construction) and long-term (operational) use of electricity, natural gas, and petroleum related to the proposed project.

Electricity

Construction

Construction of the proposed project would require electricity for operation of electrically powered hands tools. Electricity for construction activities would be provided by diesel generators using petroleum products. During a 5-month period to replace the transmission line within Nichols Canyon Road north of Hollywood Boulevard, the proposed project would require a temporary transmission line outage while trenching and removing the existing underground TOL-HWD L1 pipe and cable and installing new underground conduit and cable. However, the temporary outage would not affect service to any LADWP customer. Therefore, construction of the proposed project would result in a less-than-significant impact related to wasteful, inefficient, or unnecessary consumption of electricity.

Operations

Following the completion of construction activities, long-term operation of the proposed project would not increase electrical demand on the LADWP network. Operation of the upgraded TOL-HWD L1 would not interfere with the existing electricity service infrastructure, nor would it impede LADWP efforts to expand its renewable resources. Rather, the upgraded underground cable would maintain the reliability of the system while providing the capacity to accommodate imported renewable energy coming from outside the Los Angeles Basin. Therefore, implementation of the proposed project would have a less-than-significant impact related to operational electricity consumption.

Natural Gas

Construction

Construction activities typically do not require the consumption of natural gas to power equipment or heavy machinery. Natural gas that would be consumed during construction would be negligible and would not result in a significant drain on natural gas resources. Therefore, construction of the proposed project would result in a less-than-significant impact related to wasteful, inefficient, or unnecessary consumption of natural gas.

Operations

Operational activities would not use natural gas. Therefore, operation of the proposed project would not result in a significant impact related to wasteful, inefficient, or unnecessary consumption of natural gas.

Petroleum

Construction

Petroleum fuels would be consumed during construction activities by heavy-duty equipment, which is usually diesel powered, as well as on-road vehicles used by the construction crews, vendor deliveries, and haul trucks. Table 3-2 shows that a one-time expenditure of approximately 250,961 gallons of diesel fuel and 63,722 gallons of gasoline would be needed to construct the proposed project. Averaged over the construction timeline, equipment and vehicles employed to construct the proposed project would consume approximately 83,654 gallons of diesel fuel and 21,241 gallons of gasoline per year. The proposed project would use best practices to eliminate the potential for the wasteful consumption of petroleum. Exported materials (e.g., demolition debris and soil hauling) would be disposed of at the closest facility that is able to accept such materials, and the proposed project would be required to comply with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to five minutes. Therefore, because petroleum use would be minimized to the extent feasible and represents a relatively small amount of fuel consumption, construction of the proposed project would result in a less-than significant-impact related to wasteful, inefficient, or unnecessary consumption of petroleum.

Table 3-2: Construction Petroleum Demand

Source	Fuel Consumption (Gallons)
Off-Road Equipment (Diesel)	136,726
Vendor Delivery Trips (Diesel)	29,085
Disposal Hauling Trips (Diesel)	85,150
Total Diesel Consumption	**250,961**
Annual Average Diesel Consumption (30 months)	***83,654***
Construction Crew Trips (Gasoline)	63,722
Total Gasoline Consumption	**63,722**
Annual Average Gasoline Consumption	***21,241***

Note: Construction fuels consumption (off-road equipment and vehicles) calculations. and usage assumptions can be found in Appendix D to this IS/MND.
Source: CARB, 2018; USEPA, 2020; TAHA, 2022

Operations

Activities associated with long-term operations and maintenance would be minimal, limited to scheduled maintenance or emergency repair. No additional permanent workforce would be required to operate the proposed project. Periodic maintenance would require a small amount of transportation fuel for site inspections. Furthermore, replacing aging cable infrastructure would reduce the necessary frequency of maintenance and servicing trips compared to existing maintenance requirements. Therefore, operation of the proposed project would not result in a significant impact related to wasteful, inefficient, or unnecessary consumption of petroleum products.

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

No Impact. There is no potential for the project to conflict with renewable energy or energy efficiency plans. The proposed project would not use a significant amount of transportation fuel, electricity, or natural gas during either construction or operations. Construction activities would use best practices to eliminate the potential for the wasteful consumption of energy (e.g., compliance with CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to five minutes). Furthermore, the upgraded underground cable would maintain the reliability of the system while providing the capacity to accommodate imported renewable energy coming from outside the Los Angeles Basin. Therefore, the proposed project would result in no impact related to energy plans and energy efficiency.

VII. GEOLOGY AND SOILS

Would the project:

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

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

Less Than Significant Impact. The underground alignment along Nichols Canyon Road, between Hollywood Boulevard and Courtney Avenue would occur within the Hollywood Alquist-Priolo Earthquake Fault Zone. [23] However, the proposed project does not include the construction of any habitable structures, nor would the use of the project area change as a result of the proposed project following completion of construction. The proposed project would be designed and constructed in compliance with current applicable federal, state, and local codes related to seismic hazards. With adherence to existing codes, impacts related to directly or indirectly causing potential adverse effects from the rupture of a known earthquake fault would be less than significant.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The components of the proposed project are located within the seismically active Southern California region, and like all locations within the area, are subject to strong seismic ground shaking. However,

[23] California Department of Conservation, CGS Earthquake Hazards Zones: Fault Traces Map. Website: https://gis.conservation.ca.gov/server/rest/services/CGS_Earthquake_Hazard_Zones/SHP_Fault_Traces/MapServer, February 16, 2022.

as discussed in Section VII(a)(i) above, the proposed project would be designed and constructed in compliance with the current applicable federal, state, and local codes related to seismic hazards. As such, the proposed project would result in a less-than-significant impact related to strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. The northernmost portion of the underground alignment and the BWP line are located in designated liquefaction areas.[24] However, as discussed above, all components of the proposed project would be designed and constructed in compliance with applicable federal, state, and local codes to minimize impacts related to seismic ground failure, including liquefaction. The impact would be less than significant.

iv) Landslides?

Less Than Significant Impact. Equipment staging, laydown, and work areas for Tower 584 are located within a designated landslide area; the northernmost portion of the underground alignment is located adjacent to designated landslide and/or hillside areas.[25] However, as discussed above, all components of the proposed project would be designed and constructed in compliance with applicable federal, state, and local codes to minimize impacts related to seismic ground failure. The impact would be less than significant.

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

Less Than Significant Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. Construction activities would include excavation, shoring, base work, backfilling and plating for the proposed underground replacement cable within roadways and at the terminal tower/receiving station facilities, embedding concrete piers to support reconstructed overhead equipment at the terminal tower/receiving station facilities, and minor foundational work at the footings of Tower 584 (i.e., up to 30 cy of removed soil followed by the addition of concrete). The soil removed during excavation south of Hollywood Boulevard would not be stockpiled on site but immediately loaded onto trucks and hauled to a local landfill for proper disposal. Because soil exposed through excavation would be entirely contained within the trenches and excavations for vaults and, which would be properly shored to retain the trench walls, substantial erosion or loss of topsoil would not occur. Soil from trench excavations north of Hollywood Boulevard along Nichols Canyon Road and within the Nichols Canyon Terminal Tower would be temporarily stockpiled on site (i.e., within the construction corridor/street while the new PVC conduit is installed); the soil would be protected from erosion through the use of waddles, gravel bag barriers, etc. (see BMPs discussed in Section 1.11), and would be used to backfill the trench following

24 California Department of Conservation, CGS Earthquake Hazard Zones: Liquefaction Zones Map, Website: https://gis.conservation.ca.gov/server/rest/services/CGS_Earthquake_Hazard_Zones/SHP_Liquefaction_Zones/MapServer, February 16, 2022.

25 California Department of Conservation, CGS Earthquake Hazard Zones: Landslide Zones Map, Website: https://gis.conservation.ca.gov/server/rest/services/CGS_Earthquake_Hazard_Zones/SHP_Landslide_Zones/MapServer, February 16, 2022.

incremental installation of the PVC conduit. Additionally, during construction, transport of sediments from the project area by stormwater runoff and winds would be prevented through BMPs outlined in Section 1.11, such as implementation of Rule 403 dust control measures required by SCAQMD, the development and implementation of an erosion control plan, and a SWPPP for construction activities. With adherence to applicable regulations and implementation of preventative measures, impacts associated with soil erosion or the loss of topsoil would be less than significant.

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

Less Than Significant Impact. As discussed above in Sections VI(a)(iv) and Section VI(a)(iii), impacts related to landslides and liquefaction would be less than significant. This would include lateral spreading, which is a type of liquefaction-induced ground failure on mildly sloping ground.

Subsidence is the lowering of surface elevation due to changes occurring underground, such as extraction of large amounts of groundwater. When groundwater is extracted from aquifers at a rate that exceeds the rate of replenishment, overdraft occurs, which can lead to subsidence. No groundwater extraction would occur as part of the proposed project. Therefore, subsidence would not occur.

Collapsible soils consist of unconsolidated, low-density materials that may collapse and compact under the addition of excessive water or loading. The proposed project would not include the types of uses or activities that would contribute to the loss of subsurface support. Additionally, cable line trenches would be backfilled with higher-density soil-cement slurry, which is not subject to collapse. Therefore, the impact would be less than significant.

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

No Impact. Expansive soils are clay-based soils that tend to expand (increase in volume) as they absorb water and contract (lessen in volume) as water is removed. However, the project components would be located in areas with alluvial soils that have low expansion potential.[26] Furthermore, in areas of open-trench installation, the trench would be backfilled with a stable soil-cement slurry, which is not subject to expansion and contraction. Therefore, there would be no impact.

[26] California Department of Conservation, CGS Special Report 217: Compilation of Quaternary Surficial Deposits Map, available at: https://maps.conservation.ca.gov/cgs/qsd/app/, accessed on February 16, 2022.

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

No Impact. The proposed project would not include septic tanks or other alternative wastewater disposal systems. Therefore, no impacts associated with septic tanks or alternative wastewater disposal systems would occur. No impact would occur.

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

Less Than Significant Impact. The project area is mapped as having Quaternary surficial deposits generally consisting of old and young alluvial fan deposits, alluvial valley deposits, alluvial was deposits, and artificial fill, underlain by fine- and coarse-grained Tertiary age formations of sedimentary origin and Cretaceous and Pre-Cretaceous metamorphic formations of sedimentary and volcanic origin.[27] Soils at relatively shallow depths can reasonably be assumed to have been disturbed in the recent past by construction and maintenance of roads and utilities, as well as by natural weathering. Further, the locations of and depths of the trenches and vault along the underground alignment that would be required to install the replacement cable would be similar and adjacent to past trenching that was performed to install the existing HPPT cable system and other utilities within the existing roadways. As such, it is not anticipated that fossils would be encountered at these depths. While it is not anticipated that paleontological resources would be encountered during project construction, as discussed in BMP-GEO-1 in Section 1.11 of this IS/MND, in the event previously unknown paleontological resources are encountered, the construction manager would halt construction activities in the immediate area in accordance with CEQA Guidelines Section 15064.5(f). LADWP would retain a qualified paleontologist to make an immediate evaluation of the significance and appropriate treatment of the resource. Construction activities may continue on other parts of the construction site while evaluation and any necessary treatment of paleontological resources take place. Compliance with these existing policies would ensure that the impact to paleontological resources would be less than significant.

VIII. GREENHOUSE GAS EMISSIONS

Potential impacts related to greenhouse gas emissions associated with the proposed project were determined from the results presented in the Greenhouse Gas (GHG) Emissions Impacts Assessment prepared for the proposed project, which is included as Appendix E to this IS/MND.

The GHG emissions assessment was undertaken in a programmatic manner to estimate the total emissions that would be generated over the three-year construction period and relied upon information provided by LADWP. This information included estimated durations of the activities involved in construction of the proposed project, anticipated inventories of off-road equipment to be used in the various activities, the amount of haul trucks and concrete and material delivery trucks needed to complete the various phases of construction, and the typical construction crew size. The analysis was based on

[27] California Department of Conservation, California Geologic Survey (CGS) Special Report 217: Compilation of Quaternary Surficial Deposits Map. Website: https://maps.conservation.ca.gov/cgs/qsd/app/, February 2, 2022.

conservative estimates of the average level of equipment and vehicle activities that would be deployed on a typical day throughout construction of the proposed project. The general schedule for implementation of proposed project components as inputted to the CalEEMod analysis is summarized in Table 3-3. The analysis was conservative relative to anticipated activity in practicality because construction activities to complete each of the components listed in Table 3-3 would not occur continuously throughout the total amount of days assigned to the particular component. Daily activities would fluctuate and at times be intermittent, however it is not feasible to predict these fluctuations on a day-to-day or week-to-week basis. The working days listed for each component is more than comprehensive to characterize the amount of equipment and vehicle activity that would be needed to complete construction of the proposed project.

Table 3-3: Generalized Construction Schedule for GHG Emissions Analysis

Component/Activity	Approx. Start	Approx. End	Working Days	Days/Week
Roadway Surface Stripping	June 2023	June 2024	315	6
Maintenance Vault Excavation	June 2023	August 2023	60	6
Maintenance Vault Installation	August 2023	December 2023	48	6
Transmission Line Trenching	June 2023	June 2025	630	6
Tower 584 Foundation	July 2023	September 2024	54	6
Tower 584 Erection	September 2023	September 2025	6	6
Maintenance Vault Excavation	June 2025	July 2025	30	6
Maintenance Vault Installation	July 2025	August 2025	24	6
Roadway Restoration	June 2024	June 2025	315	6
Roadway Restriping	April 2025	June 2025	60	6
Nichols Canyon Road Pipe Replacement	October 2025	March 2026	150	6
Terminal Tower & Receiving Station	October 2025	March 2026	150	6

Note: The approximate end dates for the Tower 584 Foundation and Tower 584 Erection components/activities have been extended in this table for the IS/MND to reflect some uncertainty regarding their scheduling (and differs from those listed in Appendix E); however, there would be no change to the estimated working days for these activities, and the modeled construction-related emissions in both Appendices A and E remain purposefully conservative.

Source: TAHA, 2022.

Sources of GHG emissions involved in construction of the proposed project would primarily include exhaust from on-road vehicle operation and off-road equipment use. Through collaboration with the project team and LADWP, inventories of personnel, vehicles, and off-road equipment needed to complete each phase of construction for each project component were compiled and input to CalEEMod to characterize total GHG emissions that would occur to complete each activity. It was conservatively assumed that the daily vehicle inventory would include 80 light duty automobiles and trucks associated with the construction crews, 20 haul trucks for disposing of demolition debris and excavated soil, and 20 vendor delivery trucks supplying concrete and other materials to complete the project (for a total of 40 heavy-duty trucks in use daily on average as a reasonably conservative estimate). Detailed input data for the daily activity inventories can be found in the CalEEMod output files in Appendix E of this IS/MND.

Would the project:

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

Less Than Significant Impact. The proposed project would generate GHG emissions nearly exclusively from construction activities, because—in relation to existing operations—operation of the proposed project following the completion of construction would not introduce any new permanent sources of GHG emissions to the project area. The installation of new infrastructure components may ultimately reduce the necessary frequency of maintenance and service visits to proposed project components in the long run, however, it was assumed that existing maintenance activities would remain similar following completion of the proposed project. In accordance with the CEQA Guidelines, GHG emissions were estimated for all sources involved in construction of the proposed project and compared to the most appropriate quantitative threshold.

Table 3-4 presents the estimated GHG emissions that would be generated by construction of the proposed project based on the implementation schedule presented in Table 3-3, and displays average annual emissions calculated over the two-and-a-half years that construction activities involving heavy-duty equipment would consistently be occurring. Emissions modeling estimated that construction of the proposed project would produce approximately 3,050 $MTCO_2e$ of GHG emissions in total over the three-year implementation timeline, which equates to approximately 1,017 $MTCO_2e$ annually on average during active construction. The annual average GHG emissions would be substantially below the lowest SCAQMD recommended screening threshold, and emissions would not persist beyond the completion of construction activities. Therefore, implementation of the proposed project will result in a less-than-significant impact related to the magnitude of GHG emissions produced.

Table 3-4: Proposed Project Construction Activities GHG Emissions

Source	**Greenhouse Gas Emissions ($MTCO_2e$)**
Off-Road Equipment	1,264
Disposal Hauling Trucks	912
Material Delivery Trucks	310
Construction Crew Vehicles	564
Total	**3,050**
Annual Average Rate	***1,017***
Lowest Recommended SCAQMD Threshold	1,400

Source: TAHA, 2022

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

Less Than Significant Impact. There is no potential for the proposed project to conflict with GHG reduction plans. The new cable would maintain the reliability of the system while providing the capacity to accommodate imported renewable energy coming from outside the Los Angeles Basin. Implementation of the proposed project would not introduce any permanent, long-term sources of GHG emissions to the City of Los Angeles and would not interfere with the GHG emissions reduction plans such as *California's 2017 Climate Change Scoping Plan* and the SCAG *Connect SoCal 2020–2045 RTP*. The primary objective is to replace aging cable infrastructure of the underground portion of the TOL-HWD L1 in approximately the same location as the existing cable by installing a new cable. The new cable would maintain the reliability and resilience of the system as the new cable would allow for and have the capacity to accommodate imported renewable energy coming from outside the basin.

As previously discussed, proposed project GHG emissions would be well below the SCAQMD recommended screening threshold for small CEQA projects. GHG emissions are regionally cumulative in nature, and it is highly unlikely construction of any individual project would generate GHG emissions of sufficient quantity to conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Standard construction procedures would be undertaken in accordance with SCAQMD and CARB regulations applicable to heavy duty construction equipment and diesel haul trucks. Adhering to requirements pertinent to construction equipment maintenance and inspections and emissions standards, as well as diesel fleet requirements, including idling time restrictions and maintenance, would ensure that the proposed project would not conflict with GHG emissions reductions efforts.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

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

Less Than Significant Impact. Construction of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction activities would include the use of materials typical of construction (i.e., fuels, lubricating fluids, solvents, bonding adhesives, etc.) that are classified as hazardous by the Department of Toxic Substance Control (DTSC), United States Environmental Protection Agency (USEPA), the Occupational Safety & Health Administration (OSHA), Los Angeles Fire Department (LAFD), and/or the Los Angeles County Health Department. It should be noted these materials are not considered acutely hazardous and the limited transport, use, storage, handling, and disposal of these materials would occur in conformance with applicable federal, State, and local regulations governing such activities. The proposed project would also involve the draining and disposal of oil from the HPPT, removal and disposal of the existing pipe section that is north of Hollywood Boulevard (within Nichols Canyon Road), removal and disposal of some above ground electrical equipment, as well as the removal and disposal of two existing pump houses and accompanying tanks that are no longer needed to support an oil-filled cable. While these materials are not anticipated to be acutely hazardous, they would or may contain substances that are classified as hazardous. The disposal of all of these materials would occur in accordance with applicable rules and regulations for their handling and would be disposed of at the closest facility that is able to accept such materials. Operation of the proposed project would not result in any new transport, storage, use, or disposal of hazardous materials, and it should be noted that the proposed project would result in an improvement over existing conditions with the replacement of the pressurized, oil-filled pipe for a new, synthetic cable that is easier to maintain. With adherence to applicable regulations, the impact related to the routine transport, use, or disposal of hazardous materials would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. As discussed above, construction activities for the proposed project would involve the limited transport, storage, and use of hazardous materials, such as fuel for construction equipment. These types of materials, however, are not acutely hazardous, and all storage, handling, and disposal of these materials would comply with existing regulations. The existing HPPT (comprised of a pressurized oil-filled environment) would pose an environmental hazard (i.e., potential for leaks) if abandoned in place without depressurization/draining. As part of the proposed project, the HPPT would (1) north of Hollywood Boulevard, be depressurized, drained, heavy detergent cleaned, and removed and disposed of (recycled) at an approved off-site location, and (2) south of Hollywood Boulevard, be depressurized, drained, and abandoned in place (i.e., capped at the ends). Draining of the HPPT would be performed by vacuum and tanker trucks and the oil would be disposed of in conformance with applicable federal, State, and local regulations. Tanker trucks would be used to supply the cleaning solution to be applied at one end and then captured and collected at the other. Spent cleaning solution would be disposed of in conformance with applicable federal, State, and local regulations. Additionally, the proposed project would also involve the removal and disposal of the some above ground electrical equipment and two existing pump houses and accompanying tanks. The disposal of all of these materials would occur in accordance with applicable rules and regulations for their handling and would be disposed of at the closest facility that is able to accept such materials. Compliance with these regulations would ensure a less-than-significant impact related to creating a significant hazard to the public through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment.

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

Less Than Significant Impact. Portions of the underground alignment and the BWP line are located within one-quarter mile of schools. However, as discussed in Sections IX(a) and (b) above, construction of the proposed project would involve the limited use of hazardous materials which are not considered acutely hazardous and the disposal of materials that would or may contain substances that are classified as hazardous. These materials would be handled in accordance with applicable federal, state, and local regulations regarding storage, use, and disposal. Compliance with existing regulations would ensure a less-than-significant impact related to handling of these materials within one-quarter mile of an existing school.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. All work would be conducted from, and located within, existing road ROW, LADWP-owned land designated for Public Facilities, and a BWP easement adjacent to residential uses. According to the California Department of Toxic Substances Control EnviroStor Interactive Map none of the project components would be located on a hazardous materials site[28] and would not result in a hazard to the public or the environment. As such, no impact would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The project components are not located within an airport land use plan. The BWP line is within two miles of the Burbank Airport, but is not within an airport influence area.[29] As such, no impact would occur.

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

Less Than Significant Impact. The proposed project would require temporary lane closures during construction activities. As such, construction activities have the potential to hinder emergency access along portions of the underground alignment. However, as listed in BMP-TRA-2 in Section 1.11, LADWP would coordinate with all applicable agencies regarding construction schedules and worksite traffic control and detour plans (including emergency responders LAFD, LACFD, LASD, and LAPD) so as to address emergency response routing during construction work. Coordination with emergency response agencies would ensure a less-than-significant impact to emergency access during construction activities. During project operation, roadways would be returned to pre-construction configuration. No impact would occur during project operation and impacts would be less than significant during construction.

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[28] California Department of Toxic Substances Control, EnviroStor Interactive Map. Website: https://www.envirostor.dtsc.ca.gov/public/map/?global_id=38330005, accessed on February 16, 2022.

[29] City of Burbank, 2013, Burbank 2035 General Plan: Safety Element. Website: https://www.burbankca.gov/documents/173607/0/Burbank2035+General+Plan.pdf/139656b0-80e9-3b11-dc6d-751642c85b38?t=1612301807431, February 16, 2022.

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

Less Than Significant Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. The northern portion of the underground alignment, including the Nichols Canyon Terminal Tower, and Tower 584 are both within Very High Fire Hazard Severity Zones (VHFHSZs) within Local Responsibility Areas.[30] Tower 584 is also within a hillside area but is not located in a high wind velocity area.[31] Construction activities at these locations would be conducted from within the public roadway ROW/confines of LADWP property and in the immediate vicinity of the existing transmission line tower (which is an isolated hillside parcel surrounded by Mulholland Drive, Macapa Drive, and residential property). These locations and the nature of the proposed construction activities do not present a unique or increased fire risk; for example, construction activities at Tower 584 would involve minor foundation work at the tower footings (i.e., removal of a limited amount of existing material and the addition of concrete) and a tower raise using hydraulic lift equipment (i.e., proprietary process that employs hydraulic jacks to lift an upper portion of the tower). The nearest fire station to the project area is LAFD Station 76, located approximately 0.8 miles to the northeast of Tower 584. During construction of the proposed project, safe handling of flammable products would be required. Additionally, construction crews would have fire-suppression equipment available on-site to respond to the accidental ignition of a fire. As such, construction of the proposed project would not exacerbate wildland fire risks. Following construction activities to raise the tower, Tower 584 would operate similar to existing conditions and would not increase wildland fire risk. The impact would be less than significant.

X. HYDROLOGY AND WATER QUALITY

Would the project:

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

Less Than Significant Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. Construction activities would include excavation, shoring, base work, backfilling and plating for the proposed underground replacement cable within roadways and at the terminal tower/receiving station facilities, embedding concrete piers to support reconstructed overhead equipment at the terminal tower/receiving station facilities, and minor foundational work at the footings of Tower 584. The soil removed during excavation south of Hollywood Boulevard would not be stockpiled on site but immediately loaded onto trucks and hauled to a local landfill for proper disposal. Because soil exposed through excavation would be entirely contained within the trenches and excavations

[30] State of California and the Department of Forestry and Fire Protection (CAL FIRE), FHSZ Viewer. Website: https://egis.fire.ca.gov/FHSZ/, February 11, 2022.

[31] ZIMAS, 2022. Website: http://zimas.lacity.org/, February 11, 2022.

for vaults and would be properly shored to retain the trench walls, substantial erosion or loss of topsoil, which could affect water quality, would not occur. Soil from trench excavations north of Hollywood Boulevard along Nichols Canyon Road and within the Nichols Canyon Terminal Tower would be temporarily stockpiled on site (i.e., within the construction corridor/street while the new PVC conduit is installed); the soil would be protected from erosion through the use of waddles, gravel bag barriers, etc. (see BMPs discussed in Section 1.11), and would be used to backfill the trench following incremental installation of the PVC conduit. Additionally, during construction, transport of sediments from the project site by stormwater runoff and winds would be prevented through BMPs outlined in Section 1.11, such as implementation of Rule 403 dust control measures required by SCAQMD, the development and implementation of an erosion control plan, and a SWPPP for construction activities. Operation would be similar to existing conditions. With adherence to applicable regulations and implementation of preventative measures, impacts associated with water quality standards or waste discharge requirements would be less than significant.

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

No Impact. The proposed project would not require groundwater extraction from the project area. Although water would be used to suppress dust in compliance with SCAQMD Rule 403 and for other purposes during project construction, this would not result in the use of large amounts of water that would substantially deplete groundwater supplies or interfere with groundwater recharge. No depletion of groundwater supplies would occur related to project operations; no impact would occur.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:

i) Result in substantial erosion or siltation on- or offsite?

Less Than Significant Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles, and as such, would not alter the existing drainage pattern of the area. Because soil exposed through excavation south of Hollywood Boulevard would be entirely contained within the trenches and excavations for vaults and would be properly shored to retain the trench walls, substantial erosion would not occur. Foundation work at Tower 584 would require the removal of a limited amount of existing material (i.e., up to 30 cy of soil) at the tower footings, which would, same as for the trenching and excavation of the underground alignment, not be stockpiled on site but immediately loaded onto trucks and hauled to a local landfill for proper disposal. Soil from trench excavations north of Hollywood Boulevard along Nichols Canyon Road and within the Nichols Canyon Terminal Tower would be temporarily stockpiled on site (i.e., within the construction corridor/street while the new PVC conduit is installed); the soil would be protected from erosion through the use of waddles, gravel bag barriers, etc. (see BMPs discussed in Section 1.11), and would be used to backfill the trench following incremental installation of the PVC conduit. Additionally, during construction, transport of sediments from the project site by stormwater runoff and winds would be prevented through BMPs outlined in Section 1.11, such as implementation of Rule 403 dust control measures required by SCAQMD, the development and implementation of an erosion control plan, and a SWPPP. Therefore, impacts associated with erosion or siltation on- or offsite would be less than significant.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

No Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles, and as such, would not alter the existing drainage pattern of the area and would not create new impervious surfaces that could result in an increase in the rate of surface runoff or result in on- or off-site flooding. Therefore, there would be no impact.

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

Less Than Significant Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles, and as such, would not alter the existing drainage pattern of the area. Because soil exposed through excavation would be entirely contained within the trenches and excavations for vaults and would be properly shored to retain the trench walls, construction methods would not result in a substantial increase in the rate of surface runoff that would exceed the capacity of existing or planned stormwater drainage. Additionally, during construction, transport of sediments from the project site by stormwater runoff and winds would be prevented through BMPs outlined in Section 1.11, such as implementation of Rule 403 dust control measures required by SCAQMD, and the development and implementation of an erosion control plan, and a SWPPP for construction activities. With adherence to applicable regulations and implementation of preventative measures, impacts associated with additional sources of polluted runoff would be less than significant.

iv) Impede or redirect flood flows?

No Impact. A 100-year flood is a flood defined as having a 1.0 percent chance of occurring in any given year. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. None of the project components are located within a 100-year flood hazard zone.[32,33] No impact related to the alteration of the existing drainage pattern resulting in impeding or redirecting flood flows would occur.

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

No Impact. As discussed in Section X(c)(iv) above, the proposed project components are not located within a 100-year flood hazard zone, and there would be no impacts related to flood hazards. Tsunamis affect low-lying areas along the coastline. The closest project component to the Pacific Ocean is the underground alignment, which is located approximately 10 miles from the coast and is not located within a designated Tsunami Hazard Area.[34] No impact would occur.

Seiches are oscillations of the water surface generated in enclosed bodies of water, often as a result of earthquake related ground shaking. A seiche wave has the potential to overflow the sides of a containing basin to inundate adjacent or downstream areas. Seiches primarily cause damage to properties that are adjacent to a body of water. There are no large bodies of water near the project area and therefore there would no risk of seiche resulting in damage to the proposed project. Additionally, none of the project components would be located in a potential inundation area.[35] As such, no impact would occur.

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

No Impact. As previously discussed, a project-specific SWPPP would be developed and implemented to control pollutants in stormwater discharges during construction activities. Operation of the proposed project would not create runoff in excess of or in varying quality to existing conditions. The project would not substantially deplete groundwater supplies. Therefore, the project would not obstruct implementation of a water quality control plan or sustainable groundwater management plan. As such, no impact would occur.

XI. LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. The underground alignment would be located within existing roadways; other proposed improvements would occur at existing terminal tower/receiving station facilities and transmission line towers/poles. The installation of the new underground transmission cable within the road ROW would necessitate temporary

32 City of Burbank, 2013, Burbank 2035 General Plan: Safety Element. Website: https://www.burbankca.gov/documents/173607/0/Burbank2035+General+Plan.pdf/139656b0-80e9-3b11-dc6d-751642c85b38?t=1612301807431, February 16, 2022.

33 ZIMAS, 2022. Website http://zimas.lacity.org/, February 16, 2022.

34 ZIMAS, 2022. Website http://zimas.lacity.org/, February 16, 2022.

35 City of Los Angeles Department of City Planning, 1996, General Plan: Safety Element. Website: https://planning.lacity.org/odocument/31b07c9a-7eea-4694-9899-f00265b2dc0d/Safety_Element.pdf, February 16, 2022.

vehicle lane closures. Modifications at the terminal tower/receiving station would be conducted within the confines of those facilities that are owned by LADWP and would not result in any lane or road closure. The lowering of the BWP line would also not result in any lane or road closures. The Tower 584 raise would require the use a portion of the Sunnydell Trail street area for equipment and materials laydown and Macapa Drive would be restricted as needed for material unloading and staging of equipment; however, access for residences on these streets would be maintained at all times. No streets or sidewalks would be permanently closed as a result of the construction of the proposed project. Following construction, the roadways would be returned to their existing conditions, and no separation of uses or disruption of access between land use types would occur. Ongoing inspection of the underground maintenance vaults during project operation could necessitate the temporary closure of a single roadway lane for the duration of the activity; however, no streets or sidewalks would be permanently closed as a result of project operation. The proposed project would not physically divide an established community. As such, no impact would occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The proposed project is an electrical transmission system improvement of an existing LADWP transmission line to replace aging cable infrastructure of the underground portion of the TOL-HWD L1. The improvement would maintain the reliability of the system while providing the capacity to accommodate imported renewable energy coming from outside the Los Angeles Basin. The trenches and series of underground vaults associated with the underground alignment all would occur entirely within the public ROW of existing paved roadways in the Hollywood Community Plan Area of the City of Los Angeles and in the City of West Hollywood. Modifications at the terminal tower/receiving station would be conducted within the confines of those facilities that are owned by LADWP. Tower 584 is situated in the Hollywood Hills near the intersection of Mulholland Drive and Macapa Drive in the Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan Area of the City. The BWP line is located in the City of Burbank on land where BWP has an easement that occurs within the backyards of two residential properties. All work would be conducted from, and located within, existing road ROW, LADWP-owned land designated for Public Facilities, and a BWP easement adjacent to residential uses. The proposed Tower 584 raise would occur within 75 feet of the Mulholland Drive roadway ROW and is subject to the Mulholland Scenic Parkway Specific Plan. However, as discussed in Section I(a) of this IS/MND, Tower 584 is an existing structure that is situated on LADWP-owned land designated for Public Facilities with the express intent of supporting electricity transmission. No construction would occur within the Mulholland Drive ROW and after construction, the tower would remain in the same location and would have the same, but taller, appearance compared to existing conditions and would not result in significant visual impact. Additionally, no changes to land use are proposed. Thus, the proposed project would not conflict with existing land use plan, policies, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and impacts would be less than significant.

XII. MINERAL RESOURCES

Would the project:

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

No Impact. The underground alignment is located within areas designated as Mineral Resource Zone (MRZ)-1, meaning an area where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence, and MRZ-3, which are areas that contain mineral deposits, but their significance cannot be evaluated from available data. Tower 584 is located within an area designated as MRZ-3. The BWP line component of the proposed project is located within an area designated as MRZ-2, which are areas that contain significant mineral deposits or high likelihood exists for their presence.[36] While the majority of the City of Burbank sits atop an area classified as MRZ-2, past land use changes to accommodate planned urbanization now preclude mining activities in Burbank.[37] Future mining activities could not occur without destroying large areas of the City, including areas for residential, commercial, industrial, and transportation uses. Although there is a possibility that significant mineral resources could be located within the MRZ-2 area, mining would not be feasible, precluding this area as a potential future source for mineral resources. Thus, there are no mineral resources of value to the region and the residents of the state identified within the project area. As such, no impact would occur.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on any relevant plans, as described above in Section XII(a) above. Construction and operation of the proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on any relevant plans. As such, no impact would occur.

XIII. NOISE

Potential impacts related to noise resulting from implementation of the proposed project were determined from the results presented in the Noise and Vibration Assessment prepared for the proposed project, which is included in Appendix F to this IS/MND. Because project operations would not create perceptible noise and noise-generating maintenance and repair activities would be comparable to existing conditions, this assessment only considers construction noise.

The standard unit of measurement for noise is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, the noise measurements reflected in

36 City of Los Angeles Department of City Planning, 2001, Conservation Element of the City of Los Angeles General Plan. Website: https://planning.lacity.org/odocument/28af7e21-ffdd-4f26-84e6-dfa967b2a1ee/Conservation_Element.pdf?msclkid=67fc7a74bc0b11ec9bc6aed59ad24156, February 15, 2022.

37 The City of Burbank, 2013, Burbank2035: General Plan, Open Space and Conservation Element. Website: https://www.burbankca.gov/home/showdocument?id=23448, February 10, 2022.

this analysis are given in dB reflecting the normal hearing sensitivity range of the human ear, known as the A-weighted decibel scale (dBA). On this scale, the range of human hearing extends from approximately 3 to 140 dBA. The noise analysis discusses sound levels in terms of Equivalent Noise Level (Leq). Leq is the average noise level on an energy basis for any specific time period. For example, the Leq for one hour is the energy average noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. Leq can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level.

Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of applicable standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact After Mitigation Incorporated. The City of Los Angeles Rush Hour Ordinance limits in-street construction on weekdays to the hours of 9:00 a.m. through 3:30 p.m. Typical construction hours would be Monday through Friday from 9:00 a.m. to 3:30 p.m., and Saturday from 8:00 a.m. to 6:00 p.m. Construction activity would therefore comply with the allowable hours of construction in the Los Angeles Municipal Code (LAMC), including 7:00 a.m. to 9:00 p.m. Monday through Friday, 8:00 a.m. to 6:00 p.m. on Saturday, and no construction activity on Sundays or federal holidays. The LAMC limits construction equipment noise levels to 75 dBA L_{eq} unless technically infeasible. The City of Burbank Municipal Code (BMC) has designated hours of construction applicable to all construction, alteration, movement, enlargement, replacement, repair, equipment, maintenance, removal, and demolition work. Chapter 9-1-1-105.8 of the BMC prohibits construction activity between 7:00 PM and 7:00 AM Monday through Friday, between 5:00 PM and 8:00 AM on Saturdays, and at any time on Sundays or national holidays.

Noise impacts from construction of the proposed project would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. Construction activities typically require the use of numerous pieces of noise-generating equipment. Typical noise levels from various types of equipment that would be used during construction are listed in Table 3-5. Noise levels from individual pieces of equipment typically are between 70.3 and 83.3 dBA L_{eq} at 50 feet.

To more accurately characterize construction-period noise levels, the noise levels shown in Table 3-6 take into account the likelihood that multiple pieces of construction equipment would be operating simultaneously and the typical overall noise levels that would be expected. Some pieces of equipment would be used only for certain tasks (e.g., concrete saw to cut pavement, an excavator would only be used to excavate), and they would not operate continuously during the day and generally would not operate simultaneously. Therefore, combined noise levels take into account only construction equipment that would likely be operated simultaneously.

Table 3-5: Noise Level Ranges of Typical Construction Equipment

Construction Equipment	Noise Level At 50 Feet (dBa)
Asphalt paver	74.2
Backhoe	73.6
Compaction Roller	73.0
Concrete Pump Truck	74.4
Concrete Truck	74.8
Crane	72.6
Drilling Rig	77.4
Dump Truck	72.5
Excavator	76.7
Flatbed Truck (Stake Bed)	70.3
Material Delivery Truck	70.3
Mounted Impact Hammer	83.3
Pickup Truck	71.0
Pickup Truck (Winch Truck)	71.0
Water Truck	71.0

Source: FHWA, *Roadway Construction Noise Model*, version 1.1, 2008

Table 3-6: Representative Phased Construction Noise Levels

Construction Phases and Equipment	Noise Level at 50 feet (dBA, L_{eq})
Maintenance Vault Excavation	
Backhoe	73.6
Dump Truck[a]	72.5
Excavator[a]	76.7
Pickup Truck	71.0
Water Truck	71.0
Maintenance Vault Excavation Combined	**78.1**
Maintenance Vault Installation	
Concrete Pump Truck	74.4
Concrete Truck	74.8
Crane (250 ton)[a]	72.6
Pickup Truck[a]	71.0
Maintenance Vault Installation Combined	**74.9**
Trenching for Duct Banks	
Backhoe[a]	73.6
Concrete Pump Truck	74.4
Concrete Truck	74.8
Dump Truck	72.5
Mounted Impact Hammer[a]	83.3
Pickup Truck	71.0
Trenching for Duct Banks Combined	**83.7**
Installation of New XLPE Cable, Cable Pulling, Slicing, and Termination	
Flatbed Truck (Stake Bed)	70.3
Pickup Truck (Winch Truck)	71.0
Installation of New XLPE Cable, Cable Pulling, Slicing, and Termination Combined	**73.7**
Roadway Restoration	
Paver[a]	74.2
Roller Compactor[a]	73.0
Roadway Restoration Combined	**76.7**
BWP Distribution Line Lowering	
Handheld Equipment	N/A
Pickup Truck	71.0
Man Lift (2)[a]	70.7
BWP Line Lowering Combined	**70.7**

Table 3-6: Representative Phased Construction Noise Levels

Tower 584 Raise	
Backhoe	73.6
Concrete Trucks	74.8
Drilling Rig	77.4
Excavator [a]	76.7
Crew Trucks	71.0
Material Delivery Truck	70.3
Dump Trucks [a]	72.5
Tower 584 Raise Combined	**78.1**
Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station	
Backhoe	73.6
Concrete Trucks	74.8
Crane	72.6
Dump Trucks[a]	72.5
Excavator[a]	76.7
Flatbed Truck (Stake Bed/Tank Truck)	70.3
Pickup Truck (Winch Truck)	71.0
Combined Remove and Install Cable Noise Level	**78.1**
Combined Open Trench Construction and Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station Noise Level	**84.8**

[a] Construction equipment that would be used simultaneously during construction phase and that would create the loudest noise level associated with the phase.
Source: FHWA, *Roadway Construction Noise Model*, Version 1.1, 2008

Maintenance Vault Excavation and Installation

The maintenance vaults would be installed within the roadway, between approximately 850 and 1,100 feet apart, along the proposed transmission line alignment. The vault location would first be excavated and then the precast sections of the maintenance vault would be delivered and assembled in the excavated hole. Maintenance vaubody2lt excavation and installation is anticipated to generate an average noise level of approximately 74.9 dBA, L_{eq} to 78.1 dBA, L_{eq}. Maintenance vault excavation and installation would affect the same receptors as open trench construction. Open trench construction would result in greater average noise levels than maintenance vault construction and has therefore been conservatively utilized as the basis of this analysis.

Open Trench Construction: Trenching for Duct Banks, Installation of New XLPE Cable, and Roadway Restoration

The underground transmission line would be installed using open-cut trenching techniques that would require an approximately 10- to 15-foot-wide temporary construction corridor. Open-trench construction would begin with pavement breaking and trenching for the duct banks. Conduits would be installed and then concrete would be poured over the conduits and compacted. The open-cut trenching stage of construction would result in the loudest average noise level of approximately 83.7 dBA, L_{eq}. The new XLPE cable would then be placed at one maintenance vault then pulled to the next maintenance vault. Installation of the cable would use minimal equipment such as a flatbed truck for delivery of the cables and a winch truck to pull the cables. The average noise levels related to installation of the cable would be approximately 73.7 dBA, L_{eq}. After completion of this work the roadway would be restored utilizing a roller and compactor. The average noise level of this phase would be approximately 76.7 dBA, L_{eq}.

Open-trench construction, installation of the XLPE cable, and roadway restoration would occur within Nichols Canyon Road, Genesee Avenue, Fountain Avenue, North Fuller Avenue, and Romaine Street ROW. Conservatively, the open-trench construction average noise level of approximately 83.7 dBA, L_{eq} has been utilized as the reference noise level for this phase. Table 3-7 (Nichols Canyon Road), Table 3-8 (Genesee Avenue), Table 3-9 (Fountain Avenue), Table 3-10 (North Fuller Avenue), Table 3-11 (Romaine Street) present the estimated maximum construction noise levels related to open-trench construction at sensitive receptors within 500 feet of each segment of the proposed project.

Table 3-7: Open Trench Construction Noise Levels at Receptors – Nichols Canyon Road

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) [a]	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
First Building Row Receptors				
Residences along Nichols Canyon Rd.	50	64.3	83.7	Yes
Residences along Stanley Ave.	170	64.3	73.1	No
Residences along Granito Dr.	500	64.3	63.7	No
Residences to the north along Nichols Canyon Rd.	500	64.3	63.7	No
Second Building Row Receptors				
Residences along Courtney Ave. and Ogden Ave.	150	64.3	69.7	No
Third Building Row Receptors				
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	300	64.3	62.1	No

[a] The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
Source: TAHA, 2022.

Table 3-8: Open Trench Construction Noise Levels at Receptors – Genesee Avenue

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) [a]	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
First Building Row Receptors				
Residences along Genesee Ave.	50	60.4	83.7	Yes
Residences along Hollywood Blvd.	50	75.8	83.7	Yes
Residences along Nichols Canyon Rd.	80	64.3	79.6	Yes
Second Building Row Receptors				
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	180	60.4	68.1	No
Third Building Row Receptors				
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	350	60.4	60.8	No

[a] The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
Source: TAHA, 2022

Table 3-9: Open Trench Construction Noise Levels at Receptors – Fountain Avenue

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) [a]	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
First Building Row Receptors				
Residences along Fountain Ave.	50	72.7	83.7	Yes
Fountain Kids Academy Day Care	50	72.7	83.7	Yes
Invisible Studios	80	72.7	79.6	Yes
Residences north and south of Fountain Ave.	100	72.7	77.7	Yes
Wahlter School	180	72.7	72.6	No
Second Building Row Receptors				
Residences north and south of Fountain Ave.	200	72.7	67.2	No
Plummer Park Passive Recreation Uses	320	72.7	63.1	No
Third Building Row Receptors				
Residences north and south of Fountain Ave.	350	72.7	60.8	No
Gardner Little School Day Care	370	72.7	60.3	No

[a] The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
Source: TAHA, 2022.

Table 3-10: Open Trench Construction Noise Levels at Receptors – North Fuller Avenue

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) [a]	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
First Building Row Receptors				
Residences along Fuller Ave.	50	57.3	83.7	Yes
Plummer Park Passive Recreation Uses	50	57.3	83.7	Yes
Residences west of Fuller Ave.	220	57.3	70.8	No
Quixote Studios – West Hollywood (Stage 5)	250	57.3	69.7	No
Residences south of Romaine St.	500	57.3	63.7	No
Second Building Row Receptors				
Residences east of Fuller Ave.	200	57.3	67.2	No
Westlake Studios	350	72.7	62.3	No
Residences west of Fuller Ave.	360	57.3	62.1	No
Third Building Row Receptors				
Residences east of Fuller Ave.	320	57.3	61.6	No

[a] The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
Source: TAHA, 2022.

Table 3-11: Open Trench Construction Noise Levels at Receptors – Romaine Street

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) [a]	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
First Building Row Receptors				
Quixote Studios – West Hollywood (Stage 5)	50	57.1	83.7	Yes
Residences along Romaine St.	50	57.1	83.7	Yes
The Lot at Formosa	70	57.1	80.8	Yes
Residences north of Romaine St.	180	57.1	72.6	No
Residences southwest of Romaine St.	250	57.1	69.7	No
Residences south of Romaine St.	500	57.1	63.7	No

[a] The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
Source: TAHA, 2022.

The LAMC limits equipment noise levels to 75 dBA L_{eq} unless technically infeasible. Noise levels would exceed 75 dBA at first row sensitive receptors, and the threshold would typically not be exceeded at distances of 150 feet or greater.

BWP Distribution Line Lowering

BWP would lower the distribution line (i.e., by moving the distribution line and other wires to a lower position on their poles and cutting off the pole tops). BWP distribution line lowering is anticipated to involve hand tools, pickup trucks and man lifts and would generate limited noise. Equipment is anticipated to intermittently generate noise levels between 70.7 dBA, L_{eq} and 71.0 dBA, L_{eq}. The proposed project would comply with the allowable hours of construction of 7:00 AM to 7:00 PM Monday through Friday and 8:00 AM to 5:00 PM on Saturdays and would not violate the City of Burbank Municipal Code.

Tower 584 Raise

Raising of Tower 584 would include the use of hydraulic lift equipment (i.e., proprietary process that employs hydraulic jacks to lift an upper portion of the tower). In addition to raising the tower, foundation work would also be done at the tower. Construction at Tower 584 would typically include the use of a crane, drilling rig, excavator, and concrete trucks. The average noise levels during Tower 584 work would be approximately 78.1 dBA, L_{eq}. Table 3-12 presents the estimated maximum construction noise levels related to Tower 584 construction at sensitive receptors within 500 feet of the work zone The LAMC limits equipment noise levels to 75 dBA L_{eq} unless technically infeasible. Noise levels would exceed 75 dBA at first row sensitive receptors, and the threshold would typically not be exceeded at distances of 100 feet or greater.

Table 3-12: Tower 584 Construction Levels at Receptors

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) [a]	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
First Building Row Receptors				
Residences adjacent to Tower 584	50	56.1	78.1	Yes
Residences	100	56.1	72.1	No
Residences	200	56.1	66.1	No
Residences	400	56.1	55.5	No

[a] The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
Source: TAHA, 2022.

Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station

Modifications to support the system upgrade at the Nichols Canyon Terminal Tower and Hollywood Receiving Station properties would include replacement of the existing concrete pad and support structure of the existing TOL-HWD L1 rack, removal and replacement of the aboveground TOL-HWD L1 rack/equipment, subsurface structural supports for the replacement rack, and removal of the existing pump houses and accompanying tanks that would no longer be needed. It should be noted, construction activity at the Hollywood Receiving Station property would primarily occur within the northern central portion of the property which would reduce noise levels for sensitive receptors to the south of the Hollywood Receiving Station property. The average noise levels during this activity would be approximately 78.1 dBA, Leq. These two properties would also require open-cut trenching activities for the underground TOL-HWD L1 cable within the respective property limits. This activity could potentially overlap with the other modifications that would occur within the Nichols Canyon Terminal Tower and Hollywood Receiving Station properties. Therefore, a combined reference noise level of 84.8 dBA, Leq for the combination of trenching activities and the modifications has been used as the basis of the analysis. Table 3-13 (Nichols Canyons Terminal Tower) and Table 3-14 (Hollywood Receiving Station) present the estimated maximum construction noise levels related to modifications at the two properties at sensitive receptors within 500 feet of the work zones. The LAMC limits equipment noise levels to 75 dBA Leq unless technically infeasible. Noise levels would exceed 75 dBA at first row sensitive receptors, and the threshold would typically not be exceeded at distances greater than 150 feet.

Table 3-13: Modifications at Nichols Canyon Terminal Tower

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) [a]	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
First Building Row Receptors				
Residences adjacent to Nichols Canyon Terminal Tower	85	64.3	80.2	Yes
Residences along Nichols Canyon Rd.	150	64.3	75.3	Yes
Residences	200	64.3	72.8	No
Residences	400	64.3	66.7	No

[a] The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
Source: TAHA, 2022

Table 3-14: Modifications at Hollywood Receiving Station

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) [a]	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
First Building Row Receptors				
The Lot at Formosa to the north	90	57.1	79.7	Yes
Quixote Studios – West Hollywood (Stage 5)	100	57.1	78.8	Yes
Residences to the south	300	57.1	69.2	No
Second Building Row Receptors				
Residences along Poinsettia Pl.	230	57.1	67.0	No

[a] The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
Source: TAHA, 2022.

On-site Construction Noise Summary

Construction activities would occur Monday through Friday, and workers would typically be onsite for eight hours per day from 7:00 a.m. to ending by late afternoon. No work outside of these hours, or work on weekends or national holidays, is anticipated. Construction activity would therefore comply with the allowable hours of construction in the LAMC, including 7:00 a.m. to 9:00 p.m. Monday through Friday, 8:00 a.m. to 6:00 p.m. on Saturday, and no construction activity on Sundays or federal holidays. Construction related to the BWP distribution line lowering would comply with the Burbank Municipal does allowable hours of construction, including 7:00 a.m. to 7:00 p.m. Monday through Friday, 8:00 a.m. to 5:00 p.m. on Saturday, and no construction activity on Sundays or federal holiday. Nonetheless, construction activity during both the open trench construction, raising of Tower 584, and cable work at Hollywood Boulevard would result in noise levels that would exceed the LAMC 75 dBA threshold, typically at first row receptors. Therefore, without mitigation, the proposed project would result in a significant impact related to on-site construction noise.

Off-Site Truck Trips

In addition to on-site construction activities, noise would be generated off-site by construction-related trucks. Construction of the proposed project would require the hauling and export of debris and excavated material from the site, as well as delivery of construction materials such as the XLPE cable and backfill to the site. The maximum number of truck trips that would occur is anticipated to be 40 truck trips per day, which is conservative. An additional, conservative worst-case/peak maximum hourly haul truck volume over an eight-hour workday would approximately be 15 truck trips per hour.

A doubling of traffic volumes is typically needed to audibly increase noise levels along a roadway segment. Table 3-15 shows traffic volumes recorded by the City of Los Angeles Department of Transportation along streets that would likely be utilized as the haul route for trucks travelling to and from the project area. Daily traffic along these roadways is between approximately 2,000 daily trips and 45,000 daily trips, with approximately 100 to 5,000 peak hour trips in the AM and PM peak hour. An additional 15 truck trips per hour would not double the existing volume along any roadway segment. Off-site vehicle activity would not audibly change average daily noise levels due to the low volume of truck trips per day. Therefore, the proposed project would result in a less-than-significant impact related to construction truck noise.

Table 3-15: Existing Traffic Volumes

Roadway	Daily Traffic	Peak Hour Traffic (AM)	Peak Hour Traffic (PM)
Nichols Canyon Rd. at Hollywood Blvd.	4,154	304	633
Genesee Ave. at Sunset Ave.	2,574	212	252
Sunset Blvd. at Genesee Ave.	45,236	2,845	2,867
Fountain Ave. at Fuller Ave.	12,784	2,034	2,813
Fuller Ave. at Sunset Blvd.	1,852	92	142
Santa Monica Blvd. at Highland Ave.	2,9884	5,347	5,201

Source: LADOT, *24 Hours Traffic Volume*.

Mitigation Measures

NOI-1 Construction equipment shall be properly maintained and equipped with mufflers to manufacturer specifications.

NOI-2 Rubber-tired equipment shall be used rather than tracked equipment when feasible.

NOI-3 Equipment shall be turned off when not in use for an excess of five minutes, except for equipment that requires idling to maintain performance.

NOI-4 A public liaison shall be appointed for project construction will be responsible for addressing public concerns about construction activities, including excessive noise. As needed, the liaison shall determine the cause of the concern (e.g., starting too early, bad muffler) and implement measures to address the concern.

NOI-5 The public shall be notified in advance of the location and dates of construction hours and activities.

Significance After Mitigation

MMs NOI-1 through NOI-5 are designed to reduce construction noise levels. The equipment mufflers associated with **MM NOI-1** would reduce construction noise levels by approximately 5 dBA. **MMs NOI-2 through NOI-5**, although difficult to quantify, would also reduce and/or control or address construction noise. Mitigated noise levels for previously identified sensitive receptors that would experience construction noise above thresholds are shown in Table 3-16. **MM NOI-1** through **MM NOI-5** would reduce noise levels to the greatest extent possible at nearby sensitive receptors. Consistent with the LAMC, all feasible measures would be taken to control construction noise. Therefore, the proposed project would result in a less-than-significant impact related to temporary construction noise with mitigation incorporated.

Table 3-16: Mitigated Construction Noise Levels at Impacted Receptors

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA)[a]	Mitigation Measure[b]	Mitigated Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
Open Trench – Nichols Canyon Road					
Residences along Nichols Canyon Rd.	50	64.3	N1	78.7	**Yes**
Residences along Courtney Ave. and Ogden Ave.	150	64.3	N1	64.7	No
Residences along Stanley Ave.	170	64.3	N1	68.1	No
Residences along Courtney Ave. and Ogden Ave.	300	64.3	N1	57.1	No
Residences along Granito Dr.	500	64.3	N1	58.7	No
Residences to the north along Nichols Canyon Rd.	500	64.3	N1	58.7	No
Open Trench – Genesee Avenue					
Residences along Genesee Ave.	50	60.4	N1	78.7	**Yes**
Residences along Hollywood Blvd.	50	75.8	N1	78.7	**Yes**
Residences along Nichols Canyon Rd.	80	64.3	N1	74.6	No
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	180	60.4	N1	63.1	No
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	350	60.4	N1	55.8	No
Open Trench – Fountain Avenue					
Residences along Fountain Ave.	50	72.7	N1	78.7	**Yes**
Fountain Kids Academy Day Care	50	72.7	N1	78.7	**Yes**
Invisible Studios	80	72.7	N1	74.6	No
Residences north and south of Fountain Ave.	100	72.7	N1	72.7	No
Wahlter School	180	72.7	N1	67.6	No
Residences north and south of Fountain Ave.	200	72.7	N1	62.2	No
Plummer Park Passive Recreation Uses	320	72.7	N1	58.1	No
Residences north and south of Fountain Ave.	350	72.7	N1	55.8	No
Gardner Little School Day Care	370	72.7	N1	55.3	No
Open Trench – Fuller Avenue					
Residences along Fuller Ave.	50	57.3	N1	78.7	**Yes**
Plummer Park Passive Recreation Uses	50	57.3	N1	78.7	**Yes**
Residences west of Fuller Ave.	220	57.3	N1	65.8	No
Quixote Studios – West Hollywood (Stage 5)	250	57.3	N1	64.7	No
Westlake Studios	350	72.7	N1	57.3	No
Residences south of Romaine St.	500	57.3	N1	58.7	No
Residences east of Fuller Ave.	200	57.3	N1	62.2	No
Residences west of Fuller Ave.	360	57.3	N1	57.1	No
Residences east of Fuller Ave.	320	57.3	N1	56.6	No
Open Trench – Romaine Street					
Quixote Studios – West Hollywood (Stage 5)	50	57.1	N1	78.7	**Yes**
Residences along Romaine St.	50	57.1	N1	78.7	**Yes**
The Lot at Formosa	70	57.1	N1	75.8	**Yes**
Residences north of Romaine St.	180	57.1	N1	67.6	No
Residences southwest of Romaine St.	250	57.1	N1	64.7	No
Residences south of Romaine St.	500	57.1	N1	58.7	No

Table 3-16: Mitigated Construction Noise Levels at Impacted Receptors

Tower 584					
Residences adjacent to Tower 584	50	56.1	N1	73.1	No
Residences	100	56.1	N1	67.1	No
Residences	200	56.1	N1	61.1	No
Residences	400	56.1	N1	50.5	No
Modifications at Nichols Canyon Terminal Tower					
Residences adjacent to Nichols Canyon Terminal Tower	85	64.3	N1	75.2	**Yes**
Residences along Nichols Canyon Road	150	64.3	N1	70.3	No
Residences	200	64.3	N1	67.8	No
Residences	400	64.3	N1	61.7	No
Modifications at Hollywood Receiving Station					
The Lot at Formosa	90	57.1	N1	74.7	No
Quixote Studios – West Hollywood (Stage 5)	100	57.1	N1	73.8	No
Residences along Poinsettia Place	230	57.1	N1	62.0	No
Residences to the south	300	57.1	N1	64.2	No

[a.] The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
[b.] Mitigation Measure NOI-1 Includes a 5 dB reduction for equipment mufflers
Source: TAHA, 2022

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

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

Based on visual characteristics of adjacent structures (e.g., age), residential building foundations are assumed to be constructed of non-engineered timber and masonry, and the larger structures, such as hospitals are assumed to be constructed of reinforced-concrete, steel, or timber. According to the Federal Transit Authority (FTA) guidance, buildings constructed of non-engineered timber and masonry can withstand vibration levels up to 0.2 inches per second without experiencing damage. Equipment that would be utilized would be most similar to a caisson drill, excavator, large bulldozer, and small bulldozer. Vibration levels for various types of construction equipment with an average source level reported in terms of velocity are shown in Table 3-17. Construction equipment would largely be stationary on the project site and would not regularly traverse the site resulting in the generation of vibration at off-site uses. Structures adjacent to the open-trench construction, work at Tower 584, the Nichols Canyon Terminal Tower, and the Hollywood Receiving Station would typically be at least 50 feet from the construction activity. At a distance of 50 feet, vibration generating equipment would generate vibration levels below the vibration damage threshold of 0.2 inches per second for non-engineered timber and masonry buildings.

Table 3-17: Typical Outdoor Construction Equipment Vibration Levels

Equipment	PPV at 25 feet (Inches/Second)	PPV at 50 feet (Inches/Second)	VdB at 25 Feet (micro-inches/Second)	VdB at 50 Feet (micro-inches/Second)
Caisson Drill	0.089	0.031	87	78
Excavator	0.040	0.014	80	71
Large Bulldozer	0.089	0.031	87	78
Small Bulldozer	0.003	0.001	58	49

Source: FTA, *Transit Noise and Vibration Impact Assessment*, September 2018; New Hampshire Department of Transportation, *Ground Vibrations Emanating from Construction Equipment*, September 8, 2012.

Seven historic structures have been identified within 100 feet of construction activity. Historic uses can experience vibration level of 0.12 inches per second before there is risk of damage to the structure. As shown in Table 3-18, the nearest historic structure is Hellman House, which is located approximately 25 feet from where construction activity would occur along Nichols Canyon Road. The type and size of equipment used for open-trench construction would be most similar to a small bulldozer, which generates a vibration level of approximately 0.003 peak particle velocity (PPV) inches per second at 25 feet.

Vibration at this distance would be approximately 0.003 inches per second from a small bulldozer, which would be less than the vibration damage threshold of 0.12 inches per second. Historic residences on N. Genesee Avenue would all be more than 25 feet away or more and would not receive vibration levels that would exceed the vibration damage threshold of 0.12 inches per second. In addition to on-site construction activities, construction trucks on the roadway network have the potential to generate vibration. However, rubber-tired vehicles, including trucks, rarely generate perceptible vibration.[38] It is not anticipated that project-related trucks would generate perceptible vibration adjacent to the roadway network. Therefore, the proposed project would result in a less-than-significant impact related to structure damage from construction vibration.

Vibration annoyance is another concern related to construction activity. However, perceptible vibration is not typically a concern for human health and is a common occurrence within the urban environment. Special uses such as select medical facilities, research facilities and recording studios would be potentially impacted by construction vibration annoyance due to the presences of sensitive equipment. Vibration levels that would be generated by construction equipment were calculated for special uses identified within the vicinity of the proposed project which includes recording and television studios listed in Table 3-19. The type and size of equipment used for open-trench construction would be most similar to a small bulldozer, which generates a vibration level of approximately 58 vibration velocity decibel (VdB) micro-inches per second at 25 feet. Construction at the Hollywood Receiving Station would use equipment most similar to an excavator which generates a vibration level of approximately 80 VdB at 25 feet. As shown in Table 3-19, vibration levels at the four identified recording and television studios would not exceed the 65 VdB threshold. In addition to on-site construction activities, construction trucks on the

[38] FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

roadway network have the potential to expose vibration-sensitive land uses. Rubber-tired vehicles, including trucks, rarely generate perceptible vibration.[39] It is not anticipated that project-related trucks would generate perceptible vibration adjacent to the roadway network. Therefore, the proposed project would result in a less-than-significant impact related to vibration annoyance.

Table 3-18: Historic Use Vibrations Analysis

Historic Uses/Address	Distance from Construction Activity (feet)	Reference Vibration Level (Inches/Second)	PPV at Historic Use (Inches/Second)	Exceed 0.12 Inches/Second Threshold
Hellman House 1845 N. Courtney Ave.	25	0.003	0.003	No
Historic Residence 1435 N. Genesee Ave.	40	0.003	0.001	No
Historic Residence 1635 N. Genesee Ave.	50	0.003	0.001	No
Screen Actors Guild Headquarters	50	0.003	Less than 0.001	No
Historic Residence 1438 N. Genesee Ave.	80	0.003	Less than 0.001	No
Historic Residence 1422 N. Genesee Ave.	80	0.003	Less than 0.001	No
Historic Residence 1339 N. Genesee Ave.	80	0.003	Less than 0.001	No

Source: FTA, *Transit Noise and Vibration Impact Assessment*, September 2018; Los Angeles Department of City Planning Office of Historic Resources, *HistoricPlacesLA*, accessed March 28, 2022

Table 3-19: Construction Vibration Levels at Sensitive Receptors (Annoyance)

Sensitive Receptor	Distance (feet)[a]	Vibration Level (VdB)	Reference Equipment	Threshold (VdB)	Exceed Threshold?
Quixote Studios – West Hollywood (Stage 5)	50	49	Small Bulldozer	65	No
Invisible Studios	80	43	Small Bulldozer	65	No
The Lot at Formosa	90	63	Excavator	65	No
Westlake Studios	350	24	Small Bulldozer	65	No

[a] Measured from the project site to the nearest structure.
Source: TAHA, 2022

39 Ibid.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The proposed project is located within two miles of Van Nuys Airport to the east. According to the Los Angeles County Airport Land Use Commission, the proposed project area is not within the Airport Influence Area.[40] Therefore, no impact related to airport or airstrip noise would occur.

XIV. POPULATION AND HOUSING

Would the project:

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

No Impact. Construction of the proposed project would span approximately 3 years and is scheduled to begin in mid-2023 with an in-service date of Spring 2026. Given the temporary nature of construction industry jobs, the relatively large regional construction industry, and the relatively nominal total number of construction workers needed during any construction phase, the labor force from within the region would be sufficient to complete project construction without an influx of new workers and their families. Accordingly, construction employment generated by the proposed project would not impact population in the heavily-populated Los Angeles County region. Therefore, construction of the proposed project would not directly induce population growth, and there would be no impact.

Additionally, the proposed project does not include any new residential or commercial uses and, therefore, would not result in a direct population increase. The proposed project would increase the overall circuit rating of an existing transmission line by replacing the aging, underground cable portion of the line and addressing two CPUC GO95 clearance issues of the overhead portion of the line that would occur as a result of the increased transmission line rating. During construction and operation, the transmission line would continue to serve existing customers. During the required 5-month outage of the TOL-HWD L1, electrical service would not be affected for any LADWP customers. The outage has been scheduled during the winter timeframe when electricity demands are much lower, as is typical practice for scheduled transmission line maintenance. During the outage customers would be served by other LADWP transmission lines. The proposed project would maintain the reliability of the system while providing the capacity to accommodate imported renewable energy coming from outside the Los Angeles Basin. It would not increase electrical generation capacity for the City and it would not indirectly induce population growth. Therefore, no impact to population growth during project operation would occur.

[40]Los Angeles County Airport Land Use Commission, May 2003.

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

No Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. All work would be conducted from, and located within, existing road ROW, LADWP-owned land designated for Public Facilities, and a BWP easement adjacent to residential uses. Construction for the proposed project would span approximately 3 years and is scheduled to begin in mid-2023 with an in-service date of Spring 2026. A 5-month period with transmission line outage (between late 2025 and early 2026) would be required. No removal of residential or commercial structures would occur and no persons would be displaced as a result of implementation of the proposed project. Therefore, the proposed project would not affect the number or availability of existing housing in the area and would not necessitate the construction of replacement housing elsewhere. As such, no impact would occur.

XV. PUBLIC SERVICES

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?

Less Than Significant Impact. Fire protection services across the project area are provided by LAFD, the Los Angeles County Fire Department (LACFD), and the Burbank Fire Department (BFD). The proposed project would increase the overall circuit rating of an existing transmission line by replacing the aging, underground cable portion of the line and addressing two CPUC GO95 clearance issues of the overhead portion of the line that would occur as a result of the increased transmission line rating. It does not include the development of new housing or businesses that would increase the residential population in the area; thus, the demand for fire protection services would not substantially increase. The proposed project does not require the provision of new or physically altered fire protection facilities.

Fire protection could be required at the project sites in the event of a construction accident; however, the likelihood of an accident requiring such a response would be low as project construction would be located within existing paved roadways, within the confines of existing terminal tower and receiving station facilities that are owned by LADWP, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. As discussed in Section IX(g) of this IS/MND, the northern portion of the underground alignment, including the Nichols Canyon Terminal Tower, and Tower 584 are both within VHFHSZs within Local Responsibility Areas, and Tower 584 is also within a hillside area (but is not located in a high wind velocity area). However, construction activities at these locations would be conducted from within the public roadway ROW/confines of LADWP property and in the immediate vicinity of the existing transmission line tower (which is an isolated hillside parcel surrounded by Mulholland Drive, Macapa Drive, and residential property). These locations and the nature of the proposed construction activities do not present a unique or increased fire risk; for example, construction activities at Tower 584 would involve minor foundation work at the tower footings (i.e., removal of a limited amount of existing material and the addition of concrete) and a tower raise using hydraulic lift equipment. In addition, construction crews would have fire-suppression equipment available on-site to respond to the accidental ignition of a fire.

Additionally, as discussed in Section IX(f) of this IS/MND, the proposed project would require temporary lane closures during construction activities, which have the potential to hinder emergency access along portions of the underground alignment. However, as listed in BMP-TRA-2 in Section 1.11, LADWP would coordinate with all applicable agencies regarding construction schedules and worksite traffic control and detour plans (including emergency responders LAFD, LACFD, LASD, and LAPD) so as to address emergency response routing during construction work. Therefore, the service capacity of local fire stations in which accidents could happen during the construction period would not be adversely impacted by the proposed project. Impacts would be less than significant.

ii) Police protection?

Less Than Significant Impact. Police protection services across the project area would be provided by the City of Los Angeles Police Department (LAPD), Los Angeles County Sherriff's Department (LASD), and Burbank Police Department (BPD). As previously stated, the proposed project would not generate population growth. Therefore, implementation and operation of the proposed project would not require the construction of additional police protection services or facilities or expansion of existing police facilities.

As discussed in Section XV(a)(i) above, LADWP would consult with LAPD regarding construction schedules and worksite traffic control and detour plans. Development of such plans and consultation with LAPD would ensure that impacts related to emergency response and access during construction would be less than significant.

iii) Schools?

No Impact. The demand for new or expanded school facilities is generally associated with an increase in housing or population. As the proposed project does not include development of any residential uses, no direct increase in residential population would occur. Construction workers are anticipated to be drawn from the existing workforce throughout the region. As such, construction of the proposed project would not generate new permanent residents that would increase the demand for schools. LADWP would conduct routine inspections of the maintenance vaults as part of project operations, which would also be drawn from the existing workforce and would not indirectly induce population growth. Therefore, no increase in demand for local schools would result, and no impact would occur.

iv) Parks?

No Impact. As previously stated, the proposed project does not include development of any residential uses. Construction and operation of the proposed project would not generate new permanent residents that would increase the demand for parks and recreational facilities. Therefore, no impact would occur.

v) Other public facilities?

No Impact. Demand for other public facilities, such as libraries, is generally associated with increased housing or population. As previously discussed, the proposed project does not include a component that would generate an increase in housing or population. The proposed project would not result in direct or indirect population growth that could increase demand for other public facilities. No impact would occur.

XVI. RECREATION

Would the project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project would increase the overall circuit rating of an existing transmission line by replacing the aging, underground cable portion of the line and addressing two CPUC GO95 clearance issues of the overhead portion of the line that would occur as a result of the increased transmission line rating. Construction workers are anticipated to be largely drawn from the existing workforce in the region, and no additional workers would be required for operation of the proposed project. Neither construction nor operation of the proposed project would generate new permanent residents that would increase the use of existing parks and recreational facilities. Therefore, substantial physical deterioration of these facilities would not occur or be accelerated with implementation of the proposed project. As such, no impact would occur.

b) Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The proposed project does not include development of any recreational facilities. Further, it would not induce population growth that could require the construction or expansion of recreational facilities. As such, no impact would occur.

XVII. TRANSPORTATION

Would the project:

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

Less Than Significant Impact. One bus route, the Cityline Local - East, operated by the City of West Hollywood, utilizes streets associated with the underground alignment (i.e., Fountain Avenue, North Fuller Avenue, and Santa Monica Boulevard). Additionally, there are bike routes, sidewalks, and crosswalks located throughout the underground alignment.

Construction activities associated with the proposed underground replacement cable installation would take place entirely within the existing road ROW along portions of Nichols Canyon Road, Hollywood Boulevard, North Genesee Avenue, Fountain Avenue, North Fuller Avenue, Romaine Street, and North Poinsettia Place. Project construction activity within the public ROW would require lane closures, which would disrupt traffic in the area of the construction zones, including automobile, bus, and potentially bicycle traffic. See Table 1.1 in Section 1 of this IS/MND, for a list, including durations, of anticipated closures. As listed in BMP-TRA-2 in Section 1.11, a traffic control plan, as required by LADOT, would include measures such as signage, restriping of lanes, flag persons, detour plans, and temporary relocation of bus stops if necessary, to reduce disruptions. These disruptions would be temporary and relatively short-term and would not represent a conflict with a program plan, ordinance or policy addressing the circulation system. Therefore, the impact during construction would be less than significant.

Following the completion of construction activities, all roadways would be returned to pre-construction conditions and operation of the proposed project would require only periodic maintenance activities, which would not represent a conflict with a program plan, ordinance or policy addressing the circulation system.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

No Impact. CEQA Guidelines section 15064.3 establishes vehicle miles traveled (VMT) as the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. The LADOT Transportation Assessment Guidelines establish instructions and standards for preparation of transportation assessment in the City of Los Angeles.[41] The VMT assessment is intended to focus on the long-term, permanent transportation impacts related to the generation of automobile trips and the opportunities for alternative modes of transportation (public transit, walking, bicycling) associated with a development project. Due to the temporary and relatively low-level nature of traffic generated by the proposed project's construction, VMT assessments are not relevant for the proposed project, especially since there would be no increase in post-construction operational trips. As such, neither construction nor operation of the

41 City of Los Angeles Department of Transportation, 2020, Transportation Assessment Guidelines. Website: https://ladot.lacity.org/documents/transportation-assessment, February 12, 2022.

proposed project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). As such, no impact would occur.

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

Less Than Significant Impact. The proposed project would not include any new or altered roadways. However, during project construction, traffic lanes would temporarily be closed on portions of Nichols Canyon Road, Hollywood Boulevard, North Genesee Avenue, Fountain Avenue, North Fuller Avenue, Romaine Street, and North Poinsettia Place. Potential conflicts associated with these lane closures would be addressed in the traffic control plan required by LADOT, which would include measures such as signage, restriping of lanes, flag persons, and detour plans. With the implementation of the required traffic control plan, hazards associated with lane closures during project construction would be less than significant. During project operation, all roadways would be returned to pre-construction configuration, and no conflicts would occur.

d) Result in inadequate emergency access?

Less Than Significant Impact. The proposed project would require temporary lane closures during construction activities. As such, construction activities could potentially hinder emergency access along portions of the underground alignment. However, as listed in BMP-TRA-2 in Section 1.11, LADWP would coordinate with emergency responders, including the LAFD, LACFD, LASD, and LAPD, regarding construction schedule and traffic control plans so as to address emergency response routing during construction work. Coordination with emergency response agencies would ensure a less-than-significant impact to emergency access during construction activities.

During project operation, roadways would be returned to pre-construction configuration, and emergency access would not be restricted. No impact would occur during project operation.

XVIII. TRIBAL CULTURAL RESOURCES

The following analysis is based on information provided in the Cultural Resources Technical Memorandum prepared for the proposed project, which is included in Appendix C to this IS/MND and Native American consultation by LADWP in accordance with Assembly Bill 52 (AB 52), which requires that a lead agency must consult with California Native American tribes who request formal consultation regarding potential impacts to tribal cultural resources.

Would the project:

a) Cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

No Impact. Tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. No known tribal cultural resources were identified within the location of the underground alignment based on the Sacred Lands File search conducted by the Native American Heritage Commission, archival research, the field survey of the underground alignment and surrounding area, and consultation with Native American tribal representatives pursuant to AB 52. Therefore, there are no cultural resources within the location of the underground alignment listed or eligible for listing in the CRHR or a local register. The proposed project would not result in a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in a state or local register of historical resources. No impact would occur.

b) Cause a substantial adverse change in the significance of a tribal cultural resource that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of the Public Resources Code Section 5024.1?

Less Than Significant Impact After Mitigation Incorporated. As discussed in Section XVIII(a) above, no tribal cultural resources, including sites, places, landscapes, or objects, were identified within the proposed project study area based on the Sacred Lands File search conducted by the Native American Heritage Commission, archival research, the field survey of the project area, and consultation with Native American tribal representatives pursuant to AB 52. As of the publication date of this IS/MND, LADWP has consulted with one tribe that requested consultation on the proposed project, the Gabrieleño Band of Mission Indians – Kizh Nation. Because no specific tribal cultural resources have been identified in the project area, including during AB 52 consultation and because of substantial previous subsurface disturbance within all areas proposed for project construction related to previous road and utility construction, the potential for the existence of tribal cultural resources is considered low.

Although not expected to occur, unknown subsurface archaeological resources, including tribal cultural resources, could be encountered during ground-disturbing activities during the construction of the proposed project.

As discussed in Section V(b) of this IS/MND, in the event previously unknown archaeological resources are encountered during construction activities, the proposed project's CRMP would comply with California PRC Section 21083.2(i) regarding provisions related to the accidental discovery of archaeological resources. These provisions include immediately halting construction work in the vicinity of the find (within a 50-foot buffer) and LADWP retaining a qualified archaeologist meeting Secretary of Interior standards to evaluate the significance of and determine appropriate treatment for the resource in accordance with the provisions of CEQA Guidelines Section 15064.5 and the National Historic Preservation Act. If the resource is determined to be potentially of Native American in origin, **MM TCR-1** would be required to reduce impacts to a less-than-significant level. With implementation of **MM TCR-1**, as well as the CRMP BMP, impacts to tribal cultural resources would be less than significant.

Mitigation Measure

TCR-1 In the event that an archaeological resource inadvertently discovered during project construction is determined to be potentially of Native American origin based on the initial assessment of the find by a qualified archaeologist pursuant to California Public Resources Code Section 21083.2(i), the Native American Tribes that consulted on the proposed project pursuant to California Assembly Bill 52 shall be notified and be provided information about the find to allow for early input from the tribal representatives with regards to the potential significance and treatment of the resource.

If, as a result of the resource evaluation and tribal consultation process, the resource is considered to be a tribal cultural resource in accordance with California Public Resources Code Section 21074, determined to be eligible for inclusion in the California Register of Historic Resources or a local register of historical resources or determined to be significant by LADWP (the CEQA lead agency), the qualified archaeologist shall monitor all remaining ground-disturbing activities in the area of the resource, and a tribal monitor from a consulting Native American Tribe shall be invited to monitor the ground-disturbing activities. The tribal monitor shall be ancestrally affiliated with the project area and qualified by their tribe to monitor tribal cultural resources.

The input of all consulting Tribes shall be considered in the preparation of any required treatment plan for the resources prepared by the qualified archaeologist. Work in the area of the discovery may not resume until evaluation and treatment of the resource is completed and/or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while evaluation and treatment of the resource takes place.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:

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

No Impact. The proposed project would increase the overall circuit rating of an existing transmission line by replacing the aging, underground cable portion of the line and addressing two CPUC GO95 clearance issues of the overhead portion of the line that would occur as a result of the increased transmission line rating. Construction and operation of the proposed project would not result in the need for additional water or wastewater treatment facilities. Construction for the proposed project would span approximately 3 years and is scheduled to begin in mid-2023 with an in-service date of Spring 2026. During construction, water would be required for activities such as dust control. However, these activities are limited and temporary and would not consume large amounts of water that would require construction of new water treatment facilities. Sanitary waste related to the temporary increase in on-site workforce during project construction would be handled through the use of portable chemical toilets, the waste from which would be removed by a private contractor and disposed at an approved off-site location that would comply with the wastewater treatment requirements of the RWQCB. All drainage flows would be routed through existing storm infrastructure serving the project site and surrounding areas. Following construction, storm water flows would be similar to existing conditions. Use of electric power during construction would be provided by generators.

The proposed project would not require new or expanded water, wastewater treatment, electric power, natural gas, or telecommunications facilities. As such, no impact would occur.

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

No Impact. Construction of the proposed project would require a limited quantity of water for dust control, excavation, and other construction-related activities. Existing water resources provided by LADWP would be sufficient to meet those needs. Once completed, the proposed underground cable and aboveground facility improvements would not require new water supplies or increase the demand for water use. As such, no impact would occur.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. No wastewater would be generated during either construction or operation of the proposed project that would require an increase in demand for wastewater treatment capacity. As such, no impact would occur.

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

Less Than Significant Impact. As discussed above, the proposed project would require excavation in the roadway for the installation of the replacement underground cable, generating construction waste, including demolished asphalt and soil. The total volume of excavated material over the approximately 3-year construction period is estimated to be approximately 9,259 loose cubic yards (LCY), which is the volume based on expansion due to an increase in void spaces after the material is excavated from its fully compacted state in the ground. Roughly. this would represent an average of approximately 3,086 LCY per year during the construction period and approximately 12 LCY per day assuming 250 workdays per year. For impact analysis purposes, it has been assumed that the material would be disposed of in an area landfill approved to accept spoils or as use for alternative daily cover. Several landfills throughout the County of Los Angeles could serve the proposed project, as listed in Table 3-20. The total permitted throughput for all these landfills is 43,025 cy per day, and approximately 165 million cy of total capacity remain. The estimate of excavated material to be generated and disposed during project construction represents approximately 0.001 percent of the total remaining capacity and daily throughput limit of the landfill with the least capacity (Calabasas). In addition, the project would incorporate source reduction techniques and recycling measures and maintain a recycling program to divert waste in accordance with the Citywide Construction and Demolition Debris Recycling Ordinance (see BMP-UTL-1 in Section 1.11 of this IS/MND). These measures would minimize the amount of construction debris generated by the proposed project that would need to be disposed of in an area landfill. Additionally, the proposed project would also involve the removal and disposal of the existing pipe section that is north of Hollywood Boulevard (within Nichols Canyon Road), removal and disposal of some above ground electrical equipment from the Nichols Canyon Terminal Tower and Hollywood Receiving Station facilities, as well as the removal and disposal of two existing pump houses and accompanying tanks that are no longer needed to support an oil-filled cable. The disposal of all of these materials would occur in accordance with applicable rules and regulations for their handling and would be disposed of at the closest facility that is able to accept such materials. Once project construction is complete, the operation of the transmission line would not generate solid waste. Therefore, the project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local landfills, or otherwise impact the attainment of solid waste reduction goals; impacts would be less than significant.

Table 3-20: Existing Landfills

Landfill	Location	Estimated Closing Year	Maximum Daily Capacity (cy per day)	Current Remaining Capacity (million cy)
Antelope Valley	Palmdale	2041	3,600	14.6
Calabasas Landfill	Unincorporated Area	2027	7,901	9.7
Chiquita Canyon Landfill	Unincorporated Area	2047	12,208	57.9
Lancaster Landfill	Unincorporated Area	2041	4,000	13.2
Sunshine Canyon Landfill	Los Angeles/ Unincorporated Area	2037	15,316	69.7
			Total 43,025	**Total 165.1**

Source: County of Los Angeles. 2020. Countywide Integrated Waste Management Plan, 2019 Annual Report, available at: https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=14372&hp=yes&type=PDF, accessed February 12, 2022.

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

No Impact. The proposed project would comply with federal, state, and local statutes and regulations regarding solid waste. As discussed in Section XIX(d) above, construction debris would be recycled or disposed of according to local and regional standards. As such, no impact would occur.

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

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

Less Than Significant Impact. The proposed project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. The northern portion of the underground alignment, including Nichols Canyon Terminal Tower, and Tower 584 are both within VHFHSZs within Local Responsibility Areas.[42] Construction activities at these locations would be conducted from within the public roadway ROW/confines of LADWP property and in the immediate vicinity of the existing transmission line tower (which is an isolated hillside parcel surrounded by Mulholland Drive, Macapa Drive, and residential property). These locations and the nature of the proposed construction activities do not present a unique or increased fire risk; for example, construction activities at Tower 584 would involve minor foundation work at the tower footings (i.e., removal of a limited amount of existing material and the addition of concrete) and a tower raise using hydraulic lift equipment (i.e., proprietary process that employs hydraulic jacks to lift an upper portion of the tower). The nearest fire station to the project area is LAFD Station 76, located approximately 0.8 miles to the

[42] State of California and the Department of Forestry and Fire Protection (CAL FIRE), FHSZ Viewer. Website: https://egis.fire.ca.gov/FHSZ/, February 11, 2022.

northeast of Tower 584. During construction of the proposed project, safe handling of flammable products would be required. Additionally, construction crews would have fire-suppression equipment available on-site to respond to the accidental ignition of a fire. As such, construction of the proposed project would not exacerbate wildland fire risks. Lane closures are anticipated during construction of the proposed project. Project activities would be confined to the project sites (with the exception of haul trucks). During construction, ingress and egress to the site and surrounding area, particularly for emergency response vehicles, would be maintained at all times. Additionally, as listed in BMP-TRA-2 in Section 1.11, LADWP would coordinate with emergency response agencies regarding construction schedules and worksite traffic control plans to maintain emergency access. During project operation, roadways would be returned to pre-construction configuration. Therefore, construction and operation of the proposed project would not interfere with implementation of an adopted emergency response plan or emergency evacuation plan. The impact would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildland fires risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less Than Significant Impact. Tower 584 is within a hillside area but is not located in a high wind velocity area.[43] As discussed in XX(a) above, construction activities at the locations within the VHFHSZs would be conducted from within the public roadway ROW/confines of LADWP property and in the immediate vicinity of the existing transmission line tower (which is an isolated hillside parcel surrounded by Mulholland Drive, Macapa Drive, and residential property). These locations and the nature of the proposed construction activities do not present a unique or increased fire risk; for example, construction activities at Tower 584 would involve minor foundation work at the tower footings (i.e., removal of a limited amount of existing material and the addition of concrete) and a tower raise using hydraulic lift equipment. The nearest fire station to the project site is LAFD Station 76, located approximately 0.8 miles to the northeast. During construction of the proposed project, safe handling of flammable products would be required. Additionally, construction crews would have fire-suppression equipment available on-site to respond to the accidental ignition of a fire. As such, construction of the proposed project would not exacerbate wildland fire risks. Following construction activities to raise the tower, the project site would operate similar to existing conditions and is not expected to increase wildland fire risk. The impact would be less than significant.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may result in temporary or ongoing impacts to the environment?

Less Than Significant Impact. The proposed project would increase the overall circuit rating of an existing transmission line by replacing the aging, underground cable portion of the line and addressing two CPUC GO95 clearance issues of the overhead portion of the line that would occur as a result of the increased transmission line rating. As such, the proposed project would involve the installation of infrastructure such as power lines and other utilities. However, the proposed

43 ZIMAS, 2022. Website: http://zimas.lacity.org/, February 11, 2022.

project would be located within existing paved roadways, within existing terminal tower/receiving station facilities, and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. All work would be conducted from, and located within, existing road ROW, LADWP-owned land designated for Public Facilities, and a BWP easement adjacent to residential uses. Additionally, construction crews would have fire-suppression equipment available on-site to respond to the accidental ignition of a fire. During project operation the improved components of the transmission line would function similar to if not more efficiently and safely than existing conditions; as discussed in Section XV(a) of this IS/MND, construction and operation of the proposed project would not require the construction of additional fire protection facilities or expansion of existing facilities. As such, impacts related to the installation or maintenance of infrastructure within a VHFHSZ would be less than significant.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant Impact. Parts of the project area that are within VHFHSZs are also in locations susceptible to landslides.[44] The northern portion of the underground alignment that is within a VHFHSZ would be constructed entirely within the existing road ROW, same as the existing cable it would be replacing, and the modifications (e.g., in-kind replacement of above ground equipment) at the Nichols Canyon Terminal Tower would continue to be sited within the confines of LADWP property. Tower 584, also located within the VHFHSZ, would undergo improvements to raise the existing tower by 15 feet; however, no new structures are proposed at this location. As discussed in Section 1.11 of this IS/MND, an erosion control plan and SWPPP would be implemented to control runoff from the project site during construction. During operation, the underground alignment and tower would operate similar to existing conditions, and would not increase the chance of runoff, post-fire slope instability, or drainage changes. Therefore, impacts would be less than significant.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact After Mitigation Incorporated. The project area would occur in the urbanized and fully developed City of Los Angeles Community Plan Areas of Hollywood and Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass, City of West Hollywood, and City of Burbank, adjacent to residential, commercial, office, open space, and public facilities uses. All work would be conducted from, and located within, existing road ROW, LADWP-owned land designated for Public Facilities, and a BWP easement adjacent to residential uses.

44 ZIMAS, 2022. Website: http://zimas.lacity.org/, February 12, 2022.

Vegetation within the BSA consists primarily of plantings of non-native ornamental trees and shrubs and areas of lawn associated with residential landscapes. No sensitive natural vegetation communities or natural communities that may receive regulatory protection occur within the BSAs of Tower 584 and the vacant parcels in the City of Burbank. Some native vegetation occurs north of the Nichols Canyon Terminal Tower at the northern terminus of the underground alignment, where steep hillside habitat consists of native shrub species, and in Nichols Canyon Wash and a debris basin along the west side of Nichols Canyon Road across from the Nichols Canyon Terminal Tower. However, no project construction or maintenance would occur in these areas. One record of a special-status plant species, mesa horkelia, from 100 plus years ago coincides with the BSA surrounding Tower 584, but this species is expected to be extirpated from the area and was not observed during the field survey. Additionally, Southern California black walnut trees were observed in the BSA of Tower 584, on a private residential property at the end of Sunnydell Trail and outside the public road right-of-way where they will not be impacted. In addition, no USFWS-designated Critical Habitat for any special-status plant species coincides with the BSA. As a result, the proposed project would not result in a substantial adverse impact to listed, candidate, or otherwise sensitive special-status plant species.

No federal or State-listed wildlife species have been identified in the BSAs, and potentially suitable habitat for such species is generally absent from the BSAs. However, southern California rufous-crowned sparrow and Cooper’s hawk, both CDFW WL species, could occur within the BSA of Tower 584. No vegetation suitable for nesting by these species would be removed, and by adhering to the MBTA BMPs BIO-1 through BIO-4 (Section 1.11 of this IS/MND) related to pre-construction surveys and providing qualified biological monitors as necessary, direct impacts to special-status wildlife are not anticipated. Noise, vibration, and fugitive dust generated during construction could indirectly impact nesting birds resulting in increased nestling mortality due to nest abandonment or decreased feeding frequency. However, such indirect impacts due to construction activities occurring during the nesting bird season, generally considered to extend from February 15 through September 15, would be avoided by implementing BMPs related to fugitive dust, noise, and vibration, and by adhering to the MBTA BMPs BIO-1 through BIO-4. Thus, indirect impacts to birds protected by the MBTA, including non-listed special-status bird species, such as southern California rufous-crowned sparrow and Cooper’s hawk, would be reduced to less than significant.

The SCCIC records search revealed nine cultural resources within the entire study area. Of these nine, two are historic-era archaeological resources within the 0.5-mile area and seven are historic-period built resources, within the 500-foot area. None overlap the project area. The BERD listed two historical resources at 7300 and 7546 Fountain Avenue (individually eligible for local listing), the HPD listed two at 1135 and 1243 North Fuller Avenue (contributors to a multicomponent resource that appears eligible for local listing or designation), and the Los Angeles HRI listed two resources at 7750 West Sunset Boulevard and 1401 North Spaulding Avenue Additionally, one landmark on the list of CHLs and two LAHCMs were identified within 0.5 miles of the project area. However, the fact that all project facilities would be located within paved roadways or previously disturbed areas and would not change conditions from those present prior to project implementation, there would be no adverse change in the significance of a historical resource, and no impact would occur.

No archaeological resources were identified within the study area during the field survey or the archival search. Based on the results of the archival research and field survey, there is low potential that archaeological resources would be encountered during ground-disturbing activities for construction of the proposed project. In the event previously unknown archaeological resources are encountered during construction activities, the proposed project's CRMP would comply with California PRC Section 21083.2(i) regarding provisions related to the accidental discovery of archaeological resources. These provisions include immediately halting construction work in the vicinity of the find (within a 50-foot buffer) and LADWP retaining a qualified archaeologist meeting Secretary of Interior standards to evaluate the significance of and determine appropriate treatment for the resource in accordance with the provisions of CEQA Guidelines Section 15064.5 and the National Historic Preservation Act. If the resource is determined to be potentially of Native American in origin, **MM TCR-1** would be required. With compliance with these BMPs, standard regulations, and mitigation measure, impacts to tribal cultural resources would be less than significant.

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

Less Than Significant Impact. A significant environmental impact could result from the combined effects of two or more projects that are closely related geographically (i.e., within the same vicinity or greater region, depending on the nature and scope of the project and environmental factor under consideration) and in time (i.e., recently completed projects, projects currently under construction, and/or projects anticipated to be implemented in the near-term future). In general, the effects of a proposed project when combined with the effects of past projects (other than projects recently completed) are accounted for in the baseline conditions for the analysis of the proposed project's environmental impacts.

The analysis of the combined impacts of more than one project under CEQA allows decision-makers to consider the potential consequences of a project(s) in a broader environmental context rather than in isolation. This is necessary because a significant combined impact could result even when the individual impacts of related projects are less than significant. The combined effects of several related projects with individually less-than-significant impacts may also be determined to be less than significant on a cumulative basis. In addition, even if the combined effects of several related projects are determined to be significant, an individual project's incremental contribution to those significant combined effects may be determined to be less than cumulatively considerable and, therefore, less than significant.

When a project would create no impact related to a particular environmental factor, there would be no potential for the project to contribute to a significant effect created by the combined impacts of closely related projects. Based on the analysis in this

IS/MND, the proposed project would create no impacts related to agriculture and forestry resources, mineral resources, population and housing, or recreation.

Impacts for all other environmental factors considered in this IS/MND were determined to be less than significant without the need for mitigation measures, except for impacts related to noise created by construction activity and tribal cultural resources not currently listed or identified as eligible for listing in the CRHR, which were determined to be less than significant with the incorporation of mitigation measures.

Air pollutant and GHG emissions, as assessed under CEQA, are inherently recognized as cumulative impacts. Project-level thresholds of significance for these emissions are used in the determination of whether a project's individual emissions would make a cumulatively considerable contribution to a significant impact. Based on the analysis contained in this IS/MND, both air quality and GHG emissions would remain generally substantially below the defined thresholds of significance. Therefore, the proposed project would not make a cumulatively considerable contribution to a wider adverse air quality or GHG impact.

The use of energy is likewise considered an impact with potentially broader effects based on the consumption of limited energy resources. However, it was determined in this IS/MND that proposed project energy consumption would be relatively minor, would not be wasteful, and would be temporary in nature, occurring only during project construction. Therefore, the proposed project would not make a cumulatively considerable contribution to a wider adverse impact related to energy consumption and conservation.

Potential impacts to various resources, including biological resources (nesting birds) and the inadvertent discovery of unknown buried archaeological, paleontological, or tribal cultural resources as well as human remains were determined in this IS/MND to be less than significant through compliance with existing policies or regulations, with the implementation of applicable BMPs established as part of the proposed project, or with the implementation of mitigation measures introduced based on the results of the environmental analysis contained in the IS/MND. However, such impacts, should they occur, are site-specific in nature, limited to the proposed project construction footprint, and would not, therefore, make a cumulatively considerable contribution to similar potentially adverse impacts resulting from other closely related projects in the vicinity.

Geology and hydrology impacts related to increased potential for erosion, runoff, siltation, flooding, and pollution discharges during construction would also generally be site-specific in nature, but such impacts could also extend off site and result in a larger impact when combined with similar impacts from closely related projects in the area. However, given the nature of the proposed project and the existing setting and with the implementation of applicable BMPs established as part of the proposed project, off site impacts would be largely eliminated and would, therefore, not make a cumulatively considerable contribution to a more widespread impact potentially created by the combined effects of closely related projects.

Geology impacts related to seismic hazards and hazards created by various soil conditions pertain to the potential impacts from the environment upon the proposed project rather than impacts to the environment caused by the proposed project. In this regard, the proposed project would not make a cumulatively considerable contribution to similar impacts experienced by closely related projects in the area.

Impacts related to noise and hazardous materials during construction have the potential to affect a limited area beyond the boundary of the proposed project. However, the assessment of such impacts in this IS/MND and the conclusion of a less-than-significant impact accounted for the combined effect of the proposed project and the surrounding existing setting.

The proposed project would create individually less-than-significant impacts to transportation systems based on the requirement to close some traffic lanes during construction. This impact would be temporary and limited in physical extent at a given time, and therefore, would make a less than cumulatively considerable incremental contribution to any combined effect created by other projects. Furthermore, LADWP coordination with all applicable agencies regarding construction schedules and worksite traffic control and detour plans (including emergency responders) would also address cumulative development or activities affecting traffic during the construction period.

Impacts to utilities and service systems could contribute to a significant impact from the combined effects of more than one project on the limited capacity of services such as wastewater treatment, water supply, and solid waste disposal. However, as discussed in this IS/MND, the proposed project would create no impacts related wastewater, storm water, electrical power, natural gas, or telecommunications facilities or supplies, and, therefore, could not make a cumulatively considerable contribution to a wider impact. As discussed, the proposed project would generate solid waste in the form of excavated material. However, this would be temporary, occurring during construction only, and would represent less than 1 percent of both the allowable daily throughput and total remaining capacity of the regional landfill with the least amount of available capacity, which would represent a less than cumulatively considerable incremental contribution by the proposed project to any combined effect created by other projects.

Based on the above, the proposed project would not have environmental effects that are individually limited, but cumulatively considerable, and the impact is less than significant.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact After Mitigation Incorporated. As discussed throughout Section 3 of this IS/MND, the impacts related to the proposed project would be temporary in nature, driven by construction activities. As such, the proposed project would not result in potentially significant long-term impacts to the environment that would result in substantial adverse effects on human beings, either directly or indirectly. Numerous factors discussed above in Section 3 pertain to the quality of the human environment. Based on the analysis contained above, the environmental impacts created by the proposed project in relation to most of these factors would be less than significant. As discussed in Section XIII, the proposed project could generate a substantial temporary increase in ambient noise levels from the construction activity. Therefore, **MMs NOI-1 through NOI-5** would be required. With the incorporation of these mitigation measures, substantial adverse effects on human beings would not occur. Therefore, impacts would be less than significant.

SECTION 4
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Technical Appendices

Appendix A
Air Quality Impacts Assessment

Technical Memorandum

TO: Nathaniel Counts
AECOM

FROM: Terry A. Hayes Associates Inc.

DATE: October 10, 2022

RE: Toluca-Hollywood Line 1 Upgrade Project
Air Quality Impacts Assessment

Introduction

Terry A. Hayes Associates Inc. (TAHA) completed an Air Quality Impacts Assessment for the Toluca-Hollywood Line 1 Upgrade Project (proposed project) in accordance with the requirements of the California Environmental Quality Act (CEQA) Statute and Guidelines. This Assessment is organized by the following sections:

- Introduction
- Project Description
- Background on Air Quality
- Regulatory Framework
- Existing Setting
- Significance Thresholds
- Methodology
- Impact Assessment
- References

Terry A. Hayes Associates Inc.
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310.839.4200 fax 310.839.4201

Project Description

The City of Los Angeles Department of Water and Power (LADWP) proposes to upgrade the approximately 1.8-mile underground portion of the existing Toluca-Hollywood 230 kilovolt (kV) Line 1 (TOL-HWD L1) cable, which runs from the Nichols Canyon Terminal Tower to the Hollywood Receiving Station.

All work would be located within the road right-of-way (ROW), the confines of LADWP property, or within an easement. The proposed project would include the following work:

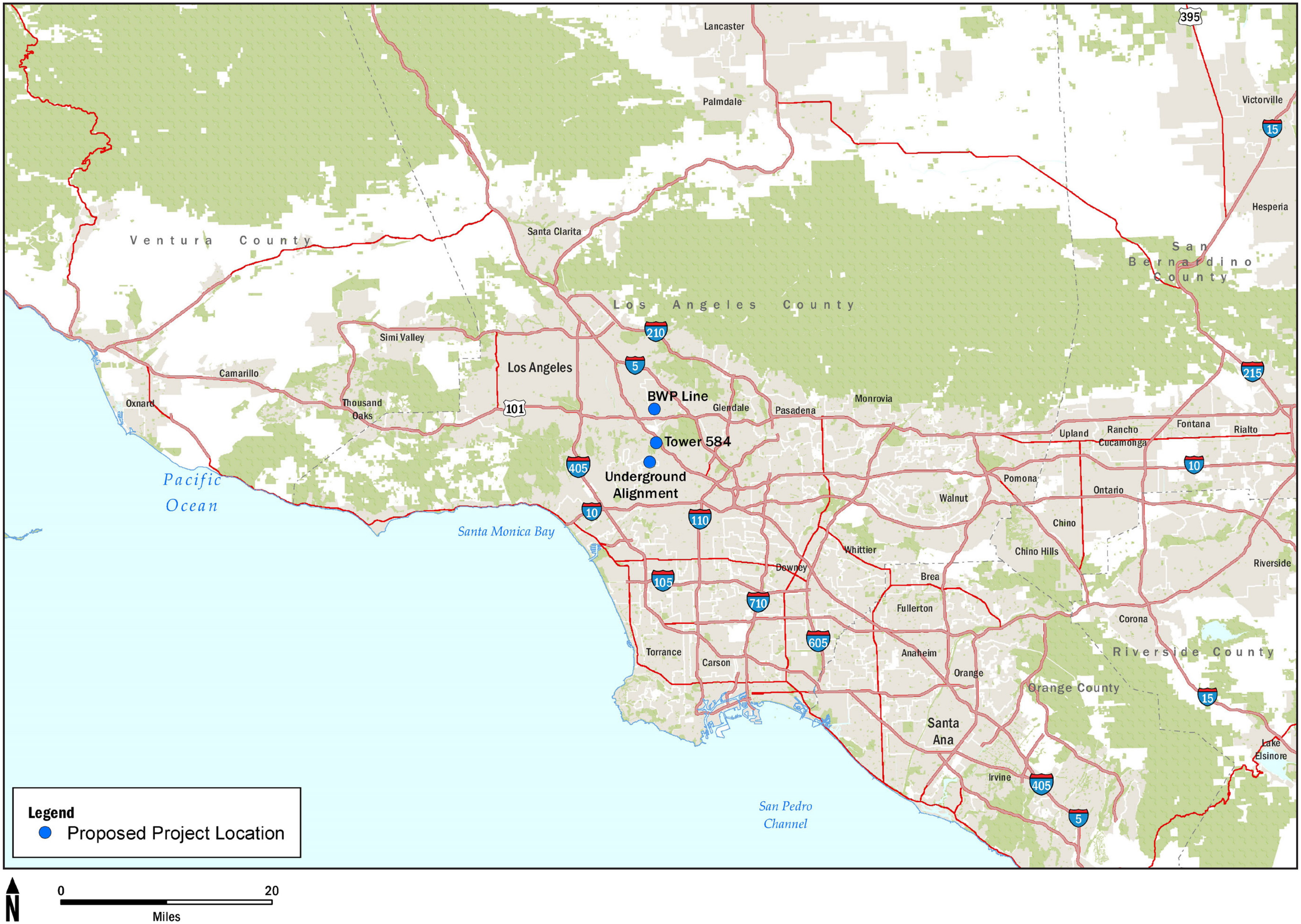
- Trenching and installing a new underground cable adjacent to the existing underground TOL-HWD L1 alignment from Hollywood Boulevard southeast to the Hollywood Receiving Station.
- Trenching and removing the existing underground TOL-HWD L1 pipe and cable and installing a new underground pipe and cable inside the same trench alignment within Nichols Canyon Road, north of Hollywood Boulevard to the Nichols Canyon Terminal Tower.
- Splicing the new cable in Nichols Canyon Road together with the new cable south of Hollywood Boulevard and transferring the circuit to the new cable. The existing pipe south of Hollywood Boulevard would be abandoned in place.
- Raising an existing transmission tower along the existing TOL-HWD L1 and lowering a portion of an existing Burbank Water and Power (BWP) distribution line that crosses under the TOL-HWD L1.
- Making modifications to the Nichols Canyon Terminal Tower and the Hollywood Receiving Station to accommodate the system upgrade.

Figure 1 shows the regional vicinity of the proposed project area. **Figure 2** shows the Toluca-Hollywood project area.

Construction Schedule

Construction for the proposed project would span approximately three years and is preliminarily scheduled to begin in mid-2023 with an in-service date of Spring 2026. Within the approximate three-year span, construction of the underground alignment is anticipated to occur in two parts: (1) an approximately two-year period for the trench/conduit and vault installation (south of Hollywood Boulevard) and the Tower 584 raise, anticipated between mid-2023 and mid-2025; and (2) an approximate 6-month period (with a 5-month transmission line outage) for the Nichols Canyon Road pipe replacement and the modifications at the terminal tower and receiving station, along with final connections, commissioning, and testing anticipated between late 2025 and early 2026.

It should be noted the BWP line lowering would occur in advance of the approximate three-year construction period. The BWP line lowering would be a short-duration activity of approximately 30 days. The City of Los Angeles Rush Hour Ordinance limits in-street construction on weekdays to the hours of 9:00 a.m. through 3:30 p.m. Construction hours would be limited to Monday through Friday from 9:00 a.m. to 3:30 p.m., and Saturday from 8:00 a.m. to 6:00 p.m.



Source: AECOM, 2022.

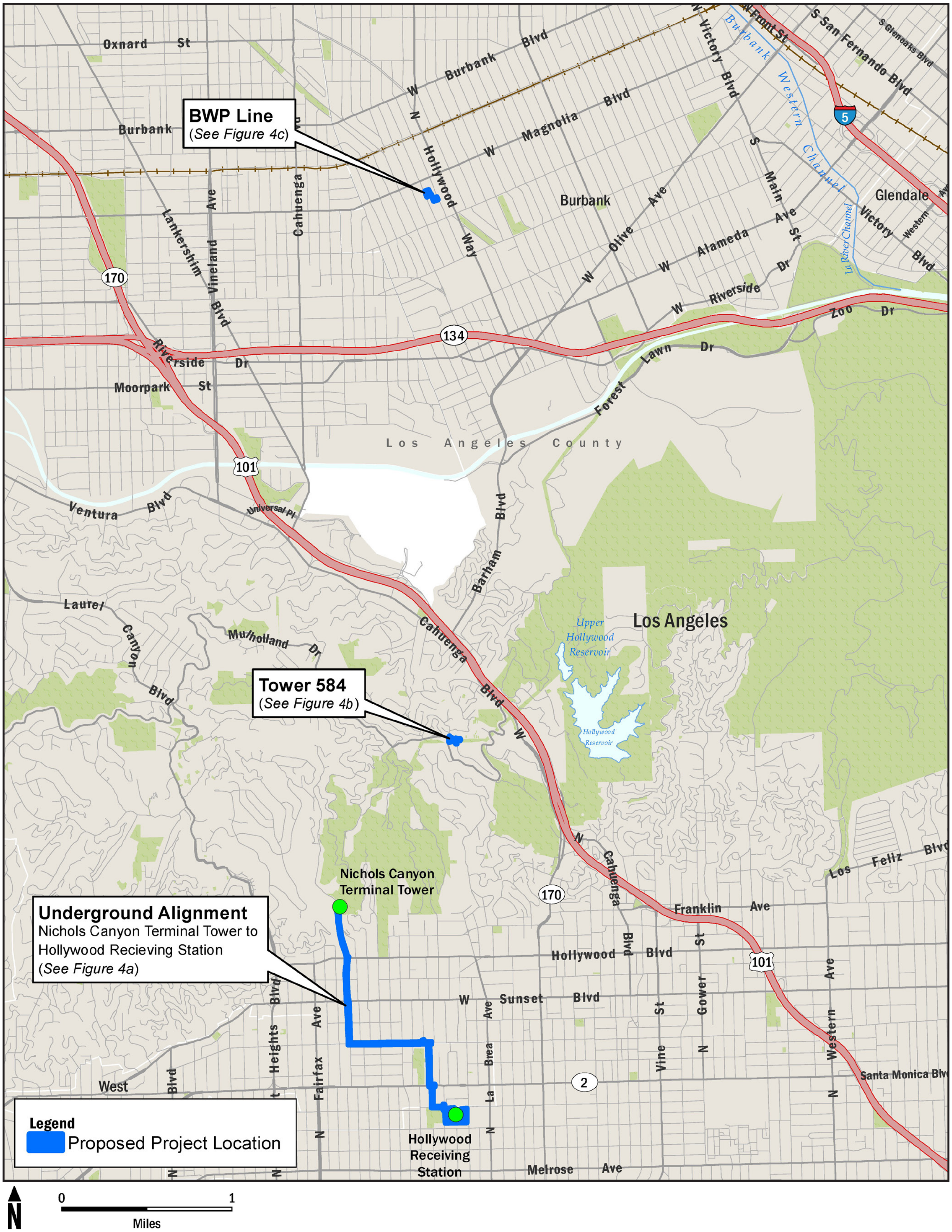
Toluca-Hollywood Line 1 Upgrade Project
Air Quality Assessment

AECOM

TAHA 2021-096

FIGURE 1

REGIONAL LOCATION



Source: AECOM, 2022.

Toluca-Hollywood Line 1 Upgrade Project
Air Quality Assessment

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AECOM

FIGURE 2

PROJECT LOCATION

Overview of Construction Activities

The following is a brief summary of construction activities. Refer to the Project Description of the Initial Study/Mitigated Negative Declaration for additional construction details. Consistent with information provided by LADWP and included as an appendix to this Air Quality Impacts Assessment, construction activities have been grouped into the following components for the purposes of estimating pollutant emissions:

- **BWP Distribution Line Lowering:** BWP would lower the distribution line (i.e., by moving the distribution line and other wires to a lower position on their poles and cutting off the pole tops). This activity would primarily involve hand tools along with tool trucks, bucket trucks, and lifts.
- **Maintenance Vault Excavation:** A total of eight (8) maintenance vaults would be installed along the proposed project corridor. The vault holes would be excavated approximately 12 feet wide, 35 feet long, and 15 feet deep to accommodate the precast maintenance vaults along the proposed transmission line alignment. This activity would primarily be completed using backhoes, excavators and dump trucks.
- **Maintenance Vault Installation**: The precast maintenance vaults would be installed within the roadway, between approximately 850 and 1,100 feet apart, along the underground transmission line alignment. This activity would primarily be completed using cranes and concrete trucks.
- **Trenching for Duct Banks**: The underground transmission line would be installed using open-cut trenching techniques. The typical trench would be approximately three feet wide and six feet deep. When segments of the trench are restored, more trenching would occur further down the street until the conduit system is installed for the entire alignment. This activity would primarily be completed using backhoes, dump trucks, and concrete trucks.
- **Cable Pulling, Splicing, and Termination**: Once the conduit is in place, cable segments between two maintenance vaults would be pulled into the ducts. Cable pulling would be completed using equipment attached to winch trucks.
- **Roadway Restoration**: Roadways would be restored using asphalt pavers and compaction rollers.
- **Tower 584 Raising:** The tower located near the intersection of Mulholland Drive and Macapa Drive would be raised in five-foot segments (to a maximum of 15 feet) using a proprietary process that employs hydraulic jacks to raise transmission line towers. In addition to raising the tower, foundation work would also be done at the tower. Construction at Tower 584 would typically include the use of a hydraulic lift equipment, boom lift truck, crane, drilling rig, excavator, and concrete trucks.
- **Nichols Canyon Road Pipe Replacement:** North of Hollywood Boulevard along Nichols Canyon Road the existing underground alignment would be used for the proposed XLPE cable due to space constraints from a number of existing underground utilities. This would involve draining and cleaning the existing pipe, trenching and removing the existing pipe and cable, and installing a new underground pipe and cable within the same trench/alignment. This activity would be primarily completed using a backhoes, excavators, tank trucks, equipment attached to winch trucks, and road repair equipment.

- **Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station:** Modifications within the Nichols Canyon Terminal Tower and Hollywood Receiving Station properties (i.e., replacement of concrete pad, subsurface support structure, and aboveground rack) would be required to connect the underground portion of the cable to associated above ground equipment. The existing pump houses and accompanying tanks within the terminal tower and receiving station would be demolished and removed, as they would no longer be supporting an oil-filled cable. Additionally. within the Hollywood Receiving Station property, the existing pipe and cable would be abandoned and trenching for a new pipe/cable alignment (approximately 350 feet in length) would be performed. These activities would be primarily completed using a backhoes, excavators, cranes, dump trucks, concrete trucks, tank trucks, equipment attached to winch trucks, and road repair equipment.

Project Construction – Best Management Practices

An appropriate combination of monitoring and resource impact avoidance would be employed during all the construction activities. The proposed project would implement Rule 403 dust control measures required by the South Coast Air Quality Management District (SCAQMD), which would include the following best management practices (BMPs):

- Water shall be applied to exposed surfaces at least two times per day to prevent generation of dust plumes.
- All trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).
- A community liaison shall be identified concerning on-site construction activity including resolution of issues related to dust generation.
- Non-toxic soil stabilizers shall be applied according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).
- Streets shall be swept at the end of the day if visible soil is carried onto adjacent public paved roads. If feasible, water sweepers with reclaimed water shall be used.
- The proposed project construction would incorporate source reduction techniques and recycling measures and maintain a recycling program to divert waste in accordance with the Citywide Construction and Demolition Debris Recycling Ordinance.

Project Operations

Annual inspections of the integrity of the transmission line would be performed and would include the inspection of all of the structures at the stations and maintenance vaults for corrosion and misalignment. The maintenance activities listed below may require the temporary closure of a single roadway lane for the duration of the activity. No other operational activities resulting from the proposed project would occur. Activities associated with long-term operations and maintenance would be minimal.

Background on Air Quality

Air quality is typically characterized by ambient air concentrations of seven specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. These specific pollutants, known as criteria air pollutants, are pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. These pollutants are common byproducts of human activities and have been documented through scientific research to cause adverse health effects. The federal ambient concentration criteria are known as the National Ambient Air Quality Standards (NAAQS), and the California ambient concentration criteria are referred to as the California Ambient Air Quality Standards (CAAQS). Federal criteria air pollutants include ground-level ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), respirable particulate matter ten microns or less in diameter (PM_{10}), fine particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and lead.

Air toxics are generally defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. Air toxics are also defined as an air pollutant that may increase a person's risk of developing cancer and/or other serious health effects; however, the emission of a toxic chemical does not automatically create a health hazard. Air toxics include, but are not limited to, diesel PM, metals, gases absorbed by particles, and certain vapors from fuels and other sources.

Regulatory Framework

The following discussion includes relevant regulations, policies, and programs that have been adopted by federal, state, and local agencies to protect air quality and public health.

Federal

The Clean Air Act (CAA) governs air quality at the national level and the USEPA is responsible for enforcing the regulations provided in the CAA. Under the CAA, the USEPA is authorized to establish NAAQS that set protective limits on concentrations of air pollutants in ambient air. Enforcement of the NAAQS is required under the 1977 CAA and subsequent amendments. As required by the CAA, NAAQS have been established for the seven criteria air pollutants: O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and Pb. These pollutants are common byproducts of human activities and have been documented through scientific research to cause adverse health effects. The CAA grants the USEPA authority to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS concentrations have been met on a regional scale relying upon air monitoring data from the most recent three-year period. The NAAQS are summarized in **Table 1**, which also includes the federal attainment status designations for the Los Angeles County portion of the South Coast Air Basin (SCAB).

TABLE 1: AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS DESIGNATIONS

Pollutant	Averaging Period	California		Federal	
		Standards (CAAQS)	**Attainment Status**	**Standards (NAAQS)**	**Attainment Status**
Ozone (O_3)	1-Hour Average	0.09 ppm (180 µg/m^3)	Nonattainment	--	--
	8-Hour Average	0.070 ppm (137 µg/m^3)	Nonattainment	0.070 ppm (137 µg/m^3)	Nonattainment – Extreme
Carbon Monoxide (CO)	1-Hour Average	20 ppm (23 mg/m^3)	Attainment	35.0 ppm (40 mg/m^3)	Attainment
	8-Hour Average	9.0 ppm (10 mg/m^3)	Attainment	9.0 ppm (10 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	1-Hour Average	0.18 ppm (338 µg/m^3)	Attainment	0.10 ppm (188 µg/m^3)	Attainment
	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	Attainment	0.053 ppm (100 µg/m^3)	Attainment
Sulfur Dioxide (SO_2)	1-Hour Average	0.25 ppm (655 µg/m^3)	Attainment	0.075 ppm (196 µg/m^3)	Attainment
	24-Hour Average	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	Attainment
	Annual Arithmetic Mean	--	--	0.030 ppm (80 µg/m^3)	Attainment
Respirable Particulate Matter (PM_{10})	24-Hour Average	50 µg/m^3	Nonattainment	150 µg/m^3	Attainment (Maintenance)
	Annual Arithmetic Mean	20 µg/m^3	Nonattainment	--	--
Fine Particulate Matter ($PM_{2.5}$)	24-Hour Average	--	--	35 µg/m^3	Nonattainment
	Annual Arithmetic Mean	12 µg/m^3	Nonattainment	12.0 µg/m^3	Nonattainment
Lead (Pb)	30-day Average	1.5 µg/m^3	Attainment	--	--
	Calendar Quarter	--	--	1.5 µg/m^3	Unclassified/ Attainment
	Rolling 3-Month Average	--	--	0.15 µg/m^3	Unclassified/ Attainment
Sulfates	24-Hour Average	25 µg/m^3	Attainment	**No Federal Standards**	
Hydrogen Sulfide	1-Hour Average	0.03 ppm (42 µg/m^3)	Attainment		
Vinyl Chloride	24-Hour Average	0.01 ppm (26 µg/m^3)	Attainment		

CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million; µg/m^3 = micrograms per cubic meter.

SOURCE: SCAQMD, *NAAQS and CAAQS Attainment Status for South Coast Air Basin*, October 2018.

State

Air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). The CCAA is administered by the California Air Resources Board (CARB) at the state level and by the air quality management districts at the regional and local levels. The CCAA requires all areas of the state to achieve and maintain the CAAQS by the earliest feasible date, which is determined in the most recent State Implementation Plan (SIP) based on existing emissions and reasonably foreseeable control measures that will be implemented in the future. The CAAQS are also summarized in **Table 1**, which also presents the state-level attainment status designations for the Los Angeles County portion of the SCAB. In addition to the federal criteria pollutants, the state regulates visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

The CARB's statewide comprehensive air toxics program was established in the early 1980s. The Toxic Air Contaminant Identification and Control Act created California's program to reduce exposure to air toxics. Under the Toxic Air Contaminant Identification and Control Act, the CARB is required to prioritize the identification and control of air toxics emissions. In selecting substances for review, the CARB must consider criteria relating to the risk of harm to public health, such as amount or potential amount of emissions, manner of and exposure to usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community.

Regional

The 1977 Lewis Air Quality Management Act established the SCAQMD in order to coordinate air quality planning efforts throughout Southern California. The SCAQMD has jurisdiction over a total area of 10,743 square miles, consisting of the SCAB—which comprises 6,745 square miles including Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties—and the Riverside County portion of the Salton Sea and Mojave Desert Air Basins. The proposed project would be located in the west San Fernando Valley, which are situated in the SCAB portion of Los Angeles County and are within the jurisdiction of the SCAQMD.

The SCAQMD is tasked with preparing regional programs and policies designed to improve air quality within the SCAB, which are assessed and published in the form of the Air Quality Management Plan (AQMP). The AQMP is updated every four years to evaluate the effectiveness of the adopted programs and policies and to forecast attainment dates for nonattainment pollutants to support the SIP based on measured regional air quality and anticipated implementation of new technologies and emissions reductions. The most recent publication is the 2016 AQMP, which is intended to serve as a regional blueprint for achieving the federal air quality standards and healthful air.

The 2016 AQMP represents a thorough analysis of existing and potential regulatory control options, and includes available, proven, and cost-effective strategies to pursue multiple goals in promoting reductions in greenhouse gas (GHG) emissions and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP focuses on demonstrating NAAQS attainment dates for the 2008 eight-hour O_3 standard, the 2012 annual $PM_{2.5}$ standard, and the 2006 24-hour $PM_{2.5}$ standard. The 2016 AQMP acknowledged that the most significant air quality challenge in the SCAB is the reduction of nitrogen oxides (NO_X) emissions sufficient to meet the upcoming O_3 standard deadlines. The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approach attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the NAAQS are not met by the established date.

The AQMP also includes an element that is related to transportation and sustainable communities planning. Pursuant to California Health and Safety Code Section 40450, the Southern California Association of Governments (SCAG) has the responsibility of preparing and approving the portions of the AQMP relating to regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. The analysis incorporated into the 2016 AQMP is based on the forecasts contained within the SCAG 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). SCAG approved the 2020–2045 RTP/SCS, although these growth projections have not been incorporated by SCAQMD into the current AQMP.

The SCAQMD has also established various rules to manage and improve air quality in the SCAB. The proposed project proponent shall comply with all applicable SCAQMD Rules and Regulations pertaining to construction activities, including, but not limited to:

- Rule 402 (Nuisance) states that a person should not emit air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- Rule 403 (Fugitive Dust) controls fugitive dust through various requirements including, but not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, limiting vehicle speeds on unpaved roads to 15 miles per hour, and maintaining effective cover over exposed areas. Rule 403 also prohibits the release of fugitive dust emissions from any active operation, open storage piles, or disturbed surface area beyond the property line of the emission source and prohibits particulate matter deposits on public roadways.

Existing Setting

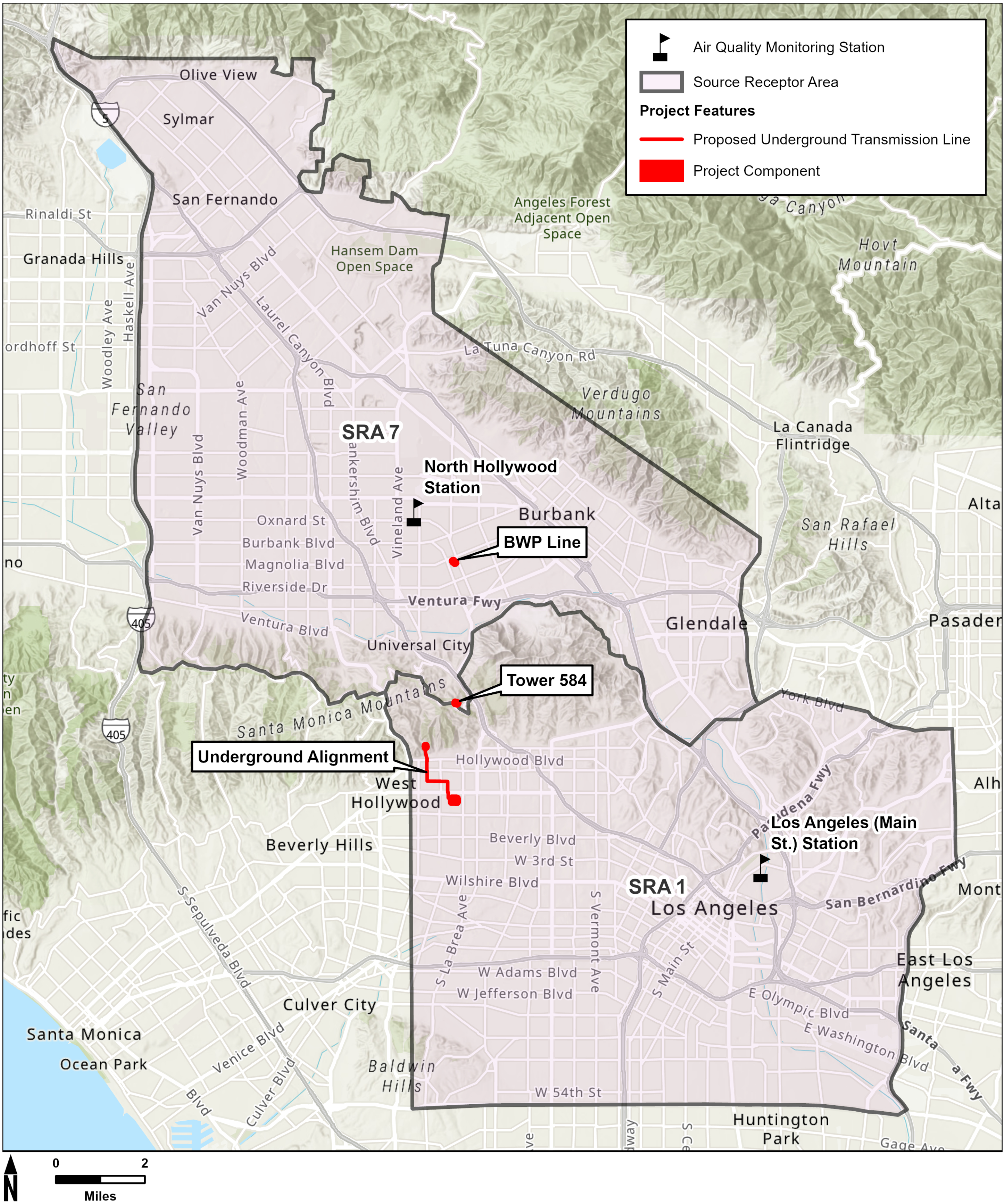
The SCAB is subject to high levels of air pollution due to the immense magnitude of emissions sources and the combination of topography, low mean atmospheric mixing height, and abundant sunshine. Although the SCAB has a semiarid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The mountains and hills surrounding the SCAB contribute to the variation of rainfall, temperature, and winds throughout the region. During the spring and early summer, pollution produced during any one day is typically blown out of the region through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. The vertical dispersion of air pollutants in the SCAB is limited by temperature inversions in the atmosphere close to the Earth's surface. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of little inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants become more concentrated in urbanized areas with pollution sources of greater magnitude.

Air quality within the SCAB region is characterized by concentrations of air pollutants measured at 37 monitoring stations located throughout the SCAQMD jurisdiction. The SCAQMD jurisdiction is divided geographically into 38 source receptors areas (SRAs), each of which contains an air quality monitoring station except for SRA 7. The SRA boundaries were drawn based on proximity to the nearest air monitoring station, the local land use patterns, and surrounding topography. Locations of proposed project improvements are in SRA 1 (Central Los Angeles County) and SRA 7 (East San Fernando Valley), which are depicted in **Figure 3**. **Tables 2** and **3** display the air quality data statistics for the monitoring period 2018 to 2020.

TABLE 2: SUMMARY OF AMBIENT AIR QUALITY DATA IN CENTRAL LOS ANGELES COUNTY

Pollutant	Air Quality Standards	Project Area Statistics	2018	2019	2020
Ozone (O_3)	1-hr. Average (ppm)	Maximum 1-hr. Concentration	0.098	0.085	0.185
	State Standard: 0.090 ppm	Frequency Std. Exceeded	2	0	14
	8-hr. Average (ppm)	Maximum 8-hr. Concentration	0.101	0.080	0.118
	State Standard: 0.070 ppm	Frequency Std. Exceeded	4	2	22
Nitrogen Dioxide (NO_2)	1-hr. Average (ppm)	Maximum 1-hr. Concentration	0.07	0.07	0.06
	State Standard: 0.18 ppm	Frequency Std. Exceeded	0	0	0
	National Standard: 0.10 ppm	Frequency Std. Exceeded	0	0	0
Carbon Monoxide (CO)	1-hr. Average (ppm)	Maximum 1-hr. Concentration	2.0	2.0	1.9
	State Standard: 20.0 ppm	Frequency Std. Exceeded	0	0	0
	National Standard: 35.0 ppm	Frequency Std. Exceeded	0	0	0
	8-hr. Average (ppm)	Maximum 8-hr. Concentration	1.7	1.6	1.5
	State Standard: 9.0 ppm	Frequency Std. Exceeded	0	0	0
	National Standard: 9.0 ppm	Frequency Std. Exceeded	0	0	0
Respirable Particulate Matter (PM_{10})	24-hr. Average (µg/m^3)	Maximum 24-hr. Concentration	81	62	77
	State Standard: 50 µg/m^3	Frequency Std. Exceeded	31	3	24
	National Standard: 150 µg/m^3	Frequency Std. Exceeded	0	0	0
	Annual Average (µg/m^3)	Annual Avg. Concentration	34	26	23
	State Standard: 20 µg/m^3	Annual Std. Exceeded?	Yes	Yes	Yes
Fine Particulate Matter ($PM_{2.5}$)	24-hr. Average (µg/m^3)	Maximum 24-hr. Concentration	44	44	47
	National Standard: 35 µg/m^3	Frequency Std. Exceeded	1	1	2
	Annual Average (µg/m^3)	Annual Avg. Concentration	13	11	12
	State Standard: 12 µg/m^3	Annual Std. Exceeded?	Yes	No	Yes
	National Standard: 12 µg/m^3	Annual Std. Exceeded?	Yes	No	Yes

SOURCE: SCAQMD, *Historical Data by Year – Air Quality Data Tables (2018, 2019, 2020)*, https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year, accessed March 10, 2022.



Source: TAHA, 2022.

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Toluca-Hollywood Line 1 Upgrade Project
Air Quality Assessment

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FIGURE 3

SOURCE RECEPTOR AREAS &
AIR QUALITY MONITORING STATIONS

As shown in **Table 2**, above, recorded data at the Central Los Angeles County monitoring station demonstrates that ambient concentrations of O_3 exceeded the CAAQS for both the one-hour and eight-hour averaging periods during the 2018 and 2020 years of the monitoring timeframe. The ambient concentrations of O_3 were also exceeded for the eight-hour averaging period for the 2019 monitoring year. Annual concentrations of PM_{10} exceeded the CAAQS in 2018, 2019 and 2020. The measured concentrations of PM_{10} are consistent with the state-level nonattainment designation and attainment of the NAAQS. The annual concentrations of PM2.5 exceeded the CAAQS and NAAQS in 2018, as well. There were no instances of any State or federal standards being exceeded for NO_2 or CO during the most recent three-year monitoring period.

SRA 7 (East San Fernando Valley) does not contain an active monitoring station. Therefore, monitoring data representing existing air quality in the vicinity of the northern proposed project locations was obtained from concentrations measured in SRA 6 (West San Fernando Valley). Additionally, PM_{10} is not monitored at SRA 6 and data was supplemented from SRA 13 (Santa Clarita Valley). Recorded data at the West San Fernando Valley monitoring station displayed in **Table 3** demonstrates that ambient concentrations of O_3 exceeded the CAAQS for both the one-hour and eight-hour averaging periods numerous times in each year of the monitoring timeframe. Annual concentrations of PM_{10} exceeded the CAAQS in 2018 and 2020 at the Santa Clarita Valley monitoring station, with several days above the State 24-hour standard in 2019. The measured concentrations of PM_{10} are consistent with the state-level nonattainment designation and attainment of the NAAQS. There were no instances of any state or federal standards being exceeded for NO_2, CO, or $PM_{2.5}$ during the most recent three-year monitoring period.

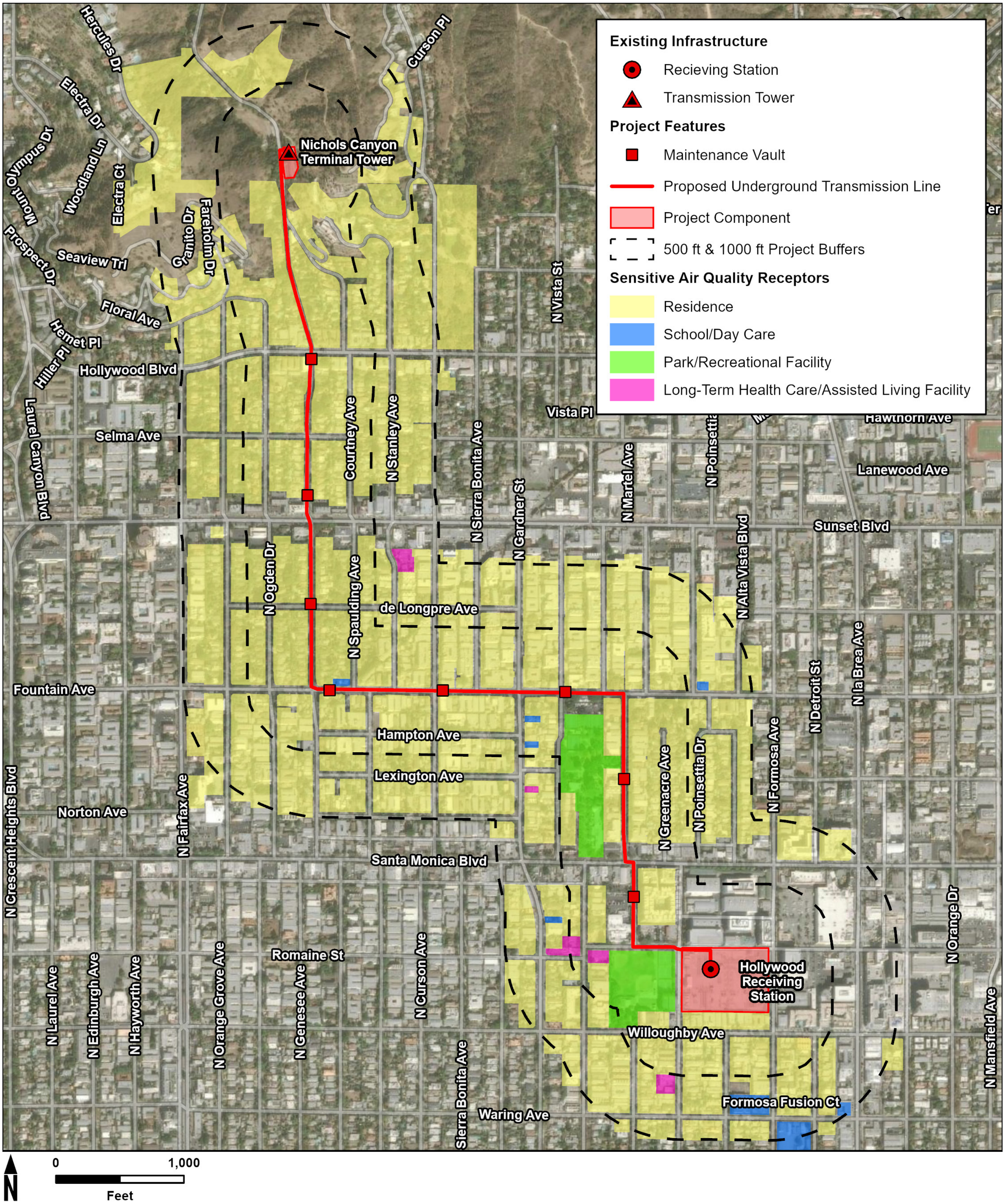
TABLE 3: SUMMARY OF AMBIENT AIR QUALITY DATA IN WEST SAN FERNANDO VALLEY AND SANTA CLARITA VALLEY

Pollutant	Air Quality Standards	Project Area Statistics	2018	2019	2020
Ozone (O_3)	1-hr. Average (ppm)	Maximum 1-hr. Concentration	0.120	0.101	0.142
	State Standard: 0.090 ppm	Frequency Std. Exceeded	14	1	14
	8-hr. Average (ppm)	Maximum 8-hr. Concentration	0.101	0.087	0.115
	State Standard: 0.070 ppm	Frequency Std. Exceeded	49	6	49
Nitrogen Dioxide (NO_2)	1-hr. Average (ppm)	Maximum 1-hr. Concentration	0.06	0.06	0.06
	State Standard: 0.18 ppm	Frequency Std. Exceeded	0	0	0
	National Standard: 0.10 ppm	Frequency Std. Exceeded	0	0	0
Carbon Monoxide (CO)	1-hr. Average (ppm)	Maximum 1-hr. Concentration	3.4	2.6	2.0
	State Standard: 20.0 ppm	Frequency Std. Exceeded	0	0	0
	National Standard: 35.0 ppm	Frequency Std. Exceeded	0	0	0
	8-hr. Average (ppm)	Maximum 8-hr. Concentration	2.1	2.2	1.7
	State Standard: 9.0 ppm	Frequency Std. Exceeded	0	0	0
	National Standard: 9.0 ppm	Frequency Std. Exceeded	0	0	0

TABLE 3: SUMMARY OF AMBIENT AIR QUALITY DATA IN WEST SAN FERNANDO VALLEY AND SANTA CLARITA VALLEY					
Pollutant	**Air Quality Standards**	**Project Area Statistics**	**2018**	**2019**	**2020**
Respirable Particulate Matter (PM_{10})	24-hr. Average ($\mu g/m^3$)	Maximum 24-hr. Concentration	49	62	48
	State Standard: 50 $\mu g/m^3$	Frequency Std. Exceeded	0	3	0
	National Standard: 150 $\mu g/m^3$	Frequency Std. Exceeded	0	0	0
	Annual Average ($\mu g/m^3$)	Annual Avg. Concentration	23	18	23
	State Standard: 20 $\mu g/m^3$	Annual Std. Exceeded?	Yes	No	Yes
Fine Particulate Matter ($PM_{2.5}$)	24-hr. Average ($\mu g/m^3$)	Maximum 24-hr. Concentration	31	30	28
	National Standard: 35 $\mu g/m^3$	Frequency Std. Exceeded	0	0	0
	Annual Average ($\mu g/m^3$)	Annual Avg. Concentration	10	9	10
	State Standard: 12 $\mu g/m^3$	Annual Std. Exceeded?	No	No	No
	National Standard: 12 $\mu g/m^3$	Annual Std. Exceeded?	No	No	No
SOURCE: SCAQMD, *Historical Data by Year – Air Quality Data Tables (2018, 2019, 2020)*, https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year, accessed March 10, 2022.					

Regarding air pollutant concentrations, some land uses are considered more sensitive to changes in air quality than others depending on the population subgroups likely to be present and nature of occupant behaviors. The CARB has identified the following subgroups of individuals who are most susceptible to experience adverse health effects due to exposure to air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases.

According to the SCAQMD, land uses that constitute sensitive receptors where these subgroups spend extended periods of time include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The proposed project is in a densely developed urban environment and many sensitive receptors are located near proposed construction zones. **Figure 4** identifies these land uses that would be within 500 feet of construction activities. Sensitive land use uses near proposed construction activities include residences, schools, and health care facilities.



Source: TAHA, 2022.

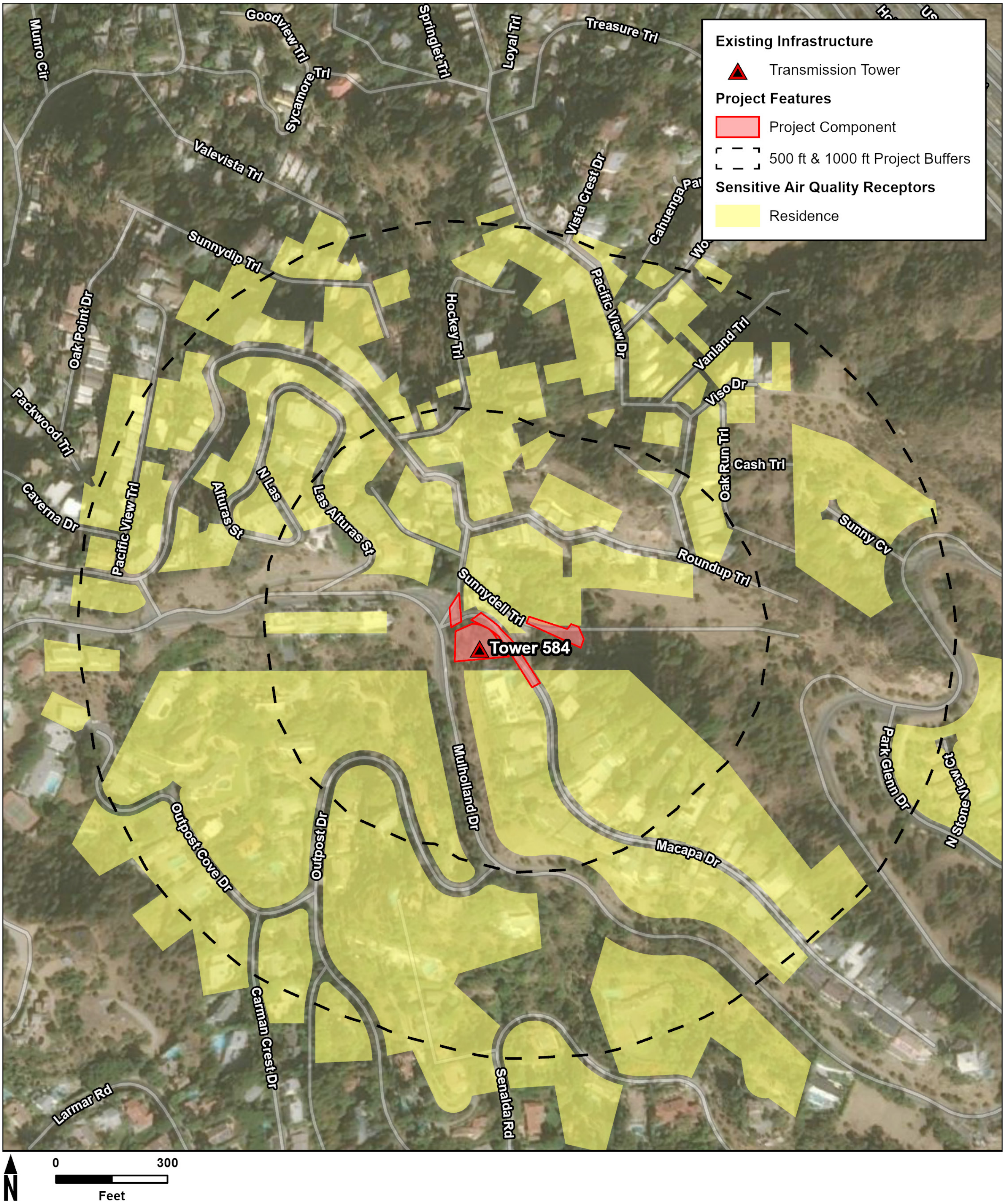
taha environmental planners
TAHA 2021-096

Toluca-Hollywood Line 1 Upgrade Project
Air Quality Assessment

AECOM

FIGURE 4A

AIR QUALITY SENSITIVE RECEPTORS
(UNDERGROUND ALIGNMENT)



Source: TAHA, 2022.

Toluca-Hollywood Line 1 Upgrade Project
Air Quality Assessment

TAHA 2021-096

AECOM

FIGURE 4B

AIR QUALITY SENSITIVE RECEPTORS (TOWER 584)

Source: TAHA, 2022.

Toluca-Hollywood Line 1 Upgrade Project
Air Quality Assessment

TAHA 2021-096

AECOM

FIGURE 4C

AIR QUALITY SENSITIVE RECEPTORS (BWP LINE)

Significance Thresholds

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

[a] Conflict with or obstruct implementation of the applicable air quality plan;

[b] Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard;

[c] Expose sensitive receptors to substantial pollutant concentrations; and/or

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

The Environmental Checklist acknowledges that, "[w]here available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make" the impact determinations. The SCAQMD published a *CEQA Air Quality Handbook* to guide air quality assessments for CEQA projects within its jurisdiction, which has been revised and updated through several iterations since the original publication in 1993.[1] SCAQMD methodologies recommend that air pollutant emissions be analyzed in both regional and local contexts. In its original 1993 *CEQA Air Quality Handbook*, the SCAQMD established regional-scale screening thresholds for criteria air pollutant and O_3 precursor emissions based on maximum allowable mass daily emissions from construction and operation of proposed projects that were derived from previously adopted quarterly and annual USEPA thresholds. Regional emissions refer to all sources of emissions that would be associated with construction and operation of a project—both those located on the project site as well as remote or mobile sources of emissions— while localized emissions refer to only those emissions that would be produced by sources located on the project site. In addition to the regional thresholds, the SCAQMD subsequently promulgated its guidance on using localized significance thresholds (LSTs) for screening on-site emissions in 2003 and updated the guidance in 2008.[2] The applicable SCAQMD thresholds for mass daily emissions are summarized below in **Table 4.**

TABLE 4: SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS – MASS DAILY EMISSIONS

Pollutant	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
CONSTRUCTION						
Regional Threshold (lbs./day)	75	100	550	150	150	55
Localized Threshold (lbs./day)	--	74	498	--	4	3
OPERATIONS						
Regional Threshold (lbs./day)	55	55	550	150	150	55
Localized Threshold (lbs./day)	--	74	498	--	1	1

Note: LST values selected for one-acre daily disturbance based on equipment inventory and 25-meter receptor distance in SRA 1 and 7. The lower, more conservative value between the two SRAs was chosen as the threshold.
SOURCE: SCAQMD, 2009 and 2019.

[1]SCAQMD, *CEQA Air Quality Handbook (Version 3)*, revised 2001.
[2]SCAQMD, *Final Localized Significance Threshold Methodology*, Revised July 2008.

Table 4 shows the regional mass daily thresholds for emissions of volatile organic compounds (VOC), NO_X, CO, sulfur oxides (SO_X), and particulate matter (PM_{10} and $PM_{2.5}$) generated by projects subject to CEQA within the SCAB. The SCAQMD considers any project that would not produce daily emissions in excess of any regional threshold to be less than significant at both the project level and for cumulative impacts. Conversely, if construction or operation of a project would generate daily mass emissions exceeding the regional threshold values presented in **Table 4**, those emissions would be considered significant, and opportunities for mitigation would need to be explored and implemented as feasible.

The localized emissions analysis addresses only those sources that would be located on the project site, such as off-road equipment exhaust and fugitive area sources such as dust generation and asphalt off-gassing during construction activities. The SCAQMD LST guidance includes mass-rate lookup tables for daily emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ that correspond to the SRA in which a project is located, the area of daily disturbance during construction activities or site size during operations, and the proximity of the nearest sensitive receptor(s).[3] Using dispersion modeling and ambient air quality data during the 2000–2002 monitoring period, the SCAQMD developed SRA-specific maximum allowable emissions levels from on-site sources to prevent the occurrence of pollutant hot-spots surrounding CEQA project sites. The LST values presented in **Table 4** are specific to a construction site up to one acre with sensitive receptors within 80 feet (approximately 25 meters) and were obtained from the SCAQMD LST guidance document. Because the construction activities would occur in SRAs 1 and 7, the lower, more conservative value between the two SRAs was chosen as the threshold.

Regarding emissions of toxic air contaminants (TACs), a significant air quality impact would occur if the proposed project resulted in a carcinogenic risk above 10 excess cancers per million, or an acute hazard index (HI) equal to or greater than 1.0 at any sensitive receptor location.

[3]SCAQMD, *Final Localized Significance Threshold Methodology Appendix C – Localized Significance Threshold Screening Tables*, October 2009.

Methodology

The air quality analysis conducted for the proposed project is consistent with the methods described in the SCAQMD *CEQA Air Quality Handbook* (Version 3, November 2001), as well as the updates to the guidance as provided on the SCAQMD website. The proposed project would not introduce new permanent sources of air pollutants to the SCAB and therefore the operational impacts assessment was qualitative in nature. The quantitative analysis focused on pollutant emissions that would be generated during construction activities. The air quality impacts assessment sought to characterize the maximum daily emissions that would be generated by sources involved in construction of the proposed project. This task involved compiling inventories of the daily personnel, vehicles, and equipment use that would occur during construction of the main components of the proposed project and determining the activities that may be ongoing simultaneously throughout the three-year construction period. The primary phases and components involved to construct the proposed project would include:

- Roadway Surface Stripping
- Maintenance Vault Excavation (2023–2024, six vaults of eight total)
- Maintenance Vault Installation (2023–2024, six vaults of eight total)
- Transmission Line Trenching
- Tower 584 Foundation
- Tower 584 Erection
- Roadway Restoration
- Maintenance Vault Excavation (2025, remaining two vaults)
- Maintenance Vault Installation (2025, remaining two vaults)
- Roadway Restriping
- Nichols Canyon Road Pipe Replacement
- Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station

As a note, a total of eight maintenance vaults would be installed along the project corridor. It was assumed that six would be installed during the first four-to-six months of construction, and that the remaining two vaults would be installed in 2025. The sources of air pollutant emissions associated with construction activities include on-road vehicle trip exhaust and dust generation, off-road equipment exhaust, and fugitive area source emissions such as dust from disturbed unpaved areas and truck loading as well as evaporative off-gassing from asphalt paving. The SCAQMD recommends the use of the California Emissions Estimator Model (CalEEMod, Version 2020.4.0) as a tool for quantifying emissions of air pollutants that will be generated by constructing and operating development projects under CEQA. CalEEMod was developed by the California air districts and contains an interface for entering project information related to land use type, construction schedule, construction equipment and personnel inventories, operational elements, and mitigation measures. The detailed CalEEMod output files disclosing estimated air pollutant emissions during construction of the proposed project can be found in the **Appendix**.

Daily on-road vehicle and off-road equipment activity inventories were populated in CalEEMod to characterize reasonably conservative estimates of maximum daily emissions that would occur during each type of construction. The CalEEMod tool provides regionally specific default values for construction vehicle trip lengths, as well as emissions factors for heavy duty equipment and passenger vehicles that have been derived by the CARB through extensive air quality investigations and surveys. The default values for Los Angeles County were used in conjunction with project-specific information (i.e., daily equipment usage rates, daily personnel, daily haul truck and vendor delivery trips) to determine reasonable estimates of daily air pollutant emissions during each phase of construction. Maximum daily emissions during construction of each project component were then combined based on conservative forecasts of activity overlap to evaluate the maximum regional and localized emissions that could occur in a worst-case scenario. Information obtained from LADWP conveyed that maximum daily trucking activities would involve up to 40 hauling trucks and 30 material delivery trucks, and it was conservatively modeled that as many as 125 construction crew vehicles could be deployed throughout the proposed project corridor on a daily basis. **Table 5** displays a summary of the emission source inventories for each phase and identifies the potentially overlapping activities.

TABLE 5: MAXIMUM DAILY CONSTRUCTION ACTIVITY SCENARIOS

Phase	Phase[/a/]	Maximum Daily Crew Vehicles	Maximum Daily Debris Haul Trucks	Max Daily Delivery Trucks	Daily # Off-Road Equipment
1	Roadway Surface Stripping	20	10	0	5
2	Maintenance Vaults Excavation[/b/]	20	15	5	3
3	Maintenance Vaults Installation[/b/]	20	0	5	4
4	Transmission Line Trenching	40	15	10	6
5	Tower 584 Foundation	10	0	5	6
6	Tower 584 Erection	10	0	5	3
7	Roadway Restoration	10	0	5	5
8	Maintenance Vault Excavation[/c/]	10	10	5	3
9	Maintenance Vault Installation[/c/]	10	0	10	4
10	Roadway Restriping	5	0	0	2
11	Nichols Canyon Road Segment	20	5	5	6
12	Terminal Tower & Receiving Station	30	0	5	7
CONCURRENT CONSTRUCTION ACTIVITIES					
1,2,3,4,5,7	Demo, Vaults, Trench, Tower$_F$, Pave	120	40	30	29
1,2,3,4,6,7	Demo, Vaults, Trench, Tower$_E$, Pave	120	40	30	26
1,2,3,4,5,7,10	Demo, Vaults, Trench, Tower$_F$, Pave, Restriping	125	40	30	31
11,12	NCR, Terminal Tower/Receiving Stn.	50	5	5	13

Notes: **/a/** Emissions analysis focused on phases involving highest amount of daily source activity; therefore, components that would require minimal equipment and heavy-duty vehicles (e.g., BWP line lowering) were excluded from the analysis.

/b/ First six maintenance vaults assumed to be installed toward beginning of construction period (first four-to-six months).

/c/ Remaining two vaults assumed to be excavated and installed near end of construction period sometime in 2025.

NCR = Nichols Canyon Road

Source: LADWP, 2022.

Maximum daily emissions during construction of the proposed project that were quantified in CalEEMod were used to assess potential environmental impacts related to air quality following the CEQA Guidelines Environmental Checklist criteria. With regards to AQMP consistency and potential conflicts with the attainment demonstrations for the O_3 and $PM_{2.5}$ NAAQS, the evaluation of potential impacts focused on the possibility of the proposed project exacerbating the frequency or severity of air quality violations during construction activities, as implementation of the proposed project would not introduce any new permanent sources of air pollution to the project area nor would it create or induce growth in population, housing, or employment that could render forecasted projections that are incorporated into the AQMP attainment demonstrations invalid. The magnitude of maximum daily air pollutant emissions during construction at the regional and localized scales was used to assess whether the proposed project could exacerbate air quality violations or could result in a cumulatively considerable increase in nonattainment pollutant emissions, which include O_3 precursors VOC and NO_X as well as particulate matter (PM_{10} and $PM_{2.5}$). The potential for the proposed project to produce nuisance conditions related to odors or other noxious emissions was evaluated qualitatively.

Impact Assessment

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

The following analysis addresses the proposed project's consistency with applicable SCAQMD and SCAG air quality planning, including the SCAQMD's 2016 AQMP and growth projections within the RTP/SCS. In accordance with the procedures established in the SCAQMD's *CEQA Air Quality Handbook*, the following criteria are required to be addressed in order to determine the consistency with applicable SCAQMD and SCAG policies:

- Would the proposed project result in any of the following?
  - An increase in the frequency or severity of existing air quality violations;
  - Cause or contribute to new air quality violations; or,
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Would the proposed project exceed the assumptions utilized in preparing the AQMP?
  - Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
  - Does the project include air quality mitigation measures; or,
  - To what extent is project development consistent with the AQMP land use policies?

As mentioned above, the proposed project would not introduce any new permanent sources of air pollutant emissions to the SCAB, and would not spur any growth in population, housing, or employment. Therefore, the proposed project would not result in any potential impacts related to the underlying growth projections that are incorporated into the AQMP attainment demonstration that are addressed in the second portion of the consistency criteria. The analysis of potential air quality impacts related to AQMP consistency that could occur from implementation of the proposed project was based on the possibility of air pollutant emissions during construction activities exacerbating the frequency or severity of air quality violations, which occur when ambient concentrations of air pollutants exceed the established SCAQMD air quality significance thresholds.

Construction

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips by construction workers and haul and delivery trucks traveling to and from the project site. Fugitive dust emissions would primarily result from roadway stripping, excavation, and truck loading activities, as well as vehicle travel on the regional roadway network. NO_X emissions would be generated in off-road equipment exhaust and on-road vehicle exhaust. Fugitive VOC emissions would be associated with repaving of the disturbed roadway areas with fresh asphalt. The assessment of construction air quality impacts considered all of these emissions sources. Throughout the course of the three-year construction period, the equipment and vehicle activity would vary substantially from day to day; the analysis utilized reasonably conservative estimates of vehicle travel and equipment usage to address potential impacts.

It is mandatory for all construction projects in the SCAB to comply with SCAQMD Rule 403 for Fugitive Dust. Rule 403 control strategies include measures to prevent the generation of visible dust plumes. The following BMPs for fugitive dust control would be employed during all activities to minimize the emissions:

- Water shall be applied to exposed surfaces at least three times per day to prevent generation of dust plumes;
- All trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).
- A community liaison shall be identified concerning on-site construction activity including resolution of issues related to dust generation.
- Streets shall be swept at the end of the day if visible soil is carried onto adjacent public paved roads. If feasible, water sweepers with reclaimed water shall be used.

Compliance with the provisions and BMPs promulgated by Rule 403—such as the application of water as a dust suppressant to excavated stockpiles, tarping of debris hauling trucks, and street-sweeping—would reduce on-site fugitive dust PM_{10} and $PM_{2.5}$ emissions associated with construction activities by approximately 61 percent. Daily emissions of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ that would be generated during construction of the proposed project were estimated using CalEEMod.

Table 6 presents the daily emissions that would be generated during each activity involved in construction of the Toluca-Hollywood Transmission Line 1 Replacement Project. Disclosure of the maximum combined daily activity emissions is presented in the bottom portion of the table, followed by the localized and regional emissions analyses.

TABLE 6: ESTIMATED DAILY EMISSIONS – PROPOSED PROJECT CONSTRUCTION						
Phase and Source Location	Maximum Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
(1) ROAD SURFACE STRIPPING						
On-Site Emissions	0.5	4.4	6.8	<0.1	0.3	0.2
Off-Site Emissions	0.2	2.8	2.0	<0.1	0.8	0.2
Total	***0.7***	***7.2***	***8.8***	***<0.1***	***1.1***	***0.4***
(2) MAINTENANCE VAULT EXCAVATIONS (I)						
On-Site Emissions	0.9	8.7	12.3	<0.1	0.4	0.4
Off-Site Emissions	0.4	5.1	4.0	<0.1	1.6	0.5
Total	***1.3***	***13.8***	***16.3***	***<0.1***	***2.0***	***0.9***
(3) MAINTENANCE VAULT INSTALLATIONS (I)						
On-Site Emissions	0.4	3.5	5.5	<0.1	0.2	0.2
Off-Site Emissions	0.2	4.6	2.5	<0.1	1.1	0.3
Total	***0.6***	***8.0***	***8.1***	***<0.1***	***1.2***	***0.5***
(4) TRENCH EXCAVATION						
On-Site Emissions	0.9	8.1	9.8	<0.1	0.4	0.4
Off-Site Emissions	0.1	0.5	0.8	<0.1	0.3	0.1
Total	***0.9***	***8.6***	***10.6***	***<0.1***	***0.7***	***0.4***
(5) TOWER 584 FOUNDATION						
On-Site Emissions	0.8	7.2	8.2	<0.1	0.3	0.3
Off-Site Emissions	0.1	0.5	1.5	<0.1	0.5	0.1
Total	***0.9***	***7.7***	***9.7***	***<0.1***	***0.9***	***0.5***
(6) TOWER 584 STRUCTURE						
On-Site Emissions	0.4	4.2	4.8	<0.1	0.2	0.2
Off-Site Emissions	0.1	0.5	0.8	<0.1	0.3	0.1
Total	***0.5***	***4.7***	***5.6***	***<0.1***	***0.5***	***0.3***
(7) ROADWAY REPAVING						
On-Site Emissions	0.6	5.5	6.5	<0.1	0.3	0.2
Off-Site Emissions	0.1	0.4	0.8	<0.1	0.3	0.1
Total	***0.6***	***5.9***	***7.2***	***<0.1***	***0.6***	***0.3***
(8) MAINTENANCE VAULT EXCAVATION (II)						
On-Site Emissions	0.3	2.9	5.5	<0.1	0.1	0.1
Off-Site Emissions	0.1	3.2	1.5	<0.1	0.7	0.2
Total	***0.4***	***6.1***	***7.0***	***<0.1***	***0.8***	***0.3***
(9) MAINTENANCE VAULT INSTALLATION (II)						
On-Site Emissions	0.7	6.2	8.1	<0.1	0.3	0.3
Off-Site Emissions	0.1	0.8	0.9	<0.1	0.4	0.1
Total	***0.8***	***7.1***	***9.0***	***<0.1***	***0.6***	***0.4***
(10) ROADWAY RESTRIPING						
On-Site Emissions	0.5	2.3	3.6	<0.1	0.1	0.1
Off-Site Emissions	0.1	<0.1	<0.1	<0.1	0.2	0.1
Total	***0.6***	***2.3***	***4.2***	***<0.1***	***0.3***	***0.2***

TABLE 6: ESTIMATED DAILY EMISSIONS – PROPOSED PROJECT CONSTRUCTION						
Phase and Source Location	Maximum Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
(11) NICHOLS CANYON ROAD PIPE REPLACEMENT						
On-Site Emissions	0.7	6.4	11.1	<0.1	0.3	0.3
Off-Site Emissions	0.1	0.4	0.8	<0.1	0.3	0.1
Total	***0.8***	***6.9***	***11.9***	***<0.1***	***0.6***	***0.4***
(12) NICHOLS CANYON TERMINAL TOWER AND HOLLYWOOD RECEIVING STATION						
On-Site Emissions	1.1	10.0	14.6	<0.1	0.5	0.4
Off-Site Emissions	0.1	0.5	1.1	<0.1	0.4	0.1
Total	***1.2***	***10.5***	***15.7***	***<0.1***	***0.9***	***0.5***
CONCURRENT ACTIVITY SCENARIOS						
(1) + (2) + (3) + (4) + (5) + (7)						
On-Site Emissions	4.1	37.4	49.0	0.1	1.9	1.7
Off-Site Emissions	1.0	13.9	11.7	0.1	4.6	1.3
Total	***5.1***	***51.3***	***60.7***	***0.2***	***6.4***	***3.0***
(1) + (2) + (3) + (4) + (6) + (7)						
On-Site Emissions	3.7	34.4	45.6	0.1	1.7	1.6
Off-Site Emissions	1.0	13.8	11.0	0.1	4.3	1.2
Total	***4.7***	***48.2***	***56.6***	***<0.1***	***6.1***	***2.8***
(1) + (2) + (3) + (4) + (5) + (7) + (10)						
On-Site Emissions	4.6	39.6	52.7	0.1	2.0	1.8
Off-Site Emissions	1.1	13.9	12.3	0.1	4.8	1.4
Total	***5.7***	***53.6***	***64.9***	***0.2***	***6.8***	***3.2***
(11) + (12)						
On-Site Emissions	1.8	16.5	25.7	<0.1	0.8	0.7
Off-Site Emissions	0.2	0.9	1.8	<0.1	0.7	0.2
Total	***2.0***	***17.4***	***27.6***	***<0.1***	***1.5***	***0.9***
REGIONAL EMISSIONS ANALYSIS						
Maximum Regional Emissions	**5.7**	**53.6**	**64.9**	**0.2**	**6.8**	**3.2**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
LOCALIZED EMISSIONS ANALYSIS						
Maximum On-Site Emissions	-	**39.6**	**52.7**	-	**2.0**	**1.8**
SCAQMD LST Screening Value	-	74	498	-	4	3
Threshold Exceeded?	-	***No***	***No***	-	***No***	***No***

Note: Emissions modeling files can be found in the **Appendix**.
SOURCE: TAHA, 2022.

As shown in **Table 6**, maximum daily emissions from the highest combined activity intensity scenarios would remain below the applicable SCAQMD regional mass daily thresholds and LST screening values. The maximum daily emissions from individual activities would also remain substantially below the corresponding

SCAQMD regional and LST screening values. Therefore, construction of the proposed project would not have the potential to result in emissions that would exceed thresholds established to prevent the occurrence of new or exacerbated air quality violations.

Based on the results of the combined activities analysis, construction of the proposed project would not have any potential to conflict with or obstruct implementation of the AQMP based on the air quality violation criterion. When considering up to seven overlapping activities—comprising a total of up to 31 pieces of off-road construction equipment, 40 haul truck round trips, and 30 concrete and material deliveries on a given day—total regional and localized NO_X emissions would be less than 54 percent of the applicable corresponding thresholds. Localized particulate matter emissions from the combined sites would remain below the lowest LST values that apply to a singular one-acre construction site within SRA 1 or SRA 7. Therefore, this impact would be less than significant, and no mitigation measures are required.

Upon completion of construction activities, vehicle and equipment sources employed to implement the proposed project would no longer be active and producing emissions. The construction workforce would comprise LADWP crews and contractors assembled from the local area and is not anticipated to introduce new permanent job growth to the region. As discussed previously, construction of the proposed project would have no impact related to the second AQMP consistency criterion related to assumptions incorporated into the regional growth forecasts for population, housing, and employment within the City of Los Angeles.

Operations

Operational activities associated with the proposed project would be minimal, and no new permanent sources of air pollutant emissions would be introduced to the project area. Implementation of the proposed project would not expand the LADWP workforce. The occasional vehicle trips would produce negligible emissions of air pollutants at the regional level. Operation of the proposed project would not have any potential to exacerbate the frequency or severity of air quality violations and would result in a less-than-significant air quality impact related to air quality violations.

The second consistency criterion requires that the proposed project not exceed the assumptions in the AQMP, thereby rendering the regional emissions inventory inaccurate. Implementation of the proposed project would not introduce new population, housing, and employment projections for the region would not be affected. The proposed project would not have any potential to result in growth that would exceed the projections incorporated into the AQMP or the RTP/SCS. The proposed project would not interfere with air pollution control measures listed in the 2016 AQMP and would not conflict with the goals of the City of Los Angeles General Plan Air Quality Element.

Mitigation Measures

No mitigation measures are required.

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

The SCAB is currently designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ under the State standards and nonattainment for O_3 and $PM_{2.5}$ under the federal standards. Therefore, a project may result in a cumulatively considerable air quality impact under this criterion if daily emissions of ozone precursors (VOC and NO_X) or particulate matter (PM_{10} and $PM_{2.5}$) exceed applicable air quality thresholds of significance established by the SCAQMD. The SCAQMD designed the regional mass daily thresholds and LST values to prevent projects from exceeding the ambient air quality standards and potentially resulting in air quality violations that could obstruct or delay implementation of the AQMP. The SCAQMD suggests that if any quantitative air quality significance threshold is exceeded by an individual project during construction activities or operation, that project is considered cumulatively considerable and would be required to implement effective and feasible mitigation measures to reduce air quality impacts. Conversely, the SCAQMD promulgates that if an individual project would not exceed the regional mass daily thresholds or LST values, then its emissions are generally considered to not be cumulatively considerable, and the impact would be less than significant. This method of impact determination allows for the screening of individual projects that would not represent substantial new sources of emissions in the SCAB; it also serves to exclude smaller projects from the responsibility of identifying potentially concurrent new or proposed construction and operation emissions nearby since the incremental contribution to regional emissions is minor.

Construction

As shown in **Table 6**, construction of the proposed project would not generate emissions in excess of any of the applicable regional or localized thresholds established by the SCAQMD. All construction activities would be conducted in accordance with the BMPs pursuant to SCAQMD Rule 403 to minimize fugitive dust emissions. Emissions produced during construction activities associated with the proposed project would not be cumulatively considerable, and this impact would be less than significant. Therefore, the proposed project would not generate cumulatively considerable emissions of ozone precursors or particulate matter during construction and impacts would be less than significant.

Operation

Following the completion of construction activities, all major components of the proposed project would be located underground and would not generate emissions of air pollutants. Implementation of the proposed project would not introduce any land use developments or LADWP facilities that would generate new vehicle trips or install new stationary sources of emissions. Therefore, the proposed project would not generate cumulatively considerable emissions of ozone precursors or particulate matter during operations and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

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

Construction

The SCAQMD devised its LST values to prevent the occurrence of localized hot spots of criteria pollutant concentrations at sensitive receptor locations surrounding the project site. The LST values were determined using emissions modeling based on ambient air quality measured throughout the SCAB. If maximum daily emissions remain below the LST values during construction activities, it is highly unlikely that air pollutant concentrations in ambient air would reach levels sufficient to create public health concerns for sensitive receptors. As shown in **Table 6**, maximum daily emissions of criteria pollutants and O_3 precursors from sources located on the project site would not exceed any applicable LST values. Additionally, the use of construction equipment in any particular location would be intermittent and temporary, such that nearby sensitive receptors would not be exposed to recurring high levels of emitted pollutants.

With regards to TAC emissions, off-road equipment exhaust would contain diesel particulate matter, which is the most prevalent air toxic in the greater Los Angeles region. However, each individual piece of equipment would only be in operation for a portion of the workdays. Carcinogenic risks are typically assessed on timescales of several years to multiple decades, as the risk accumulates over extended periods of exposure. Given that construction activities would only be occurring during the daytime when the atmospheric inversion layer is at its highest and the greatest amount of pollutant dispersion occurs, there is little potential for TAC concentrations to reach levels that would be hazardous for nearby sensitive receptors. Therefore, construction of the proposed project would not result in exposure of sensitive receptors to substantial concentrations of air pollution. This impact would be less than significant, and no mitigation is required.

Operations

Following the completion of construction activities, operation of the proposed project would not involve any active sources of air pollutant emissions. There would be no potential for sensitive receptors to be exposed to substantial pollutant concentrations resulting from sources associated with the proposed project. Operation of the proposed project would result in no impact related to sensitive receptor exposures to pollutant concentrations, and no mitigation measures would be warranted.

Mitigation Measures

No mitigation measures are required.

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

Construction

Odors are the only potential construction emissions other than the sources addressed above. Potential sources that may produce objectionable odors during construction activities include equipment exhaust, application of asphalt and architectural coatings, and other finishes. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site and would be temporary in nature and would not persist beyond the termination of construction activities. In addition, as construction-related emissions dissipate away from the construction area, the odors associated with these emissions would also decrease and would be quickly diluted. LADWP will ensure that activities comply with SCAQMD Rules 402 (Nuisance) and 401 (Visible Emissions) to prevent the occurrence of public nuisances and visible dust plumes traveling off-site. Therefore, the proposed project would result in a less-than-significant impact related to construction odors and other nuisances.

Operations

Odors are the only potential operational emissions other than the sources addressed above. Given the nature and location of the project facilities, the project has no potential to generate new, adverse odors. Therefore, the proposed project would result in a less-than-significant impact related to operational odors or other emissions that may have the potential to cause a public nuisance.

Mitigation Measures

No mitigation measures are required.

References

California Air Pollution Control Officers Association, *California Emissions Estimator Model (CalEEMod) Version 2020.4.0 User's Guide*, May 2021.

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South Coast Air Quality Management District, *Final 2016 Air Quality Management Plan*, March 2017.

South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology Appendix C – Localized Significance Threshold Screening Tables*, updated October 21, 2009.

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United States Environmental Protection Agency, *The Green Book Nonattainment Areas for Criteria Pollutants*, https://www.epa.gov/green-book, December 2020.

Appendix

- CalEEMod Output File: Daily Emissions
- SCAQMD Air Quality Data Tables – 2018, 2019, 2020
- SCAQMD Fact Sheet for Applying CalEEMod to Localized Significance Thresholds

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

LADWP Toluca-Hollywood Transmission Line Replacement

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	31.92	1000sqft	0.73	31,920.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2025
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	691.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Emissions model is for construction activities only. Operational activities are anticipated to be similar to existing conditions.

Land Use - In-road corridor is approximately 1.75 miles long with approximately 3 foot wide trenching disturbance = 27,720 sq. ft.
Vault areas (8) approximately 15 feet wide by 35 feet long = 4,200 sq. ft. disturbance area.

Construction Phase - The total days for each phase would occur sporadically throughout the two-year construction period.

Off-road Equipment - Repainting disturbed parking spaces, bike lanes, crosswalks, etc.

Off-road Equipment - Roadway asphalt removal off-road equipment inventory.

Off-road Equipment - Pulley truck & loader.

Off-road Equipment - Project specific inventory.

Off-road Equipment - Roadway restoration equipment inventory.

Off-road Equipment - Transmission line trench excavation off-road equipment inventory.

Off-road Equipment - Terminal Tower & Receiving Station inventory.

Off-road Equipment - Tower 584 Foundation off-road equipment inventory.
Foundation excavation, placing rebar, forms, etc.

Off-road Equipment - Concrete placement, form removal.

Off-road Equipment - Vault installation & completion off-road equipment inventory.

Off-road Equipment - Vault installation and completion off-road equipment inventory.

Off-road Equipment - Vault shaft excavation off-road equipment inventory.

Off-road Equipment - Vault shaft excavation inventory.

Trips and VMT - Project Construction Trips, maximum daily activity.
Max workers per day = 120.
Max haul trucks per day = 40.
Max concrete/material delivery trucks = 30.

Demolition - Approximately 850 CY of Demo A/C Debris @ 1.2 tons/CY = 1,020 tons of debris.

Grading - Total linear cubic yards excavated along transmission line trench = ~8,150 CY.
Approx. excavation per vault: 12'W x 35'L x 15'D = 6,300 cu. ft. = ~1,867 CY. Rounded up to 1,875. Assume 875 CY per vault will be refilled.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	NumDays	100.00	24.00
tblConstructionPhase	NumDays	100.00	54.00
tblConstructionPhase	NumDays	100.00	48.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	100.00	150.00
tblConstructionPhase	NumDays	10.00	315.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	2.00	60.00
tblConstructionPhase	NumDays	5.00	315.00
tblConstructionPhase	NumDays	1.00	630.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	1,000.00
tblGrading	MaterialExported	0.00	8,150.00
tblGrading	MaterialExported	0.00	3,000.00
tblOffRoadEquipment	HorsePower	9.00	20.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00

tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	HaulingTripNumber	101.00	6,300.00
tblTripsAndVMT	HaulingTripNumber	0.00	600.00
tblTripsAndVMT	HaulingTripNumber	0.00	18,900.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,800.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	5.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	5.00	10.00
tblTripsAndVMT	VendorTripNumber	5.00	10.00
tblTripsAndVMT	VendorTripNumber	5.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	3.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	80.00
tblTripsAndVMT	WorkerTripNumber	8.00	40.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year						lb/day							lb/day			
2023	3.8408	37.6289	45.3938	0.1288	3.7449	1.4172	5.0187	1.0028	1.3512	2.2093	0.0000	13,202.9638	13,202.9638	1.6795	0.9772	13,536.1484
2024	3.9372	36.6033	50.9342	0.1158	2.5235	1.4450	3.9685	0.6811	1.3570	2.0381	0.0000	11,528.9788	11,528.9788	2.0729	0.5882	11,723.5365
2025	4.2364	36.3725	54.7097	0.1225	2.7471	1.3605	4.1076	0.7404	1.2843	2.0247	0.0000	12,172.7814	12,172.7814	2.1012	0.4733	12,366.3419
Maximum	**4.2364**	**37.6289**	**54.7097**	**0.1288**	**3.7449**	**1.4450**	**5.0187**	**1.0028**	**1.3570**	**2.2093**	**0.0000**	**13,202.9638**	**13,202.9638**	**2.1012**	**0.9772**	**13,536.1484**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year						lb/day							lb/day			
2023	3.8408	37.6289	45.3938	0.1288	3.6983	1.4172	4.9721	0.9958	1.3512	2.2027	0.0000	13,202.9637	13,202.9637	1.6795	0.9772	13,536.1484
2024	3.9372	36.6033	50.9342	0.1158	2.5226	1.4450	3.9676	0.6809	1.3570	2.0379	0.0000	11,528.9788	11,528.9788	2.0729	0.5882	11,723.5365
2025	4.2364	36.3725	54.7097	0.1225	2.7462	1.3605	4.1067	0.7402	1.2843	2.0246	0.0000	12,172.7814	12,172.7814	2.1012	0.4733	12,366.3419
Maximum	**4.2364**	**37.6289**	**54.7097**	**0.1288**	**3.6983**	**1.4450**	**4.9721**	**0.9958**	**1.3570**	**2.2027**	**0.0000**	**13,202.9637**	**13,202.9637**	**2.1012**	**0.9772**	**13,536.1484**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.54	0.00	0.37	0.30	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0140	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0140**	**3.0000e-005**	**3.2500e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.9900e-003**	**6.9900e-003**	**2.0000e-005**	**0.0000**	**7.4400e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0140	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0140**	**3.0000e-005**	**3.2500e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.9900e-003**	**6.9900e-003**	**2.0000e-005**	**0.0000**	**7.4400e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/12/2023	6/12/2024	6	315	Roadway Stripping
2	Site Preparation	Site Preparation	6/12/2023	6/14/2025	6	630	Ductbank Trench Excavation
3	Vault Shaft Excavations (A)	Grading	6/12/2023	8/19/2023	6	60	Vault Excavations (A)
4	Tower 584 Foundation	Building Construction	7/3/2023	9/2/2023	6	54	Foundation work
5	Vault Installations & Completions (A)	Building Construction	8/21/2023	10/14/2023	6	48	Vault Installations (A) and cable pulling
6	Tower 584 Structure	Building Construction	9/4/2023	9/9/2023	6	6	Complete Tower 584
7	Paving	Paving	6/13/2024	6/14/2025	6	315	Roadway Restoration
8	Nichols Canyon Road Pipe Replacement	Trenching	11/11/2024	5/3/2025	6	150	Install new pipe/cable in existing alignment.
9	Terminal Tower & Receiving Station Upgrades	Building Construction	11/11/2024	5/3/2025	6	150	Modifications to Nichols Canyon Terminal Tower & Hollywood Receiving Station.
10	Architectural Coating	Architectural Coating	4/7/2025	6/14/2025	6	60	Restriping Roadway
11	Vault Shaft Excavations (B)	Grading	6/16/2025	7/19/2025	6	30	Vault Excavations (B)
12	Vault Installations & Completions (B)	Building Construction	7/21/2025	8/16/2025	6	24	Vault Installations (B) and cable pulling

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.73

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,915 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	2.00	81	0.73
Demolition	Excavators	1	4.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Pumps	2	6.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Vault Shaft Excavations (A)	Excavators	1	4.00	158	0.38
Vault Shaft Excavations (A)	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Tower 584 Foundation	Bore/Drill Rigs	1	4.00	221	0.50
Tower 584 Foundation	Cranes	1	4.00	231	0.29
Tower 584 Foundation	Excavators	1	6.00	158	0.38
Tower 584 Foundation	Pumps	1	6.00	84	0.74
Tower 584 Foundation	Rollers	1	4.00	80	0.38
Tower 584 Foundation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Vault Installations & Completions (A)	Cranes	1	4.00	231	0.29
Vault Installations & Completions (A)	Pumps	2	6.00	84	0.74
Vault Installations & Completions (A)	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Tower 584 Structure	Cranes	1	4.00	231	0.29
Tower 584 Structure	Excavators	1	4.00	158	0.38
Tower 584 Structure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	20	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	2	7.00	80	0.38
Nichols Canyon Road Pipe Replacement	Excavators	2	6.00	158	0.38
Nichols Canyon Road Pipe Replacement	Other Material Handling Equipment	1	6.00	168	0.40
Nichols Canyon Road Pipe Replacement	Rollers	1	4.00	80	0.38
Nichols Canyon Road Pipe Replacement	Surfacing Equipment	1	4.00	263	0.30

Nichols Canyon Road Pipe Replacement	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Terminal Tower & Receiving Station Upgrades	Cranes	1	4.00	231	0.29
Terminal Tower & Receiving Station Upgrades	Excavators	2	7.00	158	0.38
Terminal Tower & Receiving Station Upgrades	Pumps	1	7.00	84	0.74
Terminal Tower & Receiving Station Upgrades	Surfacing Equipment	1	4.00	263	0.30
Terminal Tower & Receiving Station Upgrades	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Architectural Coating	Air Compressors	2	6.00	78	0.48
Vault Shaft Excavations (B)	Excavators	1	4.00	158	0.38
Vault Shaft Excavations (B)	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Vault Installations & Completions (B)	Cranes	1	4.00	231	0.29
Vault Installations & Completions (B)	Pumps	2	6.00	84	0.74
Vault Installations & Completions (B)	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	40.00	0.00	6,300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	6	80.00	20.00	18,900.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Shaft Excavations (A)	3	40.00	10.00	1,800.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tower 584 Foundation	6	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Installations & Completions (A)	4	40.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tower 584 Structure	3	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Nichols Canyon Road Pipe Replacement	6	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Terminal Tower & Receiving Station Upg	7	30.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Shaft Excavations (B)	3	20.00	10.00	600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Vault Installations & Completions (B)	4	20.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0693	0.0000	0.0693	0.0105	0.0000	0.0105			0.0000			0.0000
Off-Road	0.4882	4.3700	6.8045	0.0104		0.2158	0.2158		0.2036	0.2036		998.7504	998.7504	0.2418		1,004.794 8
Total	**0.4882**	**4.3700**	**6.8045**	**0.0104**	**0.0693**	**0.2158**	**0.2851**	**0.0105**	**0.2036**	**0.2141**		**998.7504**	**998.7504**	**0.2418**		**1,004.794 8**

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0406	2.7249	0.7062	0.0117	0.3501	0.0165	0.3666	0.0960	0.0158	0.1118		1,286.6750	1,286.6750	0.0707	0.2043	1,349.3318
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1375	0.0986	1.3287	3.7500e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		378.9414	378.9414	0.0102	9.8600e-003	382.1356
Total	**0.1781**	**2.8234**	**2.0349**	**0.0155**	**0.7972**	**0.0192**	**0.8164**	**0.2146**	**0.0183**	**0.2328**		**1,665.6165**	**1,665.6165**	**0.0809**	**0.2142**	**1,731.4674**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0270	0.0000	0.0270	4.0900e-003	0.0000	4.0900e-003			0.0000			0.0000
Off-Road	0.4882	4.3700	6.8045	0.0104		0.2158	0.2158		0.2036	0.2036	0.0000	998.7504	998.7504	0.2418		1,004.7948
Total	**0.4882**	**4.3700**	**6.8045**	**0.0104**	**0.0270**	**0.2158**	**0.2428**	**4.0900e-003**	**0.2036**	**0.2077**	**0.0000**	**998.7504**	**998.7504**	**0.2418**		**1,004.7948**

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0406	2.7249	0.7062	0.0117	0.3501	0.0165	0.3666	0.0960	0.0158	0.1118		1,286.6750	1,286.6750	0.0707	0.2043	1,349.3318
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1375	0.0986	1.3287	3.7500e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		378.9414	378.9414	0.0102	9.8600e-003	382.1356
Total	**0.1781**	**2.8234**	**2.0349**	**0.0155**	**0.7972**	**0.0192**	**0.8164**	**0.2146**	**0.0183**	**0.2328**		**1,665.6165**	**1,665.6165**	**0.0809**	**0.2142**	**1,731.4674**

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0693	0.0000	0.0693	0.0105	0.0000	0.0105			0.0000			0.0000
Off-Road	0.4625	4.0809	6.8110	0.0104		0.1895	0.1895		0.1788	0.1788		999.1151	999.1151	0.2414		1,005.1494
Total	**0.4625**	**4.0809**	**6.8110**	**0.0104**	**0.0693**	**0.1895**	**0.2588**	**0.0105**	**0.1788**	**0.1893**		**999.1151**	**999.1151**	**0.2414**		**1,005.1494**

3.2 Demolition - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0403	2.7320	0.7184	0.0115	0.3501	0.0166	0.3667	0.0960	0.0159	0.1119		1,268.4730	1,268.4730	0.0713	0.2015	1,330.3068
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1286	0.0880	1.2358	3.6400e-003	0.4471	2.5700e-003	0.4497	0.1186	2.3700e-003	0.1209		368.2358	368.2358	9.2600e-003	9.1700e-003	371.1992
Total	**0.1689**	**2.8199**	**1.9542**	**0.0152**	**0.7972**	**0.0192**	**0.8164**	**0.2146**	**0.0183**	**0.2328**		**1,636.7088**	**1,636.7088**	**0.0806**	**0.2107**	**1,701.5060**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0270	0.0000	0.0270	4.0900e-003	0.0000	4.0900e-003			0.0000			0.0000
Off-Road	0.4625	4.0809	6.8110	0.0104		0.1895	0.1895		0.1788	0.1788	0.0000	999.1151	999.1151	0.2414		1,005.1494
Total	**0.4625**	**4.0809**	**6.8110**	**0.0104**	**0.0270**	**0.1895**	**0.2165**	**4.0900e-003**	**0.1788**	**0.1829**	**0.0000**	**999.1151**	**999.1151**	**0.2414**		**1,005.1494**

3.2 Demolition - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0403	2.7320	0.7184	0.0115	0.3501	0.0166	0.3667	0.0960	0.0159	0.1119		1,268.473 0	1,268.473 0	0.0713	0.2015	1,330.306 8
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1286	0.0880	1.2358	3.6400e-003	0.4471	2.5700e-003	0.4497	0.1186	2.3700e-003	0.1209		368.2358	368.2358	9.2600e-003	9.1700e-003	371.1992
Total	**0.1689**	**2.8199**	**1.9542**	**0.0152**	**0.7972**	**0.0192**	**0.8164**	**0.2146**	**0.0183**	**0.2328**		**1,636.708 8**	**1,636.708 8**	**0.0806**	**0.2107**	**1,701.506 0**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4600e-003	0.0000	1.4600e-003	2.2000e-004	0.0000	2.2000e-004			0.0000			0.0000
Off-Road	0.9458	8.7363	12.2819	0.0192		0.4297	0.4297		0.4115	0.4115		1,839.281 3	1,839.281 3	0.3354		1,847.665 4
Total	**0.9458**	**8.7363**	**12.2819**	**0.0192**	**1.4600e-003**	**0.4297**	**0.4312**	**2.2000e-004**	**0.4115**	**0.4117**		**1,839.281 3**	**1,839.281 3**	**0.3354**		**1,847.665 4**

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0609	4.0873	1.0592	0.0176	0.5251	0.0248	0.5499	0.1440	0.0237	0.1677		1,930.0125	1,930.0125	0.1060	0.3065	2,023.9976
Vendor	0.0222	0.8037	0.3068	3.7300e-003	0.1281	3.8800e-003	0.1320	0.0369	3.7100e-003	0.0406		401.2406	401.2406	0.0134	0.0577	418.7822
Worker	0.2751	0.1972	2.6575	7.5000e-003	0.8942	5.3800e-003	0.8996	0.2372	4.9500e-003	0.2421		757.8829	757.8829	0.0205	0.0197	764.2712
Total	**0.3582**	**5.0882**	**4.0235**	**0.0288**	**1.5475**	**0.0340**	**1.5815**	**0.4180**	**0.0324**	**0.4504**		**3,089.1360**	**3,089.1360**	**0.1398**	**0.3840**	**3,207.0511**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7000e-004	0.0000	5.7000e-004	9.0000e-005	0.0000	9.0000e-005			0.0000			0.0000
Off-Road	0.9458	8.7363	12.2819	0.0192		0.4297	0.4297		0.4115	0.4115	0.0000	1,839.2813	1,839.2813	0.3354		1,847.6654
Total	**0.9458**	**8.7363**	**12.2819**	**0.0192**	**5.7000e-004**	**0.4297**	**0.4303**	**9.0000e-005**	**0.4115**	**0.4116**	**0.0000**	**1,839.2813**	**1,839.2813**	**0.3354**		**1,847.6654**

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0609	4.0873	1.0592	0.0176	0.5251	0.0248	0.5499	0.1440	0.0237	0.1677		1,930.0125	1,930.0125	0.1060	0.3065	2,023.9976
Vendor	0.0222	0.8037	0.3068	3.7300e-003	0.1281	3.8800e-003	0.1320	0.0369	3.7100e-003	0.0406		401.2406	401.2406	0.0134	0.0577	418.7822
Worker	0.2751	0.1972	2.6575	7.5000e-003	0.8942	5.3800e-003	0.8996	0.2372	4.9500e-003	0.2421		757.8829	757.8829	0.0205	0.0197	764.2712
Total	**0.3582**	**5.0882**	**4.0235**	**0.0288**	**1.5475**	**0.0340**	**1.5815**	**0.4180**	**0.0324**	**0.4504**		**3,089.1360**	**3,089.1360**	**0.1398**	**0.3840**	**3,207.0511**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4600e-003	0.0000	1.4600e-003	2.2000e-004	0.0000	2.2000e-004			0.0000			0.0000
Off-Road	0.8906	8.2126	12.2865	0.0192		0.3754	0.3754		0.3594	0.3594		1,839.8521	1,839.8521	0.3339		1,848.1997
Total	**0.8906**	**8.2126**	**12.2865**	**0.0192**	**1.4600e-003**	**0.3754**	**0.3768**	**2.2000e-004**	**0.3594**	**0.3596**		**1,839.8521**	**1,839.8521**	**0.3339**		**1,848.1997**

3.3 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0604	4.0980	1.0776	0.0173	0.5251	0.0250	0.5501	0.1440	0.0239	0.1679		1,902.7094	1,902.7094	0.1070	0.3023	1,995.4602
Vendor	0.0215	0.8054	0.3003	3.6700e-003	0.1281	3.9100e-003	0.1320	0.0369	3.7400e-003	0.0406		395.2287	395.2287	0.0134	0.0569	412.5305
Worker	0.2571	0.1759	2.4716	7.2900e-003	0.8942	5.1500e-003	0.8994	0.2372	4.7400e-003	0.2419		736.4717	736.4717	0.0185	0.0183	742.3983
Total	**0.3391**	**5.0793**	**3.8495**	**0.0283**	**1.5475**	**0.0340**	**1.5815**	**0.4180**	**0.0324**	**0.4504**		**3,034.4098**	**3,034.4098**	**0.1389**	**0.3775**	**3,150.3890**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7000e-004	0.0000	5.7000e-004	9.0000e-005	0.0000	9.0000e-005			0.0000			0.0000
Off-Road	0.8906	8.2126	12.2865	0.0192		0.3754	0.3754		0.3594	0.3594	0.0000	1,839.8521	1,839.8521	0.3339		1,848.1997
Total	**0.8906**	**8.2126**	**12.2865**	**0.0192**	**5.7000e-004**	**0.3754**	**0.3759**	**9.0000e-005**	**0.3594**	**0.3595**	**0.0000**	**1,839.8521**	**1,839.8521**	**0.3339**		**1,848.1997**

3.3 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0604	4.0980	1.0776	0.0173	0.5251	0.0250	0.5501	0.1440	0.0239	0.1679		1,902.7094	1,902.7094	0.1070	0.3023	1,995.4602
Vendor	0.0215	0.8054	0.3003	3.6700e-003	0.1281	3.9100e-003	0.1320	0.0369	3.7400e-003	0.0406		395.2287	395.2287	0.0134	0.0569	412.5305
Worker	0.2571	0.1759	2.4716	7.2900e-003	0.8942	5.1500e-003	0.8994	0.2372	4.7400e-003	0.2419		736.4717	736.4717	0.0185	0.0183	742.3983
Total	**0.3391**	**5.0793**	**3.8495**	**0.0283**	**1.5475**	**0.0340**	**1.5815**	**0.4180**	**0.0324**	**0.4504**		**3,034.4098**	**3,034.4098**	**0.1389**	**0.3775**	**3,150.3890**

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4600e-003	0.0000	1.4600e-003	2.2000e-004	0.0000	2.2000e-004			0.0000			0.0000
Off-Road	0.8256	7.6445	12.2621	0.0192		0.3136	0.3136		0.3006	0.3006		1,840.7194	1,840.7194	0.3309		1,848.9918
Total	**0.8256**	**7.6445**	**12.2621**	**0.0192**	**1.4600e-003**	**0.3136**	**0.3150**	**2.2000e-004**	**0.3006**	**0.3008**		**1,840.7194**	**1,840.7194**	**0.3309**		**1,848.9918**

3.3 Site Preparation - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0599	4.0723	1.0918	0.0170	0.5252	0.0250	0.5502	0.1440	0.0239	0.1679		1,868.842 6	1,868.842 6	0.1083	0.2970	1,960.058 6
Vendor	0.0208	0.8016	0.2949	3.6000e-003	0.1281	3.9200e-003	0.1320	0.0369	3.7500e-003	0.0406		388.1250	388.1250	0.0135	0.0560	405.1351
Worker	0.2412	0.1579	2.3005	7.0400e-003	0.8942	4.9000e-003	0.8991	0.2372	4.5100e-003	0.2417		711.4708	711.4708	0.0167	0.0171	716.9905
Total	**0.3219**	**5.0319**	**3.6871**	**0.0276**	**1.5475**	**0.0338**	**1.5813**	**0.4180**	**0.0322**	**0.4502**		**2,968.438 4**	**2,968.438 4**	**0.1385**	**0.3701**	**3,082.184 2**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7000e-004	0.0000	5.7000e-004	9.0000e-005	0.0000	9.0000e-005			0.0000			0.0000
Off-Road	0.8256	7.6445	12.2621	0.0192		0.3136	0.3136		0.3006	0.3006	0.0000	1,840.719 4	1,840.719 4	0.3309		1,848.991 8
Total	**0.8256**	**7.6445**	**12.2621**	**0.0192**	**5.7000e-004**	**0.3136**	**0.3142**	**9.0000e-005**	**0.3006**	**0.3007**	**0.0000**	**1,840.719 4**	**1,840.719 4**	**0.3309**		**1,848.991 8**

3.3 Site Preparation - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0599	4.0723	1.0918	0.0170	0.5252	0.0250	0.5502	0.1440	0.0239	0.1679		1,868.842 6	1,868.842 6	0.1083	0.2970	1,960.058 6
Vendor	0.0208	0.8016	0.2949	3.6000e-003	0.1281	3.9200e-003	0.1320	0.0369	3.7500e-003	0.0406		388.1250	388.1250	0.0135	0.0560	405.1351
Worker	0.2412	0.1579	2.3005	7.0400e-003	0.8942	4.9000e-003	0.8991	0.2372	4.5100e-003	0.2417		711.4708	711.4708	0.0167	0.0171	716.9905
Total	**0.3219**	**5.0319**	**3.6871**	**0.0276**	**1.5475**	**0.0338**	**1.5813**	**0.4180**	**0.0322**	**0.4502**		**2,968.438 4**	**2,968.438 4**	**0.1385**	**0.3701**	**3,082.184 2**

3.4 Vault Shaft Excavations (A) - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.6500e-003	0.0000	5.6500e-003	8.6000e-004	0.0000	8.6000e-004			0.0000			0.0000
Off-Road	0.3592	3.4618	5.5337	8.0300e-003		0.1706	0.1706		0.1569	0.1569		777.8117	777.8117	0.2516		784.1007
Total	**0.3592**	**3.4618**	**5.5337**	**8.0300e-003**	**5.6500e-003**	**0.1706**	**0.1762**	**8.6000e-004**	**0.1569**	**0.1578**		**777.8117**	**777.8117**	**0.2516**		**784.1007**

3.4 Vault Shaft Excavations (A) - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0609	4.0873	1.0592	0.0176	0.5251	0.0248	0.5499	0.1440	0.0237	0.1677		1,930.0125	1,930.0125	0.1060	0.3065	2,023.9976
Vendor	0.0111	0.4019	0.1534	1.8600e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		200.6203	200.6203	6.6800e-003	0.0289	209.3911
Worker	0.1375	0.0986	1.3287	3.7500e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		378.9414	378.9414	0.0102	9.8600e-003	382.1356
Total	**0.2095**	**4.5877**	**2.5413**	**0.0232**	**1.0363**	**0.0294**	**1.0657**	**0.2810**	**0.0280**	**0.3090**		**2,509.5743**	**2,509.5743**	**0.1229**	**0.3452**	**2,615.5243**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2100e-003	0.0000	2.2100e-003	3.3000e-004	0.0000	3.3000e-004			0.0000			0.0000
Off-Road	0.3592	3.4618	5.5337	8.0300e-003		0.1706	0.1706		0.1569	0.1569	0.0000	777.8117	777.8117	0.2516		784.1007
Total	**0.3592**	**3.4618**	**5.5337**	**8.0300e-003**	**2.2100e-003**	**0.1706**	**0.1728**	**3.3000e-004**	**0.1569**	**0.1573**	**0.0000**	**777.8117**	**777.8117**	**0.2516**		**784.1007**

3.4 Vault Shaft Excavations (A) - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0609	4.0873	1.0592	0.0176	0.5251	0.0248	0.5499	0.1440	0.0237	0.1677		1,930.0125	1,930.0125	0.1060	0.3065	2,023.9976
Vendor	0.0111	0.4019	0.1534	1.8600e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		200.6203	200.6203	6.6800e-003	0.0289	209.3911
Worker	0.1375	0.0986	1.3287	3.7500e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		378.9414	378.9414	0.0102	9.8600e-003	382.1356
Total	**0.2095**	**4.5877**	**2.5413**	**0.0232**	**1.0363**	**0.0294**	**1.0657**	**0.2810**	**0.0280**	**0.3090**		**2,509.5743**	**2,509.5743**	**0.1229**	**0.3452**	**2,615.5243**

3.5 Tower 584 Foundation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8610	8.1105	9.7705	0.0201		0.3718	0.3718		0.3502	0.3502		1,932.7026	1,932.7026	0.4953		1,945.0858
Total	**0.8610**	**8.1105**	**9.7705**	**0.0201**		**0.3718**	**0.3718**		**0.3502**	**0.3502**		**1,932.7026**	**1,932.7026**	**0.4953**		**1,945.0858**

3.5 Tower 584 Foundation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4019	0.1534	1.8600e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		200.6203	200.6203	6.6800e-003	0.0289	209.3911
Worker	0.0688	0.0493	0.6644	1.8700e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		189.4707	189.4707	5.1100e-003	4.9300e-003	191.0678
Total	**0.0799**	**0.4512**	**0.8177**	**3.7300e-003**	**0.2876**	**3.2800e-003**	**0.2909**	**0.0777**	**3.1000e-003**	**0.0808**		**390.0910**	**390.0910**	**0.0118**	**0.0338**	**400.4589**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8610	8.1105	9.7705	0.0201		0.3718	0.3718		0.3502	0.3502	0.0000	1,932.7026	1,932.7026	0.4953		1,945.0858
Total	**0.8610**	**8.1105**	**9.7705**	**0.0201**		**0.3718**	**0.3718**		**0.3502**	**0.3502**	**0.0000**	**1,932.7026**	**1,932.7026**	**0.4953**		**1,945.0858**

3.5 Tower 584 Foundation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4019	0.1534	1.8600e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		200.6203	200.6203	6.6800e-003	0.0289	209.3911
Worker	0.0688	0.0493	0.6644	1.8700e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		189.4707	189.4707	5.1100e-003	4.9300e-003	191.0678
Total	**0.0799**	**0.4512**	**0.8177**	**3.7300e-003**	**0.2876**	**3.2800e-003**	**0.2909**	**0.0777**	**3.1000e-003**	**0.0808**		**390.0910**	**390.0910**	**0.0118**	**0.0338**	**400.4589**

3.6 Vault Installations & Completions (A) - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7809	7.1888	8.1786	0.0151		0.3388	0.3388		0.3279	0.3279		1,440.1439	1,440.1439	0.2063		1,445.3007
Total	**0.7809**	**7.1888**	**8.1786**	**0.0151**		**0.3388**	**0.3388**		**0.3279**	**0.3279**		**1,440.1439**	**1,440.1439**	**0.2063**		**1,445.3007**

3.6 Vault Installations & Completions (A) - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4019	0.1534	1.8600e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		200.6203	200.6203	6.6800e-003	0.0289	209.3911
Worker	0.1375	0.0986	1.3287	3.7500e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		378.9414	378.9414	0.0102	9.8600e-003	382.1356
Total	**0.1487**	**0.5005**	**1.4821**	**5.6100e-003**	**0.5112**	**4.6300e-003**	**0.5158**	**0.1370**	**4.3400e-003**	**0.1414**		**579.5617**	**579.5617**	**0.0169**	**0.0387**	**591.5267**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7809	7.1888	8.1786	0.0151		0.3388	0.3388		0.3279	0.3279	0.0000	1,440.1438	1,440.1438	0.2063		1,445.3007
Total	**0.7809**	**7.1888**	**8.1786**	**0.0151**		**0.3388**	**0.3388**		**0.3279**	**0.3279**	**0.0000**	**1,440.1438**	**1,440.1438**	**0.2063**		**1,445.3007**

3.6 Vault Installations & Completions (A) - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4019	0.1534	1.8600e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		200.6203	200.6203	6.6800e-003	0.0289	209.3911
Worker	0.1375	0.0986	1.3287	3.7500e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		378.9414	378.9414	0.0102	9.8600e-003	382.1356
Total	**0.1487**	**0.5005**	**1.4821**	**5.6100e-003**	**0.5112**	**4.6300e-003**	**0.5158**	**0.1370**	**4.3400e-003**	**0.1414**		**579.5617**	**579.5617**	**0.0169**	**0.0387**	**591.5267**

3.7 Tower 584 Structure - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4214	4.2178	4.7774	8.5800e-003		0.1934	0.1934		0.1779	0.1779		831.0389	831.0389	0.2688		837.7583
Total	**0.4214**	**4.2178**	**4.7774**	**8.5800e-003**		**0.1934**	**0.1934**		**0.1779**	**0.1779**		**831.0389**	**831.0389**	**0.2688**		**837.7583**

3.7 Tower 584 Structure - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4019	0.1534	1.8600e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		200.6203	200.6203	6.6800e-003	0.0289	209.3911
Worker	0.0688	0.0493	0.6644	1.8700e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		189.4707	189.4707	5.1100e-003	4.9300e-003	191.0678
Total	**0.0799**	**0.4512**	**0.8177**	**3.7300e-003**	**0.2876**	**3.2800e-003**	**0.2909**	**0.0777**	**3.1000e-003**	**0.0808**		**390.0910**	**390.0910**	**0.0118**	**0.0338**	**400.4589**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4214	4.2178	4.7774	8.5800e-003		0.1934	0.1934		0.1779	0.1779	0.0000	831.0389	831.0389	0.2688		837.7583
Total	**0.4214**	**4.2178**	**4.7774**	**8.5800e-003**		**0.1934**	**0.1934**		**0.1779**	**0.1779**	**0.0000**	**831.0389**	**831.0389**	**0.2688**		**837.7583**

3.7 Tower 584 Structure - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0111	0.4019	0.1534	1.8600e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		200.6203	200.6203	6.6800e-003	0.0289	209.3911
Worker	0.0688	0.0493	0.6644	1.8700e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		189.4707	189.4707	5.1100e-003	4.9300e-003	191.0678
Total	**0.0799**	**0.4512**	**0.8177**	**3.7300e-003**	**0.2876**	**3.2800e-003**	**0.2909**	**0.0777**	**3.1000e-003**	**0.0808**		**390.0910**	**390.0910**	**0.0118**	**0.0338**	**400.4589**

3.8 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6210	5.4862	6.4650	0.0108		0.2627	0.2627		0.2457	0.2457		1,011.4096	1,011.4096	0.2910		1,018.6852
Paving	6.0700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6271**	**5.4862**	**6.4650**	**0.0108**		**0.2627**	**0.2627**		**0.2457**	**0.2457**		**1,011.4096**	**1,011.4096**	**0.2910**		**1,018.6852**

3.8 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.4027	0.1502	1.8300e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8700e-003	0.0203		197.6143	197.6143	6.7100e-003	0.0285	206.2652
Worker	0.0643	0.0440	0.6179	1.8200e-003	0.2236	1.2900e-003	0.2248	0.0593	1.1900e-003	0.0605		184.1179	184.1179	4.6300e-003	4.5800e-003	185.5996
Total	**0.0750**	**0.4467**	**0.7681**	**3.6500e-003**	**0.2876**	**3.2400e-003**	**0.2909**	**0.0777**	**3.0600e-003**	**0.0808**		**381.7323**	**381.7323**	**0.0113**	**0.0331**	**391.8648**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6210	5.4862	6.4650	0.0108		0.2627	0.2627		0.2457	0.2457	0.0000	1,011.4096	1,011.4096	0.2910		1,018.6852
Paving	6.0700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6271**	**5.4862**	**6.4650**	**0.0108**		**0.2627**	**0.2627**		**0.2457**	**0.2457**	**0.0000**	**1,011.4096**	**1,011.4096**	**0.2910**		**1,018.6852**

3.8 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.4027	0.1502	1.8300e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8700e-003	0.0203		197.6143	197.6143	6.7100e-003	0.0285	206.2652
Worker	0.0643	0.0440	0.6179	1.8200e-003	0.2236	1.2900e-003	0.2248	0.0593	1.1900e-003	0.0605		184.1179	184.1179	4.6300e-003	4.5800e-003	185.5996
Total	**0.0750**	**0.4467**	**0.7681**	**3.6500e-003**	**0.2876**	**3.2400e-003**	**0.2909**	**0.0777**	**3.0600e-003**	**0.0808**		**381.7323**	**381.7323**	**0.0113**	**0.0331**	**391.8648**

3.8 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5959	5.2015	6.4601	0.0108		0.2417	0.2417		0.2263	0.2263		1,011.1152	1,011.1152	0.2909		1,018.3884
Paving	6.0700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6020**	**5.2015**	**6.4601**	**0.0108**		**0.2417**	**0.2417**		**0.2263**	**0.2263**		**1,011.1152**	**1,011.1152**	**0.2909**		**1,018.3884**

3.8 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.4008	0.1474	1.8000e-003	0.0641	1.9600e-003	0.0660	0.0184	1.8700e-003	0.0203		194.0625	194.0625	6.7500e-003	0.0280	202.5675
Worker	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	**0.0707**	**0.4403**	**0.7225**	**3.5600e-003**	**0.2876**	**3.1900e-003**	**0.2908**	**0.0777**	**3.0000e-003**	**0.0807**		**371.9302**	**371.9302**	**0.0109**	**0.0323**	**381.8152**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5959	5.2015	6.4601	0.0108		0.2417	0.2417		0.2263	0.2263	0.0000	1,011.1152	1,011.1152	0.2909		1,018.3883
Paving	6.0700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6020**	**5.2015**	**6.4601**	**0.0108**		**0.2417**	**0.2417**		**0.2263**	**0.2263**	**0.0000**	**1,011.1152**	**1,011.1152**	**0.2909**		**1,018.3883**

3.8 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.4008	0.1474	1.8000e-003	0.0641	1.9600e-003	0.0660	0.0184	1.8700e-003	0.0203		194.0625	194.0625	6.7500e-003	0.0280	202.5675
Worker	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	**0.0707**	**0.4403**	**0.7225**	**3.5600e-003**	**0.2876**	**3.1900e-003**	**0.2908**	**0.0777**	**3.0000e-003**	**0.0807**		**371.9302**	**371.9302**	**0.0109**	**0.0323**	**381.8152**

3.9 Nichols Canyon Road Pipe Replacement - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7294	6.4374	11.1394	0.0191		0.3109	0.3109		0.2860	0.2860		1,850.7450	1,850.7450	0.5986		1,865.7092
Total	**0.7294**	**6.4374**	**11.1394**	**0.0191**		**0.3109**	**0.3109**		**0.2860**	**0.2860**		**1,850.7450**	**1,850.7450**	**0.5986**		**1,865.7092**

3.9 Nichols Canyon Road Pipe Replacement - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.4027	0.1502	1.8300e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8700e-003	0.0203		197.6143	197.6143	6.7100e-003	0.0285	206.2652
Worker	0.0643	0.0440	0.6179	1.8200e-003	0.2236	1.2900e-003	0.2248	0.0593	1.1900e-003	0.0605		184.1179	184.1179	4.6300e-003	4.5800e-003	185.5996
Total	**0.0750**	**0.4467**	**0.7681**	**3.6500e-003**	**0.2876**	**3.2400e-003**	**0.2909**	**0.0777**	**3.0600e-003**	**0.0808**		**381.7323**	**381.7323**	**0.0113**	**0.0331**	**391.8648**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7294	6.4374	11.1394	0.0191		0.3109	0.3109		0.2860	0.2860	0.0000	1,850.7450	1,850.7450	0.5986		1,865.7092
Total	**0.7294**	**6.4374**	**11.1394**	**0.0191**		**0.3109**	**0.3109**		**0.2860**	**0.2860**	**0.0000**	**1,850.7450**	**1,850.7450**	**0.5986**		**1,865.7092**

3.9 Nichols Canyon Road Pipe Replacement - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.4027	0.1502	1.8300e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8700e-003	0.0203		197.6143	197.6143	6.7100e-003	0.0285	206.2652
Worker	0.0643	0.0440	0.6179	1.8200e-003	0.2236	1.2900e-003	0.2248	0.0593	1.1900e-003	0.0605		184.1179	184.1179	4.6300e-003	4.5800e-003	185.5996
Total	**0.0750**	**0.4467**	**0.7681**	**3.6500e-003**	**0.2876**	**3.2400e-003**	**0.2909**	**0.0777**	**3.0600e-003**	**0.0808**		**381.7323**	**381.7323**	**0.0113**	**0.0331**	**391.8648**

3.9 Nichols Canyon Road Pipe Replacement - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6754	5.7192	11.1137	0.0191		0.2665	0.2665		0.2452	0.2452		1,851.0500	1,851.0500	0.5987		1,866.0167
Total	**0.6754**	**5.7192**	**11.1137**	**0.0191**		**0.2665**	**0.2665**		**0.2452**	**0.2452**		**1,851.0500**	**1,851.0500**	**0.5987**		**1,866.0167**

3.9 Nichols Canyon Road Pipe Replacement - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.4008	0.1474	1.8000e-003	0.0641	1.9600e-003	0.0660	0.0184	1.8700e-003	0.0203		194.0625	194.0625	6.7500e-003	0.0280	202.5675
Worker	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	**0.0707**	**0.4403**	**0.7225**	**3.5600e-003**	**0.2876**	**3.1900e-003**	**0.2908**	**0.0777**	**3.0000e-003**	**0.0807**		**371.9302**	**371.9302**	**0.0109**	**0.0323**	**381.8152**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6754	5.7192	11.1137	0.0191		0.2665	0.2665		0.2452	0.2452	0.0000	1,851.0500	1,851.0500	0.5987		1,866.0167
Total	**0.6754**	**5.7192**	**11.1137**	**0.0191**		**0.2665**	**0.2665**		**0.2452**	**0.2452**	**0.0000**	**1,851.0500**	**1,851.0500**	**0.5987**		**1,866.0167**

3.9 Nichols Canyon Road Pipe Replacement - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.4008	0.1474	1.8000e-003	0.0641	1.9600e-003	0.0660	0.0184	1.8700e-003	0.0203		194.0625	194.0625	6.7500e-003	0.0280	202.5675
Worker	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	**0.0707**	**0.4403**	**0.7225**	**3.5600e-003**	**0.2876**	**3.1900e-003**	**0.2908**	**0.0777**	**3.0000e-003**	**0.0807**		**371.9302**	**371.9302**	**0.0109**	**0.0323**	**381.8152**

3.10 Terminal Tower & Receiving Station Upgrades - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0939	10.0259	14.5808	0.0265		0.4517	0.4517		0.4237	0.4237		2,555.3066	2,555.3066	0.6741		2,572.1592
Total	**1.0939**	**10.0259**	**14.5808**	**0.0265**		**0.4517**	**0.4517**		**0.4237**	**0.4237**		**2,555.3066**	**2,555.3066**	**0.6741**		**2,572.1592**

3.10 Terminal Tower & Receiving Station Upgrades - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.4027	0.1502	1.8300e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8700e-003	0.0203		197.6143	197.6143	6.7100e-003	0.0285	206.2652
Worker	0.0964	0.0660	0.9269	2.7300e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		276.1769	276.1769	6.9500e-003	6.8800e-003	278.3994
Total	**0.1072**	**0.4687**	**1.0770**	**4.5600e-003**	**0.3994**	**3.8800e-003**	**0.4033**	**0.1074**	**3.6500e-003**	**0.1110**		**473.7912**	**473.7912**	**0.0137**	**0.0354**	**484.6646**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0939	10.0259	14.5808	0.0265		0.4517	0.4517		0.4237	0.4237	0.0000	2,555.3066	2,555.3066	0.6741		2,572.1592
Total	**1.0939**	**10.0259**	**14.5808**	**0.0265**		**0.4517**	**0.4517**		**0.4237**	**0.4237**	**0.0000**	**2,555.3066**	**2,555.3066**	**0.6741**		**2,572.1592**

3.10 Terminal Tower & Receiving Station Upgrades - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0108	0.4027	0.1502	1.8300e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8700e-003	0.0203		197.6143	197.6143	6.7100e-003	0.0285	206.2652
Worker	0.0964	0.0660	0.9269	2.7300e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		276.1769	276.1769	6.9500e-003	6.8800e-003	278.3994
Total	**0.1072**	**0.4687**	**1.0770**	**4.5600e-003**	**0.3994**	**3.8800e-003**	**0.4033**	**0.1074**	**3.6500e-003**	**0.1110**		**473.7912**	**473.7912**	**0.0137**	**0.0354**	**484.6646**

3.10 Terminal Tower & Receiving Station Upgrades - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0194	9.1043	14.5381	0.0265		0.3906	0.3906		0.3664	0.3664		2,555.9702	2,555.9702	0.6724		2,572.7802
Total	**1.0194**	**9.1043**	**14.5381**	**0.0265**		**0.3906**	**0.3906**		**0.3664**	**0.3664**		**2,555.9702**	**2,555.9702**	**0.6724**		**2,572.7802**

3.10 Terminal Tower & Receiving Station Upgrades - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.4008	0.1474	1.8000e-003	0.0641	1.9600e-003	0.0660	0.0184	1.8700e-003	0.0203		194.0625	194.0625	6.7500e-003	0.0280	202.5675
Worker	0.0904	0.0592	0.8627	2.6400e-003	0.3353	1.8400e-003	0.3372	0.0889	1.6900e-003	0.0906		266.8016	266.8016	6.2700e-003	6.4200e-003	268.8714
Total	**0.1009**	**0.4600**	**1.0101**	**4.4400e-003**	**0.3994**	**3.8000e-003**	**0.4032**	**0.1074**	**3.5600e-003**	**0.1109**		**460.8641**	**460.8641**	**0.0130**	**0.0344**	**471.4390**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0194	9.1043	14.5381	0.0265		0.3906	0.3906		0.3664	0.3664	0.0000	2,555.9702	2,555.9702	0.6724		2,572.7802
Total	**1.0194**	**9.1043**	**14.5381**	**0.0265**		**0.3906**	**0.3906**		**0.3664**	**0.3664**	**0.0000**	**2,555.9702**	**2,555.9702**	**0.6724**		**2,572.7802**

3.10 Terminal Tower & Receiving Station Upgrades - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.4008	0.1474	1.8000e-003	0.0641	1.9600e-003	0.0660	0.0184	1.8700e-003	0.0203		194.0625	194.0625	6.7500e-003	0.0280	202.5675
Worker	0.0904	0.0592	0.8627	2.6400e-003	0.3353	1.8400e-003	0.3372	0.0889	1.6900e-003	0.0906		266.8016	266.8016	6.2700e-003	6.4200e-003	268.8714
Total	**0.1009**	**0.4600**	**1.0101**	**4.4400e-003**	**0.3994**	**3.8000e-003**	**0.4032**	**0.1074**	**3.5600e-003**	**0.1109**		**460.8641**	**460.8641**	**0.0130**	**0.0344**	**471.4390**

3.11 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.1479					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030		562.8961	562.8961	0.0307		563.6637
Total	**0.4897**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**		**562.8961**	**562.8961**	**0.0307**		**563.6637**

3.11 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	**0.0603**	**0.0395**	**0.5751**	**1.7600e-003**	**0.2236**	**1.2300e-003**	**0.2248**	**0.0593**	**1.1300e-003**	**0.0604**		**177.8677**	**177.8677**	**4.1800e-003**	**4.2800e-003**	**179.2476**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.1479					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030	0.0000	562.8961	562.8961	0.0307		563.6637
Total	**0.4897**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**	**0.0000**	**562.8961**	**562.8961**	**0.0307**		**563.6637**

3.11 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	**0.0603**	**0.0395**	**0.5751**	**1.7600e-003**	**0.2236**	**1.2300e-003**	**0.2248**	**0.0593**	**1.1300e-003**	**0.0604**		**177.8677**	**177.8677**	**4.1800e-003**	**4.2800e-003**	**179.2476**

3.12 Vault Shaft Excavations (B) - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7700e-003	0.0000	3.7700e-003	5.7000e-004	0.0000	5.7000e-004			0.0000			0.0000
Off-Road	0.3148	2.9472	5.5316	8.0500e-003		0.1246	0.1246		0.1147	0.1147		778.7667	778.7667	0.2519		785.0634
Total	**0.3148**	**2.9472**	**5.5316**	**8.0500e-003**	**3.7700e-003**	**0.1246**	**0.1284**	**5.7000e-004**	**0.1147**	**0.1152**		**778.7667**	**778.7667**	**0.2519**		**785.0634**

3.12 Vault Shaft Excavations (B) - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0399	2.7149	0.7278	0.0113	0.3501	0.0167	0.3668	0.0960	0.0159	0.1119		1,245.895 1	1,245.895 1	0.0722	0.1980	1,306.705 7
Vendor	0.0104	0.4008	0.1474	1.8000e-003	0.0641	1.9600e-003	0.0660	0.0184	1.8700e-003	0.0203		194.0625	194.0625	6.7500e-003	0.0280	202.5675
Worker	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	**0.1106**	**3.1552**	**1.4504**	**0.0149**	**0.6377**	**0.0199**	**0.6576**	**0.1737**	**0.0189**	**0.1927**		**1,617.825 3**	**1,617.825 3**	**0.0831**	**0.2303**	**1,688.520 9**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4700e-003	0.0000	1.4700e-003	2.2000e-004	0.0000	2.2000e-004			0.0000			0.0000
Off-Road	0.3148	2.9472	5.5316	8.0500e-003		0.1246	0.1246		0.1147	0.1147	0.0000	778.7667	778.7667	0.2519		785.0634
Total	**0.3148**	**2.9472**	**5.5316**	**8.0500e-003**	**1.4700e-003**	**0.1246**	**0.1261**	**2.2000e-004**	**0.1147**	**0.1149**	**0.0000**	**778.7667**	**778.7667**	**0.2519**		**785.0634**

3.12 Vault Shaft Excavations (B) - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0399	2.7149	0.7278	0.0113	0.3501	0.0167	0.3668	0.0960	0.0159	0.1119		1,245.8951	1,245.8951	0.0722	0.1980	1,306.7057
Vendor	0.0104	0.4008	0.1474	1.8000e-003	0.0641	1.9600e-003	0.0660	0.0184	1.8700e-003	0.0203		194.0625	194.0625	6.7500e-003	0.0280	202.5675
Worker	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	**0.1106**	**3.1552**	**1.4504**	**0.0149**	**0.6377**	**0.0199**	**0.6576**	**0.1737**	**0.0189**	**0.1927**		**1,617.8253**	**1,617.8253**	**0.0831**	**0.2303**	**1,688.5209**

3.13 Vault Installations & Completions (B) - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6847	6.2245	8.1136	0.0151		0.2592	0.2592		0.2506	0.2506		1,440.5069	1,440.5069	0.2015		1,445.5433
Total	**0.6847**	**6.2245**	**8.1136**	**0.0151**		**0.2592**	**0.2592**		**0.2506**	**0.2506**		**1,440.5069**	**1,440.5069**	**0.2015**		**1,445.5433**

3.13 Vault Installations & Completions (B) - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0208	0.8016	0.2949	3.6000e-003	0.1281	3.9200e-003	0.1320	0.0369	3.7500e-003	0.0406		388.1250	388.1250	0.0135	0.0560	405.1351
Worker	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	**0.0811**	**0.8411**	**0.8700**	**5.3600e-003**	**0.3517**	**5.1500e-003**	**0.3568**	**0.0962**	**4.8800e-003**	**0.1011**		**565.9927**	**565.9927**	**0.0177**	**0.0602**	**584.3827**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6847	6.2245	8.1136	0.0151		0.2592	0.2592		0.2506	0.2506	0.0000	1,440.5069	1,440.5069	0.2015		1,445.5433
Total	**0.6847**	**6.2245**	**8.1136**	**0.0151**		**0.2592**	**0.2592**		**0.2506**	**0.2506**	**0.0000**	**1,440.5069**	**1,440.5069**	**0.2015**		**1,445.5433**

3.13 Vault Installations & Completions (B) - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0208	0.8016	0.2949	3.6000e-003	0.1281	3.9200e-003	0.1320	0.0369	3.7500e-003	0.0406		388.1250	388.1250	0.0135	0.0560	405.1351
Worker	0.0603	0.0395	0.5751	1.7600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		177.8677	177.8677	4.1800e-003	4.2800e-003	179.2476
Total	**0.0811**	**0.8411**	**0.8700**	**5.3600e-003**	**0.3517**	**5.1500e-003**	**0.3568**	**0.0962**	**4.8800e-003**	**0.1011**		**565.9927**	**565.9927**	**0.0177**	**0.0602**	**584.3827**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0140	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003
Unmitigated	0.0140	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0113					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003
Total	**0.0140**	**3.0000e-005**	**3.2500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.9900e-003**	**6.9900e-003**	**2.0000e-005**		**7.4400e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0113					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003
Total	**0.0140**	**3.0000e-005**	**3.2500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.9900e-003**	**6.9900e-003**	**2.0000e-005**		**7.4400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

LADWP Toluca-Hollywood Transmission Line Replacement

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	31.92	1000sqft	0.73	31,920.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2025
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	691.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Emissions model is for construction activities only. Operational activities are anticipated to be similar to existing conditions.

Land Use - In-road corridor is approximately 1.75 miles long with approximately 3 foot wide trenching disturbance = 27,720 sq. ft.
Vault areas (8) approximately 15 feet wide by 35 feet long = 4,200 sq. ft. disturbance area.

Construction Phase - The total days for each phase would occur sporadically throughout the two-year construction period.

Off-road Equipment - Repainting disturbed parking spaces, bike lanes, crosswalks, etc.

Off-road Equipment - Roadway asphalt removal off-road equipment inventory.

Off-road Equipment - Pulley truck & loader.

Off-road Equipment - Project specific inventory.

Off-road Equipment - Roadway restoration equipment inventory.

Off-road Equipment - Transmission line trench excavation off-road equipment inventory.

Off-road Equipment - Terminal Tower & Receiving Station inventory.

Off-road Equipment - Tower 584 Foundation off-road equipment inventory.
Foundation excavation, placing rebar, forms, etc.

Off-road Equipment - Concrete placement, form removal.

Off-road Equipment - Vault installation & completion off-road equipment inventory.

Off-road Equipment - Vault installation and completion off-road equipment inventory.

Off-road Equipment - Vault shaft excavation off-road equipment inventory.

Off-road Equipment - Vault shaft excavation inventory.

Trips and VMT - Project Construction Trips, maximum daily activity.
Max workers per day = 120.
Max haul trucks per day = 40.
Max concrete/material delivery trucks = 30.

Demolition - Approximately 850 CY of Demo A/C Debris @ 1.2 tons/CY = 1,020 tons of debris.

Grading - Total linear cubic yards excavated along transmission line trench = ~8,150 CY.
Approx. excavation per vault: 12'W x 35'L x 15'D = 6,300 cu. ft. = ~1,867 CY. Rounded up to 1,875. Assume 875 CY per vault will be refilled.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	NumDays	100.00	24.00
tblConstructionPhase	NumDays	100.00	54.00
tblConstructionPhase	NumDays	100.00	48.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	100.00	150.00
tblConstructionPhase	NumDays	10.00	315.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	2.00	60.00
tblConstructionPhase	NumDays	5.00	315.00
tblConstructionPhase	NumDays	1.00	630.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	1,000.00
tblGrading	MaterialExported	0.00	8,150.00
tblGrading	MaterialExported	0.00	3,000.00
tblOffRoadEquipment	HorsePower	9.00	20.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00

tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	HaulingTripNumber	101.00	6,300.00
tblTripsAndVMT	HaulingTripNumber	0.00	600.00
tblTripsAndVMT	HaulingTripNumber	0.00	18,900.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,800.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	5.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	5.00	10.00
tblTripsAndVMT	VendorTripNumber	5.00	10.00
tblTripsAndVMT	VendorTripNumber	5.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	3.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	80.00
tblTripsAndVMT	WorkerTripNumber	8.00	40.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.8065	37.0546	45.8770	0.1297	3.7449	1.4171	5.0185	1.0028	1.3511	2.2091	0.0000	13,291.0924	13,291.0924	1.6796	0.9731	13,623.0813
2024	3.9086	36.3086	51.3000	0.1165	2.5235	1.4449	3.9684	0.6811	1.3569	2.0380	0.0000	11,601.9598	11,601.9598	2.0727	0.5858	11,795.6543
2025	4.2041	36.0784	55.0939	0.1233	2.7471	1.3604	4.1075	0.7404	1.2842	2.0246	0.0000	12,252.8548	12,252.8548	2.1010	0.4703	12,445.5192
Maximum	**4.2041**	**37.0546**	**55.0939**	**0.1297**	**3.7449**	**1.4449**	**5.0185**	**1.0028**	**1.3569**	**2.2091**	**0.0000**	**13,291.0924**	**13,291.0924**	**2.1010**	**0.9731**	**13,623.0813**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.8065	37.0546	45.8770	0.1297	3.6983	1.4171	4.9719	0.9958	1.3511	2.2026	0.0000	13,291.0924	13,291.0924	1.6796	0.9731	13,623.0813
2024	3.9086	36.3086	51.3000	0.1165	2.5226	1.4449	3.9675	0.6809	1.3569	2.0378	0.0000	11,601.9598	11,601.9598	2.0727	0.5858	11,795.6543
2025	4.2041	36.0784	55.0939	0.1233	2.7462	1.3604	4.1066	0.7402	1.2842	2.0245	0.0000	12,252.8548	12,252.8548	2.1010	0.4703	12,445.5192
Maximum	**4.2041**	**37.0546**	**55.0939**	**0.1297**	**3.6983**	**1.4449**	**4.9719**	**0.9958**	**1.3569**	**2.2026**	**0.0000**	**13,291.0924**	**13,291.0924**	**2.1010**	**0.9731**	**13,623.0813**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.54	0.00	0.37	0.30	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0140	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0140**	**3.0000e-005**	**3.2500e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.9900e-003**	**6.9900e-003**	**2.0000e-005**	**0.0000**	**7.4400e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0140	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0140**	**3.0000e-005**	**3.2500e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.9900e-003**	**6.9900e-003**	**2.0000e-005**	**0.0000**	**7.4400e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/12/2023	6/12/2024	6	315	Roadway Stripping
2	Site Preparation	Site Preparation	6/12/2023	6/14/2025	6	630	Ductbank Trench Excavation
3	Vault Shaft Excavations (A)	Grading	6/12/2023	8/19/2023	6	60	Vault Excavations (A)
4	Tower 584 Foundation	Building Construction	7/3/2023	9/2/2023	6	54	Foundation work
5	Vault Installations & Completions (A)	Building Construction	8/21/2023	10/14/2023	6	48	Vault Installations (A) and cable pulling
6	Tower 584 Structure	Building Construction	9/4/2023	9/9/2023	6	6	Complete Tower 584
7	Paving	Paving	6/13/2024	6/14/2025	6	315	Roadway Restoration
8	Nichols Canyon Road Pipe Replacement	Trenching	11/11/2024	5/3/2025	6	150	Install new pipe/cable in existing alignment.
9	Terminal Tower & Receiving Station Upgrades	Building Construction	11/11/2024	5/3/2025	6	150	Modifications to Nichols Canyon Terminal Tower & Hollywood Receiving Station.
10	Architectural Coating	Architectural Coating	4/7/2025	6/14/2025	6	60	Restriping Roadway
11	Vault Shaft Excavations (B)	Grading	6/16/2025	7/19/2025	6	30	Vault Excavations (B)
12	Vault Installations & Completions (B)	Building Construction	7/21/2025	8/16/2025	6	24	Vault Installations (B) and cable pulling

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.73

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,915 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	2.00	81	0.73
Demolition	Excavators	1	4.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Pumps	2	6.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Vault Shaft Excavations (A)	Excavators	1	4.00	158	0.38
Vault Shaft Excavations (A)	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Tower 584 Foundation	Bore/Drill Rigs	1	4.00	221	0.50
Tower 584 Foundation	Cranes	1	4.00	231	0.29
Tower 584 Foundation	Excavators	1	6.00	158	0.38
Tower 584 Foundation	Pumps	1	6.00	84	0.74
Tower 584 Foundation	Rollers	1	4.00	80	0.38
Tower 584 Foundation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Vault Installations & Completions (A)	Cranes	1	4.00	231	0.29
Vault Installations & Completions (A)	Pumps	2	6.00	84	0.74
Vault Installations & Completions (A)	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Tower 584 Structure	Cranes	1	4.00	231	0.29
Tower 584 Structure	Excavators	1	4.00	158	0.38
Tower 584 Structure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	20	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	2	7.00	80	0.38
Nichols Canyon Road Pipe Replacement	Excavators	2	6.00	158	0.38
Nichols Canyon Road Pipe Replacement	Other Material Handling Equipment	1	6.00	168	0.40
Nichols Canyon Road Pipe Replacement	Rollers	1	4.00	80	0.38
Nichols Canyon Road Pipe Replacement	Surfacing Equipment	1	4.00	263	0.30

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Nichols Canyon Road Pipe Replacement	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Terminal Tower & Receiving Station Upgrades	Cranes	1	4.00	231	0.29
Terminal Tower & Receiving Station Upgrades	Excavators	2	7.00	158	0.38
Terminal Tower & Receiving Station Upgrades	Pumps	1	7.00	84	0.74
Terminal Tower & Receiving Station Upgrades	Surfacing Equipment	1	4.00	263	0.30
Terminal Tower & Receiving Station Upgrades	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Architectural Coating	Air Compressors	2	6.00	78	0.48
Vault Shaft Excavations (B)	Excavators	1	4.00	158	0.38
Vault Shaft Excavations (B)	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Vault Installations & Completions (B)	Cranes	1	4.00	231	0.29
Vault Installations & Completions (B)	Pumps	2	6.00	84	0.74
Vault Installations & Completions (B)	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	40.00	0.00	6,300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	6	80.00	20.00	18,900.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Shaft Excavations (A)	3	40.00	10.00	1,800.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tower 584 Foundation	6	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Installations & Completions (A)	4	40.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tower 584 Structure	3	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Nichols Canyon Road Pipe Replacement	6	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Terminal Tower & Receiving Station Upg	7	30.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Shaft Excavations (B)	3	20.00	10.00	600.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Vault Installations & Completions (B)	4	20.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0693	0.0000	0.0693	0.0105	0.0000	0.0105			0.0000			0.0000
Off-Road	0.4882	4.3700	6.8045	0.0104		0.2158	0.2158		0.2036	0.2036		998.7504	998.7504	0.2418		1,004.7948
Total	**0.4882**	**4.3700**	**6.8045**	**0.0104**	**0.0693**	**0.2158**	**0.2851**	**0.0105**	**0.2036**	**0.2141**		**998.7504**	**998.7504**	**0.2418**		**1,004.7948**

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0434	2.6098	0.6966	0.0117	0.3501	0.0165	0.3666	0.0960	0.0158	0.1117		1,285.3202	1,285.3202	0.0708	0.2041	1,347.9150
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1280	0.0892	1.4456	3.9600e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		400.0302	400.0302	0.0101	9.2300e-003	403.0334
Total	**0.1714**	**2.6990**	**2.1422**	**0.0157**	**0.7972**	**0.0192**	**0.8164**	**0.2146**	**0.0182**	**0.2328**		**1,685.3504**	**1,685.3504**	**0.0809**	**0.2133**	**1,750.9484**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0270	0.0000	0.0270	4.0900e-003	0.0000	4.0900e-003			0.0000			0.0000
Off-Road	0.4882	4.3700	6.8045	0.0104		0.2158	0.2158		0.2036	0.2036	0.0000	998.7504	998.7504	0.2418		1,004.7948
Total	**0.4882**	**4.3700**	**6.8045**	**0.0104**	**0.0270**	**0.2158**	**0.2428**	**4.0900e-003**	**0.2036**	**0.2077**	**0.0000**	**998.7504**	**998.7504**	**0.2418**		**1,004.7948**

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Hauling	0.0434	2.6098	0.6966	0.0117	0.3501	0.0165	0.3666	0.0960	0.0158	0.1117		1,285.3202	1,285.3202	0.0708	0.2041	1,347.9150
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1280	0.0892	1.4456	3.9600e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		400.0302	400.0302	0.0101	9.2300e-003	403.0334
Total	**0.1714**	**2.6990**	**2.1422**	**0.0157**	**0.7972**	**0.0192**	**0.8164**	**0.2146**	**0.0182**	**0.2328**		**1,685.3504**	**1,685.3504**	**0.0809**	**0.2133**	**1,750.9484**

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day								lb/day		
Fugitive Dust					0.0693	0.0000	0.0693	0.0105	0.0000	0.0105			0.0000			0.0000
Off-Road	0.4625	4.0809	6.8110	0.0104		0.1895	0.1895		0.1788	0.1788		999.1151	999.1151	0.2414		1,005.1494
Total	**0.4625**	**4.0809**	**6.8110**	**0.0104**	**0.0693**	**0.1895**	**0.2588**	**0.0105**	**0.1788**	**0.1893**		**999.1151**	**999.1151**	**0.2414**		**1,005.1494**

3.2 Demolition - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0431	2.6165	0.7089	0.0115	0.3501	0.0166	0.3667	0.0960	0.0159	0.1119		1,267.118 9	1,267.118 9	0.0715	0.2013	1,328.890 9
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1193	0.0797	1.3433	3.8500e-003	0.4471	2.5700e-003	0.4497	0.1186	2.3700e-003	0.1209		388.6920	388.6920	9.1300e-003	8.5900e-003	391.4786
Total	**0.1624**	**2.6962**	**2.0522**	**0.0154**	**0.7972**	**0.0192**	**0.8164**	**0.2146**	**0.0183**	**0.2328**		**1,655.810 9**	**1,655.810 9**	**0.0806**	**0.2099**	**1,720.369 5**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0270	0.0000	0.0270	4.0900e-003	0.0000	4.0900e-003			0.0000			0.0000
Off-Road	0.4625	4.0809	6.8110	0.0104		0.1895	0.1895		0.1788	0.1788	0.0000	999.1151	999.1151	0.2414		1,005.149 4
Total	**0.4625**	**4.0809**	**6.8110**	**0.0104**	**0.0270**	**0.1895**	**0.2165**	**4.0900e-003**	**0.1788**	**0.1829**	**0.0000**	**999.1151**	**999.1151**	**0.2414**		**1,005.149 4**

3.2 Demolition - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0431	2.6165	0.7089	0.0115	0.3501	0.0166	0.3667	0.0960	0.0159	0.1119		1,267.118 9	1,267.118 9	0.0715	0.2013	1,328.890 9
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1193	0.0797	1.3433	3.8500e-003	0.4471	2.5700e-003	0.4497	0.1186	2.3700e-003	0.1209		388.6920	388.6920	9.1300e-003	8.5900e-003	391.4786
Total	**0.1624**	**2.6962**	**2.0522**	**0.0154**	**0.7972**	**0.0192**	**0.8164**	**0.2146**	**0.0183**	**0.2328**		**1,655.810 9**	**1,655.810 9**	**0.0806**	**0.2099**	**1,720.369 5**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4600e-003	0.0000	1.4600e-003	2.2000e-004	0.0000	2.2000e-004			0.0000			0.0000
Off-Road	0.9458	8.7363	12.2819	0.0192		0.4297	0.4297		0.4115	0.4115		1,839.281 3	1,839.281 3	0.3354		1,847.665 4
Total	**0.9458**	**8.7363**	**12.2819**	**0.0192**	**1.4600e-003**	**0.4297**	**0.4312**	**2.2000e-004**	**0.4115**	**0.4117**		**1,839.281 3**	**1,839.281 3**	**0.3354**		**1,847.665 4**

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0651	3.9147	1.0449	0.0175	0.5251	0.0247	0.5498	0.1440	0.0236	0.1676		1,927.9803	1,927.9803	0.1063	0.3062	2,021.8725
Vendor	0.0230	0.7677	0.2974	3.7200e-003	0.1281	3.8600e-003	0.1320	0.0369	3.6900e-003	0.0406		400.5650	400.5650	0.0134	0.0576	418.0622
Worker	0.2560	0.1785	2.8912	7.9200e-003	0.8942	5.3800e-003	0.8996	0.2372	4.9500e-003	0.2421		800.0603	800.0603	0.0202	0.0185	806.0668
Total	**0.3441**	**4.8609**	**4.2335**	**0.0292**	**1.5475**	**0.0339**	**1.5814**	**0.4180**	**0.0323**	**0.4503**		**3,128.6056**	**3,128.6056**	**0.1399**	**0.3822**	**3,246.0015**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7000e-004	0.0000	5.7000e-004	9.0000e-005	0.0000	9.0000e-005			0.0000			0.0000
Off-Road	0.9458	8.7363	12.2819	0.0192		0.4297	0.4297		0.4115	0.4115	0.0000	1,839.2813	1,839.2813	0.3354		1,847.6654
Total	**0.9458**	**8.7363**	**12.2819**	**0.0192**	**5.7000e-004**	**0.4297**	**0.4303**	**9.0000e-005**	**0.4115**	**0.4116**	**0.0000**	**1,839.2813**	**1,839.2813**	**0.3354**		**1,847.6654**

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0651	3.9147	1.0449	0.0175	0.5251	0.0247	0.5498	0.1440	0.0236	0.1676		1,927.980 3	1,927.980 3	0.1063	0.3062	2,021.872 5
Vendor	0.0230	0.7677	0.2974	3.7200e-003	0.1281	3.8600e-003	0.1320	0.0369	3.6900e-003	0.0406		400.5650	400.5650	0.0134	0.0576	418.0622
Worker	0.2560	0.1785	2.8912	7.9200e-003	0.8942	5.3800e-003	0.8996	0.2372	4.9500e-003	0.2421		800.0603	800.0603	0.0202	0.0185	806.0668
Total	**0.3441**	**4.8609**	**4.2335**	**0.0292**	**1.5475**	**0.0339**	**1.5814**	**0.4180**	**0.0323**	**0.4503**		**3,128.605 6**	**3,128.605 6**	**0.1399**	**0.3822**	**3,246.001 5**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4600e-003	0.0000	1.4600e-003	2.2000e-004	0.0000	2.2000e-004			0.0000			0.0000
Off-Road	0.8906	8.2126	12.2865	0.0192		0.3754	0.3754		0.3594	0.3594		1,839.852 1	1,839.852 1	0.3339		1,848.199 7
Total	**0.8906**	**8.2126**	**12.2865**	**0.0192**	**1.4600e-003**	**0.3754**	**0.3768**	**2.2000e-004**	**0.3594**	**0.3596**		**1,839.852 1**	**1,839.852 1**	**0.3339**		**1,848.199 7**

3.3 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day							lb/day			
Hauling	0.0646	3.9248	1.0633	0.0173	0.5251	0.0249	0.5500	0.1440	0.0238	0.1678		1,900.678 3	1,900.678 3	0.1072	0.3019	1,993.336 3
Vendor	0.0223	0.7692	0.2911	3.6600e-003	0.1281	3.8900e-003	0.1320	0.0369	3.7200e-003	0.0406		394.5492	394.5492	0.0135	0.0568	411.8080
Worker	0.2385	0.1593	2.6866	7.6900e-003	0.8942	5.1500e-003	0.8994	0.2372	4.7400e-003	0.2419		777.3841	777.3841	0.0183	0.0172	782.9572
Total	**0.3255**	**4.8533**	**4.0410**	**0.0286**	**1.5475**	**0.0339**	**1.5814**	**0.4180**	**0.0323**	**0.4503**		**3,072.611 6**	**3,072.611 6**	**0.1390**	**0.3759**	**3,188.101 5**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						lb/day							lb/day			
Fugitive Dust					5.7000e-004	0.0000	5.7000e-004	9.0000e-005	0.0000	9.0000e-005			0.0000			0.0000
Off-Road	0.8906	8.2126	12.2865	0.0192		0.3754	0.3754		0.3594	0.3594	0.0000	1,839.852 1	1,839.852 1	0.3339		1,848.199 7
Total	**0.8906**	**8.2126**	**12.2865**	**0.0192**	**5.7000e-004**	**0.3754**	**0.3759**	**9.0000e-005**	**0.3594**	**0.3595**	**0.0000**	**1,839.852 1**	**1,839.852 1**	**0.3339**		**1,848.199 7**

3.3 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0646	3.9248	1.0633	0.0173	0.5251	0.0249	0.5500	0.1440	0.0238	0.1678		1,900.6783	1,900.6783	0.1072	0.3019	1,993.3363
Vendor	0.0223	0.7692	0.2911	3.6600e-003	0.1281	3.8900e-003	0.1320	0.0369	3.7200e-003	0.0406		394.5492	394.5492	0.0135	0.0568	411.8080
Worker	0.2385	0.1593	2.6866	7.6900e-003	0.8942	5.1500e-003	0.8994	0.2372	4.7400e-003	0.2419		777.3841	777.3841	0.0183	0.0172	782.9572
Total	**0.3255**	**4.8533**	**4.0410**	**0.0286**	**1.5475**	**0.0339**	**1.5814**	**0.4180**	**0.0323**	**0.4503**		**3,072.6116**	**3,072.6116**	**0.1390**	**0.3759**	**3,188.1015**

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4600e-003	0.0000	1.4600e-003	2.2000e-004	0.0000	2.2000e-004			0.0000			0.0000
Off-Road	0.8256	7.6445	12.2621	0.0192		0.3136	0.3136		0.3006	0.3006		1,840.7194	1,840.7194	0.3309		1,848.9918
Total	**0.8256**	**7.6445**	**12.2621**	**0.0192**	**1.4600e-003**	**0.3136**	**0.3150**	**2.2000e-004**	**0.3006**	**0.3008**		**1,840.7194**	**1,840.7194**	**0.3309**		**1,848.9918**

3.3 Site Preparation - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0641	3.8999	1.0777	0.0169	0.5252	0.0249	0.5501	0.1440	0.0239	0.1678		1,866.8229	1,866.8229	0.1085	0.2967	1,957.9467
Vendor	0.0217	0.7656	0.2857	3.5900e-003	0.1281	3.9000e-003	0.1320	0.0369	3.7300e-003	0.0406		387.4458	387.4458	0.0136	0.0558	404.4141
Worker	0.2230	0.1431	2.4986	7.4300e-003	0.8942	4.9000e-003	0.8991	0.2372	4.5100e-003	0.2417		750.9019	750.9019	0.0165	0.0160	756.0925
Total	**0.3087**	**4.8086**	**3.8620**	**0.0280**	**1.5475**	**0.0337**	**1.5812**	**0.4180**	**0.0321**	**0.4501**		**3,005.1706**	**3,005.1706**	**0.1385**	**0.3685**	**3,118.4533**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7000e-004	0.0000	5.7000e-004	9.0000e-005	0.0000	9.0000e-005			0.0000			0.0000
Off-Road	0.8256	7.6445	12.2621	0.0192		0.3136	0.3136		0.3006	0.3006	0.0000	1,840.7194	1,840.7194	0.3309		1,848.9918
Total	**0.8256**	**7.6445**	**12.2621**	**0.0192**	**5.7000e-004**	**0.3136**	**0.3142**	**9.0000e-005**	**0.3006**	**0.3007**	**0.0000**	**1,840.7194**	**1,840.7194**	**0.3309**		**1,848.9918**

3.3 Site Preparation - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0641	3.8999	1.0777	0.0169	0.5252	0.0249	0.5501	0.1440	0.0239	0.1678		1,866.822 9	1,866.822 9	0.1085	0.2967	1,957.946 7
Vendor	0.0217	0.7656	0.2857	3.5900e-003	0.1281	3.9000e-003	0.1320	0.0369	3.7300e-003	0.0406		387.4458	387.4458	0.0136	0.0558	404.4141
Worker	0.2230	0.1431	2.4986	7.4300e-003	0.8942	4.9000e-003	0.8991	0.2372	4.5100e-003	0.2417		750.9019	750.9019	0.0165	0.0160	756.0925
Total	**0.3087**	**4.8086**	**3.8620**	**0.0280**	**1.5475**	**0.0337**	**1.5812**	**0.4180**	**0.0321**	**0.4501**		**3,005.170 6**	**3,005.170 6**	**0.1385**	**0.3685**	**3,118.453 3**

3.4 Vault Shaft Excavations (A) - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.6500e-003	0.0000	5.6500e-003	8.6000e-004	0.0000	8.6000e-004			0.0000			0.0000
Off-Road	0.3592	3.4618	5.5337	8.0300e-003		0.1706	0.1706		0.1569	0.1569		777.8117	777.8117	0.2516		784.1007
Total	**0.3592**	**3.4618**	**5.5337**	**8.0300e-003**	**5.6500e-003**	**0.1706**	**0.1762**	**8.6000e-004**	**0.1569**	**0.1578**		**777.8117**	**777.8117**	**0.2516**		**784.1007**

3.4 Vault Shaft Excavations (A) - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0651	3.9147	1.0449	0.0175	0.5251	0.0247	0.5498	0.1440	0.0236	0.1676		1,927.980 3	1,927.980 3	0.1063	0.3062	2,021.872 5
Vendor	0.0115	0.3838	0.1487	1.8600e-003	0.0641	1.9300e-003	0.0660	0.0184	1.8500e-003	0.0203		200.2825	200.2825	6.7100e-003	0.0288	209.0311
Worker	0.1280	0.0892	1.4456	3.9600e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		400.0302	400.0302	0.0101	9.2300e-003	403.0334
Total	**0.2046**	**4.3878**	**2.6392**	**0.0234**	**1.0363**	**0.0293**	**1.0656**	**0.2810**	**0.0280**	**0.3089**		**2,528.292 9**	**2,528.292 9**	**0.1231**	**0.3442**	**2,633.937 0**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2100e-003	0.0000	2.2100e-003	3.3000e-004	0.0000	3.3000e-004			0.0000			0.0000
Off-Road	0.3592	3.4618	5.5337	8.0300e-003		0.1706	0.1706		0.1569	0.1569	0.0000	777.8117	777.8117	0.2516		784.1007
Total	**0.3592**	**3.4618**	**5.5337**	**8.0300e-003**	**2.2100e-003**	**0.1706**	**0.1728**	**3.3000e-004**	**0.1569**	**0.1573**	**0.0000**	**777.8117**	**777.8117**	**0.2516**		**784.1007**

3.4 Vault Shaft Excavations (A) - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0651	3.9147	1.0449	0.0175	0.5251	0.0247	0.5498	0.1440	0.0236	0.1676		1,927.980 3	1,927.980 3	0.1063	0.3062	2,021.872 5
Vendor	0.0115	0.3838	0.1487	1.8600e-003	0.0641	1.9300e-003	0.0660	0.0184	1.8500e-003	0.0203		200.2825	200.2825	6.7100e-003	0.0288	209.0311
Worker	0.1280	0.0892	1.4456	3.9600e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		400.0302	400.0302	0.0101	9.2300e-003	403.0334
Total	**0.2046**	**4.3878**	**2.6392**	**0.0234**	**1.0363**	**0.0293**	**1.0656**	**0.2810**	**0.0280**	**0.3089**		**2,528.292 9**	**2,528.292 9**	**0.1231**	**0.3442**	**2,633.937 0**

3.5 Tower 584 Foundation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8610	8.1105	9.7705	0.0201		0.3718	0.3718		0.3502	0.3502		1,932.702 6	1,932.702 6	0.4953		1,945.085 8
Total	**0.8610**	**8.1105**	**9.7705**	**0.0201**		**0.3718**	**0.3718**		**0.3502**	**0.3502**		**1,932.702 6**	**1,932.702 6**	**0.4953**		**1,945.085 8**

3.5 Tower 584 Foundation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.3838	0.1487	1.8600e-003	0.0641	1.9300e-003	0.0660	0.0184	1.8500e-003	0.0203		200.2825	200.2825	6.7100e-003	0.0288	209.0311
Worker	0.0640	0.0446	0.7228	1.9800e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		200.0151	200.0151	5.0400e-003	4.6200e-003	201.5167
Total	**0.0755**	**0.4285**	**0.8715**	**3.8400e-003**	**0.2876**	**3.2700e-003**	**0.2909**	**0.0777**	**3.0900e-003**	**0.0808**		**400.2975**	**400.2975**	**0.0118**	**0.0334**	**410.5478**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8610	8.1105	9.7705	0.0201		0.3718	0.3718		0.3502	0.3502	0.0000	1,932.7026	1,932.7026	0.4953		1,945.0858
Total	**0.8610**	**8.1105**	**9.7705**	**0.0201**		**0.3718**	**0.3718**		**0.3502**	**0.3502**	**0.0000**	**1,932.7026**	**1,932.7026**	**0.4953**		**1,945.0858**

3.5 Tower 584 Foundation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.3838	0.1487	1.8600e-003	0.0641	1.9300e-003	0.0660	0.0184	1.8500e-003	0.0203		200.2825	200.2825	6.7100e-003	0.0288	209.0311
Worker	0.0640	0.0446	0.7228	1.9800e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		200.0151	200.0151	5.0400e-003	4.6200e-003	201.5167
Total	**0.0755**	**0.4285**	**0.8715**	**3.8400e-003**	**0.2876**	**3.2700e-003**	**0.2909**	**0.0777**	**3.0900e-003**	**0.0808**		**400.2975**	**400.2975**	**0.0118**	**0.0334**	**410.5478**

3.6 Vault Installations & Completions (A) - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7809	7.1888	8.1786	0.0151		0.3388	0.3388		0.3279	0.3279		1,440.1439	1,440.1439	0.2063		1,445.3007
Total	**0.7809**	**7.1888**	**8.1786**	**0.0151**		**0.3388**	**0.3388**		**0.3279**	**0.3279**		**1,440.1439**	**1,440.1439**	**0.2063**		**1,445.3007**

3.6 Vault Installations & Completions (A) - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.3838	0.1487	1.8600e-003	0.0641	1.9300e-003	0.0660	0.0184	1.8500e-003	0.0203		200.2825	200.2825	6.7100e-003	0.0288	209.0311
Worker	0.1280	0.0892	1.4456	3.9600e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		400.0302	400.0302	0.0101	9.2300e-003	403.0334
Total	**0.1395**	**0.4731**	**1.5943**	**5.8200e-003**	**0.5112**	**4.6200e-003**	**0.5158**	**0.1370**	**4.3300e-003**	**0.1413**		**600.3126**	**600.3126**	**0.0168**	**0.0380**	**612.0645**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7809	7.1888	8.1786	0.0151		0.3388	0.3388		0.3279	0.3279	0.0000	1,440.1438	1,440.1438	0.2063		1,445.3007
Total	**0.7809**	**7.1888**	**8.1786**	**0.0151**		**0.3388**	**0.3388**		**0.3279**	**0.3279**	**0.0000**	**1,440.1438**	**1,440.1438**	**0.2063**		**1,445.3007**

3.6 Vault Installations & Completions (A) - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.3838	0.1487	1.8600e-003	0.0641	1.9300e-003	0.0660	0.0184	1.8500e-003	0.0203		200.2825	200.2825	6.7100e-003	0.0288	209.0311
Worker	0.1280	0.0892	1.4456	3.9600e-003	0.4471	2.6900e-003	0.4498	0.1186	2.4800e-003	0.1211		400.0302	400.0302	0.0101	9.2300e-003	403.0334
Total	**0.1395**	**0.4731**	**1.5943**	**5.8200e-003**	**0.5112**	**4.6200e-003**	**0.5158**	**0.1370**	**4.3300e-003**	**0.1413**		**600.3126**	**600.3126**	**0.0168**	**0.0380**	**612.0645**

3.7 Tower 584 Structure - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4214	4.2178	4.7774	8.5800e-003		0.1934	0.1934		0.1779	0.1779		831.0389	831.0389	0.2688		837.7583
Total	**0.4214**	**4.2178**	**4.7774**	**8.5800e-003**		**0.1934**	**0.1934**		**0.1779**	**0.1779**		**831.0389**	**831.0389**	**0.2688**		**837.7583**

3.7 Tower 584 Structure - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.3838	0.1487	1.8600e-003	0.0641	1.9300e-003	0.0660	0.0184	1.8500e-003	0.0203		200.2825	200.2825	6.7100e-003	0.0288	209.0311
Worker	0.0640	0.0446	0.7228	1.9800e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		200.0151	200.0151	5.0400e-003	4.6200e-003	201.5167
Total	**0.0755**	**0.4285**	**0.8715**	**3.8400e-003**	**0.2876**	**3.2700e-003**	**0.2909**	**0.0777**	**3.0900e-003**	**0.0808**		**400.2975**	**400.2975**	**0.0118**	**0.0334**	**410.5478**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4214	4.2178	4.7774	8.5800e-003		0.1934	0.1934		0.1779	0.1779	0.0000	831.0389	831.0389	0.2688		837.7583
Total	**0.4214**	**4.2178**	**4.7774**	**8.5800e-003**		**0.1934**	**0.1934**		**0.1779**	**0.1779**	**0.0000**	**831.0389**	**831.0389**	**0.2688**		**837.7583**

3.7 Tower 584 Structure - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.3838	0.1487	1.8600e-003	0.0641	1.9300e-003	0.0660	0.0184	1.8500e-003	0.0203		200.2825	200.2825	6.7100e-003	0.0288	209.0311
Worker	0.0640	0.0446	0.7228	1.9800e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605		200.0151	200.0151	5.0400e-003	4.6200e-003	201.5167
Total	**0.0755**	**0.4285**	**0.8715**	**3.8400e-003**	**0.2876**	**3.2700e-003**	**0.2909**	**0.0777**	**3.0900e-003**	**0.0808**		**400.2975**	**400.2975**	**0.0118**	**0.0334**	**410.5478**

3.8 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6210	5.4862	6.4650	0.0108		0.2627	0.2627		0.2457	0.2457		1,011.4096	1,011.4096	0.2910		1,018.6852
Paving	6.0700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6271**	**5.4862**	**6.4650**	**0.0108**		**0.2627**	**0.2627**		**0.2457**	**0.2457**		**1,011.4096**	**1,011.4096**	**0.2910**		**1,018.6852**

3.8 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.3846	0.1455	1.8300e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		197.2746	197.2746	6.7400e-003	0.0284	205.9040
Worker	0.0596	0.0398	0.6717	1.9200e-003	0.2236	1.2900e-003	0.2248	0.0593	1.1900e-003	0.0605		194.3460	194.3460	4.5600e-003	4.2900e-003	195.7393
Total	**0.0708**	**0.4244**	**0.8172**	**3.7500e-003**	**0.2876**	**3.2300e-003**	**0.2908**	**0.0777**	**3.0500e-003**	**0.0808**		**391.6206**	**391.6206**	**0.0113**	**0.0327**	**401.6433**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6210	5.4862	6.4650	0.0108		0.2627	0.2627		0.2457	0.2457	0.0000	1,011.4096	1,011.4096	0.2910		1,018.6852
Paving	6.0700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6271**	**5.4862**	**6.4650**	**0.0108**		**0.2627**	**0.2627**		**0.2457**	**0.2457**	**0.0000**	**1,011.4096**	**1,011.4096**	**0.2910**		**1,018.6852**

3.8 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.3846	0.1455	1.8300e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		197.2746	197.2746	6.7400e-003	0.0284	205.9040
Worker	0.0596	0.0398	0.6717	1.9200e-003	0.2236	1.2900e-003	0.2248	0.0593	1.1900e-003	0.0605		194.3460	194.3460	4.5600e-003	4.2900e-003	195.7393
Total	**0.0708**	**0.4244**	**0.8172**	**3.7500e-003**	**0.2876**	**3.2300e-003**	**0.2908**	**0.0777**	**3.0500e-003**	**0.0808**		**391.6206**	**391.6206**	**0.0113**	**0.0327**	**401.6433**

3.8 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5959	5.2015	6.4601	0.0108		0.2417	0.2417		0.2263	0.2263		1,011.1152	1,011.1152	0.2909		1,018.3884
Paving	6.0700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6020**	**5.2015**	**6.4601**	**0.0108**		**0.2417**	**0.2417**		**0.2263**	**0.2263**		**1,011.1152**	**1,011.1152**	**0.2909**		**1,018.3884**

3.8 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3828	0.1429	1.8000e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8600e-003	0.0203		193.7229	193.7229	6.7800e-003	0.0279	202.2070
Worker	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	**0.0666**	**0.4186**	**0.7675**	**3.6600e-003**	**0.2876**	**3.1800e-003**	**0.2908**	**0.0777**	**2.9900e-003**	**0.0807**		**381.4484**	**381.4484**	**0.0109**	**0.0319**	**391.2302**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5959	5.2015	6.4601	0.0108		0.2417	0.2417		0.2263	0.2263	0.0000	1,011.1152	1,011.1152	0.2909		1,018.3883
Paving	6.0700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6020**	**5.2015**	**6.4601**	**0.0108**		**0.2417**	**0.2417**		**0.2263**	**0.2263**	**0.0000**	**1,011.1152**	**1,011.1152**	**0.2909**		**1,018.3883**

3.8 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3828	0.1429	1.8000e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8600e-003	0.0203		193.7229	193.7229	6.7800e-003	0.0279	202.2070
Worker	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	**0.0666**	**0.4186**	**0.7675**	**3.6600e-003**	**0.2876**	**3.1800e-003**	**0.2908**	**0.0777**	**2.9900e-003**	**0.0807**		**381.4484**	**381.4484**	**0.0109**	**0.0319**	**391.2302**

3.9 Nichols Canyon Road Pipe Replacement - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7294	6.4374	11.1394	0.0191		0.3109	0.3109		0.2860	0.2860		1,850.7450	1,850.7450	0.5986		1,865.7092
Total	**0.7294**	**6.4374**	**11.1394**	**0.0191**		**0.3109**	**0.3109**		**0.2860**	**0.2860**		**1,850.7450**	**1,850.7450**	**0.5986**		**1,865.7092**

3.9 Nichols Canyon Road Pipe Replacement - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.3846	0.1455	1.8300e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		197.2746	197.2746	6.7400e-003	0.0284	205.9040
Worker	0.0596	0.0398	0.6717	1.9200e-003	0.2236	1.2900e-003	0.2248	0.0593	1.1900e-003	0.0605		194.3460	194.3460	4.5600e-003	4.2900e-003	195.7393
Total	**0.0708**	**0.4244**	**0.8172**	**3.7500e-003**	**0.2876**	**3.2300e-003**	**0.2908**	**0.0777**	**3.0500e-003**	**0.0808**		**391.6206**	**391.6206**	**0.0113**	**0.0327**	**401.6433**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7294	6.4374	11.1394	0.0191		0.3109	0.3109		0.2860	0.2860	0.0000	1,850.745 0	1,850.745 0	0.5986		1,865.709 2
Total	**0.7294**	**6.4374**	**11.1394**	**0.0191**		**0.3109**	**0.3109**		**0.2860**	**0.2860**	**0.0000**	**1,850.745 0**	**1,850.745 0**	**0.5986**		**1,865.709 2**

3.9 Nichols Canyon Road Pipe Replacement - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.3846	0.1455	1.8300e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		197.2746	197.2746	6.7400e-003	0.0284	205.9040
Worker	0.0596	0.0398	0.6717	1.9200e-003	0.2236	1.2900e-003	0.2248	0.0593	1.1900e-003	0.0605		194.3460	194.3460	4.5600e-003	4.2900e-003	195.7393
Total	**0.0708**	**0.4244**	**0.8172**	**3.7500e-003**	**0.2876**	**3.2300e-003**	**0.2908**	**0.0777**	**3.0500e-003**	**0.0808**		**391.6206**	**391.6206**	**0.0113**	**0.0327**	**401.6433**

3.9 Nichols Canyon Road Pipe Replacement - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6754	5.7192	11.1137	0.0191		0.2665	0.2665		0.2452	0.2452		1,851.0500	1,851.0500	0.5987		1,866.0167
Total	**0.6754**	**5.7192**	**11.1137**	**0.0191**		**0.2665**	**0.2665**		**0.2452**	**0.2452**		**1,851.0500**	**1,851.0500**	**0.5987**		**1,866.0167**

3.9 Nichols Canyon Road Pipe Replacement - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3828	0.1429	1.8000e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8600e-003	0.0203		193.7229	193.7229	6.7800e-003	0.0279	202.2070
Worker	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	**0.0666**	**0.4186**	**0.7675**	**3.6600e-003**	**0.2876**	**3.1800e-003**	**0.2908**	**0.0777**	**2.9900e-003**	**0.0807**		**381.4484**	**381.4484**	**0.0109**	**0.0319**	**391.2302**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6754	5.7192	11.1137	0.0191		0.2665	0.2665		0.2452	0.2452	0.0000	1,851.0500	1,851.0500	0.5987		1,866.0167
Total	**0.6754**	**5.7192**	**11.1137**	**0.0191**		**0.2665**	**0.2665**		**0.2452**	**0.2452**	**0.0000**	**1,851.0500**	**1,851.0500**	**0.5987**		**1,866.0167**

3.9 Nichols Canyon Road Pipe Replacement - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3828	0.1429	1.8000e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8600e-003	0.0203		193.7229	193.7229	6.7800e-003	0.0279	202.2070
Worker	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	**0.0666**	**0.4186**	**0.7675**	**3.6600e-003**	**0.2876**	**3.1800e-003**	**0.2908**	**0.0777**	**2.9900e-003**	**0.0807**		**381.4484**	**381.4484**	**0.0109**	**0.0319**	**391.2302**

3.10 Terminal Tower & Receiving Station Upgrades - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0939	10.0259	14.5808	0.0265		0.4517	0.4517		0.4237	0.4237		2,555.3066	2,555.3066	0.6741		2,572.1592
Total	**1.0939**	**10.0259**	**14.5808**	**0.0265**		**0.4517**	**0.4517**		**0.4237**	**0.4237**		**2,555.3066**	**2,555.3066**	**0.6741**		**2,572.1592**

3.10 Terminal Tower & Receiving Station Upgrades - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.3846	0.1455	1.8300e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		197.2746	197.2746	6.7400e-003	0.0284	205.9040
Worker	0.0895	0.0597	1.0075	2.8800e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		291.5190	291.5190	6.8400e-003	6.4400e-003	293.6089
Total	**0.1006**	**0.4444**	**1.1530**	**4.7100e-003**	**0.3994**	**3.8700e-003**	**0.4033**	**0.1074**	**3.6400e-003**	**0.1110**		**488.7936**	**488.7936**	**0.0136**	**0.0348**	**499.5129**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0939	10.0259	14.5808	0.0265		0.4517	0.4517		0.4237	0.4237	0.0000	2,555.3066	2,555.3066	0.6741		2,572.1592
Total	**1.0939**	**10.0259**	**14.5808**	**0.0265**		**0.4517**	**0.4517**		**0.4237**	**0.4237**	**0.0000**	**2,555.3066**	**2,555.3066**	**0.6741**		**2,572.1592**

3.10 Terminal Tower & Receiving Station Upgrades - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.3846	0.1455	1.8300e-003	0.0641	1.9400e-003	0.0660	0.0184	1.8600e-003	0.0203		197.2746	197.2746	6.7400e-003	0.0284	205.9040
Worker	0.0895	0.0597	1.0075	2.8800e-003	0.3353	1.9300e-003	0.3373	0.0889	1.7800e-003	0.0907		291.5190	291.5190	6.8400e-003	6.4400e-003	293.6089
Total	**0.1006**	**0.4444**	**1.1530**	**4.7100e-003**	**0.3994**	**3.8700e-003**	**0.4033**	**0.1074**	**3.6400e-003**	**0.1110**		**488.7936**	**488.7936**	**0.0136**	**0.0348**	**499.5129**

3.10 Terminal Tower & Receiving Station Upgrades - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0194	9.1043	14.5381	0.0265		0.3906	0.3906		0.3664	0.3664		2,555.9702	2,555.9702	0.6724		2,572.7802
Total	**1.0194**	**9.1043**	**14.5381**	**0.0265**		**0.3906**	**0.3906**		**0.3664**	**0.3664**		**2,555.9702**	**2,555.9702**	**0.6724**		**2,572.7802**

3.10 Terminal Tower & Receiving Station Upgrades - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3828	0.1429	1.8000e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8600e-003	0.0203		193.7229	193.7229	6.7800e-003	0.0279	202.2070
Worker	0.0836	0.0537	0.9370	2.7900e-003	0.3353	1.8400e-003	0.3372	0.0889	1.6900e-003	0.0906		281.5882	281.5882	6.1700e-003	6.0100e-003	283.5347
Total	**0.0945**	**0.4364**	**1.0799**	**4.5900e-003**	**0.3994**	**3.7900e-003**	**0.4032**	**0.1074**	**3.5500e-003**	**0.1109**		**475.3111**	**475.3111**	**0.0130**	**0.0339**	**485.7417**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0194	9.1043	14.5381	0.0265		0.3906	0.3906		0.3664	0.3664	0.0000	2,555.9702	2,555.9702	0.6724		2,572.7802
Total	**1.0194**	**9.1043**	**14.5381**	**0.0265**		**0.3906**	**0.3906**		**0.3664**	**0.3664**	**0.0000**	**2,555.9702**	**2,555.9702**	**0.6724**		**2,572.7802**

3.10 Terminal Tower & Receiving Station Upgrades - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0109	0.3828	0.1429	1.8000e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8600e-003	0.0203		193.7229	193.7229	6.7800e-003	0.0279	202.2070
Worker	0.0836	0.0537	0.9370	2.7900e-003	0.3353	1.8400e-003	0.3372	0.0889	1.6900e-003	0.0906		281.5882	281.5882	6.1700e-003	6.0100e-003	283.5347
Total	**0.0945**	**0.4364**	**1.0799**	**4.5900e-003**	**0.3994**	**3.7900e-003**	**0.4032**	**0.1074**	**3.5500e-003**	**0.1109**		**475.3111**	**475.3111**	**0.0130**	**0.0339**	**485.7417**

3.11 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.1479					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030		562.8961	562.8961	0.0307		563.6637
Total	**0.4897**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**		**562.8961**	**562.8961**	**0.0307**		**563.6637**

3.11 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	**0.0557**	**0.0358**	**0.6247**	**1.8600e-003**	**0.2236**	**1.2300e-003**	**0.2248**	**0.0593**	**1.1300e-003**	**0.0604**		**187.7255**	**187.7255**	**4.1100e-003**	**4.0100e-003**	**189.0231**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.1479					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3417	2.2910	3.6183	5.9400e-003		0.1030	0.1030		0.1030	0.1030	0.0000	562.8961	562.8961	0.0307		563.6637
Total	**0.4897**	**2.2910**	**3.6183**	**5.9400e-003**		**0.1030**	**0.1030**		**0.1030**	**0.1030**	**0.0000**	**562.8961**	**562.8961**	**0.0307**		**563.6637**

3.11 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	**0.0557**	**0.0358**	**0.6247**	**1.8600e-003**	**0.2236**	**1.2300e-003**	**0.2248**	**0.0593**	**1.1300e-003**	**0.0604**		**187.7255**	**187.7255**	**4.1100e-003**	**4.0100e-003**	**189.0231**

3.12 Vault Shaft Excavations (B) - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.7700e-003	0.0000	3.7700e-003	5.7000e-004	0.0000	5.7000e-004			0.0000			0.0000
Off-Road	0.3148	2.9472	5.5316	8.0500e-003		0.1246	0.1246		0.1147	0.1147		778.7667	778.7667	0.2519		785.0634
Total	**0.3148**	**2.9472**	**5.5316**	**8.0500e-003**	**3.7700e-003**	**0.1246**	**0.1284**	**5.7000e-004**	**0.1147**	**0.1152**		**778.7667**	**778.7667**	**0.2519**		**785.0634**

3.12 Vault Shaft Excavations (B) - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0427	2.5999	0.7184	0.0113	0.3501	0.0166	0.3667	0.0960	0.0159	0.1119		1,244.548 6	1,244.548 6	0.0723	0.1978	1,305.297 8
Vendor	0.0109	0.3828	0.1429	1.8000e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8600e-003	0.0203		193.7229	193.7229	6.7800e-003	0.0279	202.2070
Worker	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	**0.1093**	**3.0185**	**1.4860**	**0.0150**	**0.6377**	**0.0198**	**0.6575**	**0.1737**	**0.0189**	**0.1926**		**1,625.997 0**	**1,625.997 0**	**0.0832**	**0.2297**	**1,696.528 0**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4700e-003	0.0000	1.4700e-003	2.2000e-004	0.0000	2.2000e-004			0.0000			0.0000
Off-Road	0.3148	2.9472	5.5316	8.0500e-003		0.1246	0.1246		0.1147	0.1147	0.0000	778.7667	778.7667	0.2519		785.0634
Total	**0.3148**	**2.9472**	**5.5316**	**8.0500e-003**	**1.4700e-003**	**0.1246**	**0.1261**	**2.2000e-004**	**0.1147**	**0.1149**	**0.0000**	**778.7667**	**778.7667**	**0.2519**		**785.0634**

3.12 Vault Shaft Excavations (B) - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0427	2.5999	0.7184	0.0113	0.3501	0.0166	0.3667	0.0960	0.0159	0.1119		1,244.548 6	1,244.548 6	0.0723	0.1978	1,305.297 8
Vendor	0.0109	0.3828	0.1429	1.8000e-003	0.0641	1.9500e-003	0.0660	0.0184	1.8600e-003	0.0203		193.7229	193.7229	6.7800e-003	0.0279	202.2070
Worker	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	**0.1093**	**3.0185**	**1.4860**	**0.0150**	**0.6377**	**0.0198**	**0.6575**	**0.1737**	**0.0189**	**0.1926**		**1,625.997 0**	**1,625.997 0**	**0.0832**	**0.2297**	**1,696.528 0**

3.13 Vault Installations & Completions (B) - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6847	6.2245	8.1136	0.0151		0.2592	0.2592		0.2506	0.2506		1,440.506 9	1,440.506 9	0.2015		1,445.543 3
Total	**0.6847**	**6.2245**	**8.1136**	**0.0151**		**0.2592**	**0.2592**		**0.2506**	**0.2506**		**1,440.506 9**	**1,440.506 9**	**0.2015**		**1,445.543 3**

3.13 Vault Installations & Completions (B) - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0217	0.7656	0.2857	3.5900e-003	0.1281	3.9000e-003	0.1320	0.0369	3.7300e-003	0.0406		387.4458	387.4458	0.0136	0.0558	404.4141
Worker	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	**0.0774**	**0.8014**	**0.9104**	**5.4500e-003**	**0.3517**	**5.1300e-003**	**0.3568**	**0.0962**	**4.8600e-003**	**0.1010**		**575.1713**	**575.1713**	**0.0177**	**0.0598**	**593.4372**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6847	6.2245	8.1136	0.0151		0.2592	0.2592		0.2506	0.2506	0.0000	1,440.5069	1,440.5069	0.2015		1,445.5433
Total	**0.6847**	**6.2245**	**8.1136**	**0.0151**		**0.2592**	**0.2592**		**0.2506**	**0.2506**	**0.0000**	**1,440.5069**	**1,440.5069**	**0.2015**		**1,445.5433**

3.13 Vault Installations & Completions (B) - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0217	0.7656	0.2857	3.5900e-003	0.1281	3.9000e-003	0.1320	0.0369	3.7300e-003	0.0406		387.4458	387.4458	0.0136	0.0558	404.4141
Worker	0.0557	0.0358	0.6247	1.8600e-003	0.2236	1.2300e-003	0.2248	0.0593	1.1300e-003	0.0604		187.7255	187.7255	4.1100e-003	4.0100e-003	189.0231
Total	**0.0774**	**0.8014**	**0.9104**	**5.4500e-003**	**0.3517**	**5.1300e-003**	**0.3568**	**0.0962**	**4.8600e-003**	**0.1010**		**575.1713**	**575.1713**	**0.0177**	**0.0598**	**593.4372**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0140	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003
Unmitigated	0.0140	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0113					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003
Total	**0.0140**	**3.0000e-005**	**3.2500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.9900e-003**	**6.9900e-003**	**2.0000e-005**		**7.4400e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.4300e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0113					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.9900e-003	6.9900e-003	2.0000e-005		7.4400e-003
Total	**0.0140**	**3.0000e-005**	**3.2500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.9900e-003**	**6.9900e-003**	**2.0000e-005**		**7.4400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

2020 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2020

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide a): No. Days of Data	Carbon Monoxide a): Max Conc. in ppm 1-hour	Carbon Monoxide a): Max Conc. in ppm 8-hour	Ozone b): No. Days of Data	Ozone b): Max. Conc. in ppm 1-hour	Ozone b): Max. Conc. in ppm 8-hour	Ozone b): Fourth High Conc. ppm 8-hour	Ozone b), Number of Days Standard Exceeded: Old Federal > 0.124 ppm 1-hour	Current Federal > 0.070 ppm 8-hour	2008 Federal > 0.075 ppm 8-hour	1997 Federal > 0.084 ppm 8-hour	Current State > 0.09 ppm 1-hour	Current State > 0.070 ppm 8-hour	Nitrogen Dioxide c): No. Days of Data	Nitrogen Dioxide c): Max Conc. in ppb 1-hour	Nitrogen Dioxide c): 98th Percentile Conc. ppb 1-hour	Nitrogen Dioxide c): Annual Average AAM Conc. ppb	Sulfur Dioxide d): No. Days of Data	Sulfur Dioxide d): Max. Conc. in ppb 1-hour	Sulfur Dioxide d): 99th Percentile Conc. ppb 1-hour
LOS ANGELES COUNTY																						
1	Central LA	087	359	1.9	1.5	332	0.185	0.118	0.093	1	22	16	6	14	22	364	61.8	54.7	16.9	333	3.8	3.3
2	Northwest Coastal LA County	091	365	2.0	1.2	357	0.134	0.092	0.078	1	8	5	1	6	8	360	76.6	43.9	10.6	--	--	--
3	Southwest Coastal LA County	820	364	1.6	1.3	350	0.117	0.074	0.066	0	2	0	0	1	2	364	59.7	50.9	9.5	361	6.0	3.3
4	South Coastal LA County 1	072	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 3	033	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.4
4	South Coastal LA County 4	039	--	--	--	332	0.105	0.083	0.071	0	4	2	0	4	4	357	75.3	56.3	12.8	--	--	--
4	I-710 Near Road##	032	--	--	--	--	--	--	--	--	--	--	--	--	--	355	90.3	79.1	22.3	--	--	--
6	West San Fernando Valley	074	349	2.0	1.7	345	0.142	0.115	0.097	0	49	23	12	14	49	365	57.2	50.1	12.1	--	--	--
7	East San Fernando Valley	200	--	--	--	359	0.133	0.108	0.102	5	49	33	20	31	49	357	60.4	52.4	14.5	--	--	--
8	West San Gabriel Valley	088	361	2.6	2.2	354	0.163	0.115	0.108	9	60	44	21	41	60	354	61.2	49.7	13.6	--	--	--
9	East San Gabriel Valley 1	060	349	2.4	2.0	347	0.168	0.125	0.105	11	61	43	19	53	61	347	64.8	54.1	13.6	--	--	--
9	East San Gabriel Valley 2	591	310	2.3	1.9	348	0.173	0.138	0.124	17	97	71	32	76	97	366	50.4	41.9	8.5	--	--	--
10	Pomona/Walnut Valley	075	363	1.5	1.1	353	0.180	0.124	0.106	10	84	53	29	51	84	355	67.9	59.8	18.3	--	--	--
11	South San Gabriel Valley	085	362	3.1	1.7	356	0.169	0.114	0.089	3	23	15	7	20	23	365	69.2	57.8	17.8	--	--	--
12	South Central LA County	112	364	4.5	3.1	354	0.152	0.115	0.072	1	4	3	2	3	4	362	72.3	60.5	14.5	--	--	--
13	Santa Clarita Valley	090	363	1.2	0.8	348	0.148	0.122	0.106	10	73	56	29	44	73	361	46.3	35.9	9.4	--	--	--
ORANGE COUNTY																						
16	North Orange County	3177	347	2.1	1.2	340	0.171	0.113	0.088	3	23	19	6	15	23	347	57.2	50.1	12.7	--	--	--
17	Central Orange County	3176	361	2.3	1.7	356	0.142	0.097	0.079	2	15	4	3	6	15	364	70.9	52.1	13.3	--	--	--
17	I-5 Near Road##	3131	359	2.4	2.0	--	--	--	--	--	--	--	--	--	--	365	69.9	52.6	18.8	--	--	--
19	Saddleback Valley	3812	366	1.7	0.8	364	0.171	0.122	0.090	1	32	25	10	20	32	--	--	--	--	--	--	--
RIVERSIDE COUNTY																						
22	Corona/Norco Area	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	361	1.9	1.4	348	0.143	0.115	0.102	6	81	59	27	46	81	359	66.4	54.1	13.6	356	2.2	1.7
23	Metropolitan Riverside County 3	4165	359	1.8	1.5	350	0.140	0.117	0.103	7	89	62	32	51	89	352	58.1	49.9	12.3	--	--	--
24	Perris Valley	4149	--	--	--	358	0.125	0.106	0.097	1	74	48	14	34	74	--	--	--	--	--	--	--
25	Elsinore Valley	4158	358	0.9	0.7	355	0.130	0.100	0.093	1	52	30	10	18	52	345	43.6	37.9	7.4	--	--	--
26	Temecula Valley	4031	--	--	--	364	0.108	0.091	0.084	0	37	20	2	5	37	--	--	--	--	--	--	--
29	San Gorgonio Pass	4164	--	--	--	358	0.150	0.115	0.104	3	68	48	21	29	68	363	51.1	47.1	8.5	--	--	--
30	Coachella Valley 1**	4137	365	0.8	0.5	360	0.119	0.094	0.089	0	49	28	5	9	49	365	47.4	34.3	6.6	--	--	--
30	Coachella Valley 2**	4157	--	--	--	358	0.097	0.084	0.081	0	42	17	0	2	42	--	--	--	--	--	--	--
30	Coachella Valley 3**	4032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																						
32	Northwest San Bernardino Valley	5175	364	1.5	1.1	360	0.158	0.123	0.116	15	114	87	43	82	114	364	55.4	44.8	13.9	--	--	--
33	I-10 Near Road##	5035	363	1.5	1.2	--	--	--	--	--	--	--	--	--	--	345	94.2	75.1	28.7	--	--	--
33	CA-60 Near Road##	5036	--	--	--	--	--	--	--	--	--	--	--	--	--	346	101.6	78.0	29.1	--	--	--
34	Central San Bernardino Valley 1	5197	358	1.7	1.2	348	0.151	0.111	0.105	8	89	65	27	56	89	360	66.4	57.9	18.7	363	2.5	1.7
34	Central San Bernardino Valley 2	5203	360	1.9	1.4	359	0.162	0.128	0.122	15	128	110	60	89	128	365	54.0	45.6	14.9	--	--	--
35	East San Bernardino Valley	5204	--	--	--	361	0.173	0.136	0.125	16	141	127	78	104	141	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	364	0.159	0.139	0.117	7	118	97	55	69	118	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM e)			4.5	3.1		0.185	0.139	0.125	17	141	127	78	104	141		101.6	86.3	29.1		6.0	3.3
	SOUTH COAST AIR BASIN f)			4.5	3.1		0.185	0.139	0.125	27	157	142	97	132	157		101.6	86.3	29.1		6.0	3.3

* Incomplete data. ** Salton Sea Air Basin -- Pollutant not monitored ppm - Parts Per Million parts of air, by volume ppb – Parts Per Billion parts of air, by volume AAM = Annual Arithmetic Mean

a) The federal and state 8-hour CO standards (9 ppm and 9.0 ppm) and the federal and state 1-hour CO standards (35 ppm and 20 ppm) were not exceeded.
b) The current (2015) O_3 federal standard was revised effective December 28, 2015.
c) The NO_2 federal 1-hour standard is100 ppb annual standard is annual arithmetic mean NO2 > 0.0534 ppm (53.4 ppb). The state 1-hour and annual standards are 0.18 ppm and 0.030 ppm.
d) The federal SO_2 1-hour standard is 75 ppb (0.075 ppm). The state standards are 1-hour average SO2 > 0.25 ppm (250 ppb) and 24-hour average SO2 > 0.04 ppm (40 ppb).
e) District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction
f) Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin
Four near-road sites measuring one or more of the pollutants $PM_{2.5}$, CO and/or NO_2 are operating near the following freeways: I-5, I-10, CA-60 and I-710.

South Coast
Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

For information on the current standard levels and most recent revisions please refer to "Appendix II – Current Air Quality" of the "2016 AQMP" which can be accessed at http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-ii.pdf?sfvrsn=4. Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the South Coast AQMD Air Quality Forecast Map at www.aqmd.gov/forecast. A printed map or copy of the AQMP Appendix II is also available free of charge from the South Coast AQMD Public Information Center at 1-800-CUT-SMOG.

2020 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2020 Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 [e) k) +] No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standards Federal > 150 µg/m³ 24-hour	State > 50 µg/m³ 24-hour	Annual. Average Conc. [f] (AAM) µg/m³	Fine Particulates PM2.5 [g) #] No. Days of Data	Max. Conc. in µg/m³ 24-hour	98th Percentile Conc. in µg/m³ 24-hour	No (%) Samples Exceeding Federal Std. > 35 µg/m³ 24-hour	Annual. Average Conc. [h)] (AAM) µg/m³	Lead [i) ++] Max. Monthly Average Conc. µg/m³	Max. 3-Months Rolling Averages µg/m³	PM10 Sulfate [j)] No. Days of Data	Max. Conc. in µg/m³ 24-hour
LOS ANGELES COUNTY																
1	Central LA	087	337	77	0	24 (7%)	23.0	353	47.30	28.00	2 (1%)	12.31	0.013	0.011	45	3.3
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	Southwest Coastal LA County	820	37	43	0	0	22.5	--	--	--	--	--	0.008	0.005	--	--
4	South Coastal LA County 1	072	--	--	--	--	--	117	28.10	26.10	0	11.26	--	--	--	--
4	South Coastal LA County 2	077	42	59	0	2 (5%)	24.9	357	39.00	28.00	1 (0%)	11.38	0.008	0.006	--	--
4	South Coastal LA County 3	033	12	54	0	2 (17%)	27.8	--	--	--	--	--	--	--	14	2.3
4	South Coastal LA County 4	039	--	--	--	--	--	--	--	--	--	--				
4	I-710 Near Road[##]	032	--	--	--	--	--	356	44.00	31.50	2 (1%)	12.93	--	--	--	--
6	West San Fernando Valley	074	--	--	--	--	--	116	27.60	26.40	0	10.13	--	--	--	--
7	East San Fernando Valley	200	--	--	--	--	--	--	--	--	--	--				
8	West San Gabriel Valley	088	--	--	--	--	--	117	34.90	31.20	0	11.06	--	--	--	--
9	East San Gabriel Valley 1	060	43	95	0	8 (19%)	37.7	116	33.00	25.80	0	11.13	0.010	0.007	45	3.1
9	East San Gabriel Valley 2	591	333	105	0	9 (3%)	25.2	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	116	35.40	30.50	0	13.22	0.012	0.011	--	--
12	South Central LA County	112	--	--	--	--	--	352	43.20	34.10	7 (2%)	13.57	0.010	0.009	--	--
13	Santa Clarita Valley	090	36	48	0	0	22.5	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	329	120	0	13 (4%)	23.9	355	41.40	27.10	1 (0%)	11.27	--	--	44	3.3
17	I-5 Near Road[##]	3131	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	42	53	0	1 (2%)	16.8	120	35.00	32.70	0	8.81	--	--	--	--
RIVERSIDE COUNTY																
22	Corona/Norco Area	4155	44	100	0	10 (23%)	39.1	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	320	104	0	110 (34%)	30.0	357	41.00	29.60	4 (1%)	12.63	0.016	0.010	84	5.2
23	Metropolitan Riverside County 3	4165	304	124	0	154 (51%)	52.2	358	38.70	34.70	5 (1.%)	14.03	--	--	--	--
24	Perris Valley	4149	37	77	0	6 (16%)	35.9	--	--	--	--	--	--	--	--	--
25	Elsinore Valley	4158	334	84	0	7 (2%)	22.0	--	--	--	--	--	--	--	--	--
26	Temecula Valley	4031	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	San Gorgonio Pass	4164	42	46	0	0	19.2	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	4137	251	48	0	0	20.4	122	23.90	16.90	0	6.42	--	--	--	--
30	Coachella Valley 2**	4157	317	77	0	8 (3%)	29.1	121	25.60	20.20	0	8.41	--	--	89	2.7
30	Coachella Valley 3**	4032	320	259	1 (0%)	69 (22%)	38.0	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																
32	Northwest San Bernardino Valley	5175	305	63	0	12 (4%)	30.5	--	--	--	--	--	--	--	--	--
33	I-10 Near Road[##]	5035	--	--	--	--	--	--	--	--	--	--	--	--	--	--
33	CA-60 Near Road[##]	5036	--	--	--	--	--	356	53.10	33.70	4 (1%)	14.36	--	--	--	--
34	Central San Bernardino Valley 1	5197	40	61	0	6 (15%)	35.8	117	46.10	27.40	1 (1%)	11.95	--	--	44	3.0
34	Central San Bernardino Valley 2	5203	320	80	0	81 (25%)	38.7	115	25.70	24.70	0	11.66	0.010	0.009	--	--
35	East San Bernardino Valley	5204	40	57	0	1 (3%)	23.4	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	40	51	0	1 (3%)	18.1	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	58	24.30	20.40	0	7.62	--	--	--	--
	DISTRICT MAXIMUM [l)]			259	1	154	52.2		53.1	34.1	7	14.36	0.016	0.011		5.2
	SOUTH COAST AIR BASIN [m)]			124	0	173	52.2		53.1	34.1	13	14.36	0.016	0.011		5.2

* Incomplete data due to the site improvement. ** Salton Sea Air Basin µg/m³ – Micrograms per cubic meter of air AAM – Annual Arithmetic Mean -- Pollutant not monitored

\+ High PM10 (≥ 155 µg/m³) data recorded in the Coachella Valley and the Basin attributed to high winds are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

\# PM2.5 concentrations above the 24-hour standard attributed to wildfire smoke and fireworks are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

e) PM10 statistics listed above are based on combined Federal Reference Method (FRM) and Federal Equivalent Method (FEM) data.

f) State annual average (AAM) PM10 standard is 20 µg/m³. Federal annual PM10 standard (50 µg/m³) was revoked in 2006.

g) PM2.5 statistics listed above represent FRM data only with the exception of Central Orange County, I-710 Near Road, Metropolitan Riverside County 1 and 3, CA-60 Near Road, and South Coastal LA County 2 where FEM PM2.5 measurements are used to supplement missing FRM measurements because they pass the screening criteria in the South Coast AQMD Continuous Monitor Comparability Assessment and Request for Waiver dated July 1, 2021.

h) The Federal and State annual standards are 12.0 µg/m³.

i) Federal lead standard is 3-months rolling average > 0.15 µg/m³; state standard is monthly average ³ 1.5 µg/m³. Lead standards were not exceeded.

j) State sulfate standard is 24-hour ³ 25 µg/m³. There is no federal standard for sulfate.

k) Filter-based measurements for PM10 from March 28, 2020 to June 26, 2020 are not available due the COVID-19 Pandemic

l) District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction

m) Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin

++ Higher lead concentrations were recorded at near-source monitoring sites immediately downwind of stationary lead sources. Maximum monthly and 3-month rolling averages recorded were 0. 096 µg/m³ and 0.059 µg/m³, respectively.

\## Four near-road sites measuring one or more of the pollutants PM2.5, CO and/or NO2 are operating near the following freeways: I-5, I-10, CA-60 and I-710.

2019 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2019

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide a): No. Days of Data	Carbon Monoxide a): Max Conc. in ppm 1-hour	Carbon Monoxide a): Max Conc. in ppm 8-hour	Ozone b): No. Days of Data	Ozone b): Max. Conc. in ppm 1-hour	Ozone b): Max. Conc. in ppm 8-hour	Ozone b): Fourth High Conc. ppm 8-hour	Ozone b), No. Days Standard Exceeded: Old Federal > 0.124 ppm 1-hour	Current Federal > 0.070 ppm 8-hour	2008 Federal > 0.075 ppm 8-hour	1997 Federal > 0.084 ppm 8-hour	Current State > 0.09 ppm 1-hour	Current State > 0.070 ppm 8-hour	Nitrogen Dioxide c): No. Days of Data	Nitrogen Dioxide c): Max Conc. in ppb 1-hour	Nitrogen Dioxide c): 98th Percentile Conc. ppb 1-hour	Nitrogen Dioxide c): Annual Average AAM Conc. ppb	Sulfur Dioxide d): No. Days of Data	Sulfur Dioxide d): Max. Conc. in ppb 1-hour	Sulfur Dioxide d): 99th Percentile Conc. ppb 1-hour
	LOS ANGELES COUNTY																					
1	Central LA	87	364	2.0	1.6	364	0.085	0.080	0.065	0	2	1	0	0	2	365	69.7	55.5	17.7	365	10.0	2.3
2	Northwest Coastal LA County	91	364	1.9	1.2	360	0.086	0.075	0.064	0	1	0	0	0	1	365	48.8	43.0	9.7	--	--	--
3	Southwest Coastal LA County	820	364	1.8	1.3	365	0.082	0.067	0.060	0	0	0	0	0	0	363	56.6	48.9	9.5	365	8.2	3.7
4	South Coastal LA County 1	72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 2	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 3	33	340	3.0	2.1	343	0.074	0.064	0.055	0	0	0	0	0	0	255	71.8	56.3	16.2	344	8.9	7.7
4	I-710 Near Road##	32	--	--	--	--	--	--	--	--	--	--	--	--	--	365	97.7	78.3	22.8	--	--	--
6	West San Fernando Valley	74	363	2.6	2.2	267	0.101	0.087	0.076	0	6	4	1	1	6	365	64.4	43.8	10.7	--	--	--
8	West San Gabriel Valley	88	361	1.5	1.2	302	0.120	0.098	0.086	0	12	8	4	4	12	361	59.1	50.6	13.2	--	--	--
9	East San Gabriel Valley 1	60	361	1.6	1.1	362	0.123	0.094	0.090	0	39	21	10	34	39	365	59.7	49.8	13.7	--	--	--
9	East San Gabriel Valley 2	591	360	1.2	0.8	356	0.130	0.102	0.097	1	58	38	17	46	58	360	52.9	36.5	8.6	--	--	--
10	Pomona/Walnut Valley	75	364	1.7	1.3	365	0.096	0.083	0.077	0	12	4	0	1	12	365	64.4	57.8	17.9	--	--	--
11	South San Gabriel Valley	85	364	1.9	1.5	364	0.108	0.091	0.073	0	7	3	1	5	7	364	61.8	55.1	17.6	--	--	--
12	South Central LA County	112	363	3.8	3.2	363	0.100	0.079	0.064	0	1	1	0	1	1	363	70.0	52.8	14.1	--	--	--
13	Santa Clarita Valley	90	359	1.5	1.2	359	0.128	0.106	0.101	1	56	42	17	34	56	357	46.3	35.3	9.1	--	--	--
	ORANGE COUNTY																					
16	North Orange County	3177	364	2.6	1.2	364	0.107	0.094	0.074	0	6	3	1	2	6	362	59.4	44.5	12.1	--	--	--
17	Central Orange County	3176	363	2.4	1.3	365	0.096	0.082	0.064	0	1	1	0	1	1	365	59.4	49.2	12.7	--	--	--
17	I-5 Near Road##	3131	350	2.6	1.6	--	--	--	--	--	--	--	--	--	--	365	59.4	50.4	19.2	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	363	1.0	0.8	365	0.106	0.087	0.082	0	11	7	1	3	11	--	--	--	--	--	--	--
	RIVERSIDE COUNTY																					
22	Corona/Norco Area	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	364	1.5	1.2	360	0.123	0.096	0.092	0	59	37	15	24	59	365	56.0	52.8	13.5	365	1.8	1.4
23	Metropolitan Riverside County 3	4165	364	2.0	1.3	365	0.131	0.099	0.096	2	64	42	19	26	64	346	56.0	49.4	12.2	--	--	--
24	Perris Valley	4149	--	--	--	365	0.118	0.095	0.090	0	64	38	13	26	64	--	--	--	--	--	--	--
25	Lake Elsinore	4158	364	1.6	0.7	365	0.108	0.089	0.079	0	28	11	1	4	28	365	38.0	33.3	6.8	--	--	--
26	Temecula Valley	4031	--	--	--	365	0.091	0.079	0.074	0	6	2	0	0	6	--	--	--	--	--	--	--
29	San Gorgonio Pass	4164	--	--	--	365	0.119	0.096	0.093	0	59	37	11	24	59	364	56.0	43.3	7.5	--	--	--
30	Coachella Valley 1**	4137	360	1.3	0.7	364	0.100	0.084	0.083	0	34	17	0	5	34	361	41.4	32.2	7.3	--	--	--
30	Coachella Valley 2**	4157	--	--	--	365	0.103	0.087	0.083	0	43	15	2	4	43	--	--	--	--	--	--	--
30	Coachella Valley 3**	4032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	SAN BERNARDINO COUNTY																					
32	Northwest San Bernardino Valley	5175	337	1.5	1.1	338	0.131	0.107	0.097	1	52	34	13	31	52	328	57.9	46.4	14.0	--	--	--
33	I-10 Near Road##	5035	364	1.5	1.1	--	--	--	--	--	--	--	--	--	--	346	86.3	70.5	27.6	--	--	--
33	CA-60 Near Road##	5036	--	--	--	--	--	--	--	--	--	--	--	--	--	364	87.7	73.9	29.0	--	--	--
34	Central San Bernardino Valley 1	5197	359	2.7	1.0	364	0.124	0.109	0.097	0	67	46	20	41	67	365	76.1	57.7	17.2	358	2.4	1.9
34	Central San Bernardino Valley 2	5203	352	1.3	1.1	354	0.127	0.114	0.103	2	96	73	37	63	96	352	59.3	46.3	14.3	--	--	--
35	East San Bernardino Valley	5204	--	--	--	364	0.137	0.117	0.106	8	109	88	63	73	109	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	365	0.129	0.112	0.106	2	99	79	44	53	99	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM e)			3.8	3.2		0.137	0.117	0.106	8	109	88	63	73	109		97.7	78.3	29.0		10.0	7.7
	SOUTH COAST AIR BASIN f)			3.8	3.2		0.137	0.117	0.106	10	126	101	71	82	126		97.7	78.3	29.0		10.0	7.7

*Incomplete Data ** Salton Sea Air Basin -- Pollutant not monitored ppm - Parts Per Million parts of air, by volume ppb – Parts Per Billion parts of air, by volume

AAM = Annual Arithmetic Mean ## Four near-road sites measuring one or more of the pollutants $PM_{2.5}$, CO and/or NO_2 are operating near freeways: I-5, I-10, I-710 and CA-60.

a) - The federal and state 8-hour CO standards (9 ppm and 9.0 ppm) and the federal and state 1-hour CO standards (35 ppm and 20 ppm) were not exceeded.

b) - The current (2015) O_3 federal standard was revised effective December 28, 2015.

c) - The NO_2 federal 1-hour standard is100 ppb and the federal annual standard is 53.4 ppb. The state 1-hour and annual standards are 0.18 ppm and 0.030 ppm.

d) - The federal SO_2 1-hour standard is 75 ppb (0.075 ppm). The state 1-hour SO standard is 0.25 ppm (250 ppb) and the state 24-hour SO_2 standard is 0.04 ppm (40 ppb).

e) - District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction

f) - Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin.

For information on the current standard levels and most recent revisions please refer to "Appendix II – Current Air Quality" of the "2016 AQMP" which can be accessed at https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp . Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the South Coast AQMD Current Hourly Air Quality Map, at https://www.aqmd.gov/aqimap. A printed map or copy of the AQMP Appendix II is also available free of charge from the South Coast AQMD Public Information Center at 1-800-CUT-SMOG.

2019 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2019

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 e)+ No. Days of Data	Max. Conc. in µg/m3 24-hour	No. (%) Samples Exceeding Standards Federal > 150 µg/m3 24-hour	State > 50 µg/m3 24-hour	Annual. Average Conc. f) (AAM) µg/m3	Fine Particulates PM2.5 g)# No. Days of Data	Max. Conc. in µg/m3 24-hour	98th Percentile Conc. in µg/m3 24-hour	No (%) Samples Exceeding Federal Std. > 35 µg/m3 24-hour	Annual. Average Conc. h) (AAM) µg/m3	Lead i)++ Max. Monthly Average Conc. µg/m3	Max. 3-Months Rolling Averages µg/m3	PM10 Sulfate j) No. Days of Data	Max. Conc. in µg/m3 24-hour
LOS ANGELES COUNTY																
1	Central LA	087	9	62	0	3 (6%)	25.5	360	43.50	28.30	1 (0.3%)	10.85	0.012	0.010	55	5.1
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	Southwest Coastal LA County	820	59	62	0	2 (3%)	19.2	--	--	--	--	--	0.004	0.004	--	--
4	South Coastal LA County 1	072	--	--	--	--	--	159	28.00	20.70	0	9.23	--	--	--	--
4	South Coastal LA County 2	077	60	72	0	2 (3%)	21.0	354	30.60	23.20	0	9.22	0.006	0.005	--	--
4	South Coastal LA County 3	033	58	74	0	3 (5%)	26.9	--	--	--	--	--	--	--	59	5.8
4	I-710 Near Road##	032	--	--	--	--	--	365	36.70	26.40	1 (0.3%)	10.99	--	--	--	--
6	West San Fernando Valley	074	--	--	--	--	--	118	30.00	26.30	0	9.16	--	--	--	--
8	West San Gabriel Valley	088	--	--	--	--	--	118	30.90	24.60	0	8.90	--	--	--	--
9	East San Gabriel Valley 1	060	61	82	0	4 (7%)	28.1	120	28.30	21.20	0	9.18	--	--	61	6.2
9	East San Gabriel Valley 2	591	308	97	0	3 (1%)	20.8	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	119	29.60	24.40	0	10.34	0.009	0.007	--	--
12	South Central LA County	112	--	--	--	--	--	303	39.50	26.60	1 (0.3%)	10.87	0.009	0.007	--	--
13	Santa Clarita Valley	090	60	62	0	1 (2%)	18.4	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	364	127	0	13 (4%)	21.9	346	36.10	23.30	3 (0.9%)	9.32	--	--	60	5.1
17	I-5 Near Road##	3131	--	--	--	--	--	--	--	--	--	--	--	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	60	45	0	0	16.6	111	20.80	14.70	0	7.11	--	--	--	--
RIVERSIDE COUNTY																
22	Corona/Norco Area	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	120	99	0	21 (18%)	34.4	352	46.70	31.80	4 (1.1%)	11.13	0.008	0.007	121	14.6
23	Metropolitan Riverside County 3	4165	362	143	0	130 (36%)	43.1	356	46.70	36.20	9 (2.5%)	12.53	--	--	--	--
24	Perris Valley	4149	61	97	0	4 (7%)	25.3	--	--	--	--	--	--	--	--	--
25	Elsinore Valley	4158	301	93	0	5 (2%)	18.7	--	--	--	--	--	--	--	--	--
26	Temecula Valley	4031	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	San Gorgonio Pass	4164	56	63	0	2 (4%)	17.9	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	4137	346	75	0	5 (1%)	19.5	119	15.50	12.40	0	6.05	--	--	--	--
30	Coachella Valley 2**	4157	361	141	0	27 (7%)	27.8	118	15.00	13.50	0	7.37	--	--	119	3.2
30	Coachella Valley 3**	4032	324	154	0	44 (14%)	33.3	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																
32	Northwest San Bernardino Valley	5175	306	125	0	7 (2%)	28.1	--	--	--	--	--	--	--	--	--
33	I-10 Near Road##	5035	--	--	--	--	--	--	--	--	--	--	--	--	--	--
33	CA-60 Near Road##	5036	--	--	--	--	--	364	41.30	30.70	5 (1.4%)	12.70	--	--	--	--
34	Central San Bernardino Valley 1	5197	61	88	0	12 (20%)	34.8	114	46.50	29.70	2 (1.8%)	10.84	--	--	62	5.2
34	Central San Bernardino Valley 2	5203	269	112	0	36 (13%)	29.9	97	34.80	33.00	0	10.06	0.013	0.011	--	--
35	East San Bernardino Valley	5204	59	44	0	0	21.2	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	54	38	0	0	16.1	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	46	31.00	31.00	0	5.94	--	--	--	--
	DISTRICT MAXIMUM k)			154	0	130	43.1		46.7	36.2	9	12.70	0.013	0.011		14.6
	SOUTH COAST AIR BASIN m)			143	0	137	43.1		46.7	36.2	10	12.70	0.013	0.011		14.6

* Incomplete data due to the site improvement. ** Salton Sea Air Basin µg/m³ – Micrograms per cubic meter of air AAM – Annual Arithmetic Mean -- Pollutant not monitored

\+ High PM10 (≥ 155 µg/m3) data recorded in the Coachella Valley and the Basin (due to high winds) are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

\# PM2.5 concentrations above the 24-hour standard attributed to wildfire smoke and fireworks are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

e) PM10 statistics listed above are based on combined Federal Reference Method (FRM) and Federal Equivalent Method (FEM) data.

f) State annual average (AAM) PM10 standard is > 20 µg/m3. Federal annual PM10 standard (AAM > 50 µg/m3) was revoked in 2006.

g) PM2.5 statistics listed above are for the FRM data only. FEM PM2.5 continuous monitoring instruments were operated at some of the above locations for real-time alerts and forecasting only.

h) Both Federal and State standards are annual average (AAM) > 12.0 µg/m3.

i) Federal lead standard is 3-months rolling average > 0.15 µg/m3; state standard is monthly average ³ 1.5 µg/m3. Lead standards were not exceeded.

j) State sulfate standard is 24-hour ³ 25 µg/m3. There is no federal standard for sulfate.

k) District Maximum is the maximum value calculated at any station in the South Coast AQMD Jurisdiction

m) Concentrations are the maximum value observed at any station in the South Coast Air Basin. Number of daily exceedances are the total number of days that the indicated concentration is exceeded at any station in the South Coast Air Basin.

++ Higher lead concentrations were recorded at near-source monitoring sites immediately downwind of stationary lead sources. Maximum monthly and 3-month rolling averages recorded were 0. 021 µg/m3 and 0.017 µg/m3, respectively.

\## Four near-road sites measuring one or more of the pollutants PM2.5, CO and/or NO2 are operating near the following freeways: I-5, I-10, CA-60 and I-710.

2018 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2018

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide a) No. Days of Data	Carbon Monoxide a) Max Conc. in ppm 1-hour	Carbon Monoxide a) Max Conc. in ppm 8-hour	Ozone b) No. Days of Data	Ozone b) Max. Conc. in ppm 1-hour	Ozone b) Max. Conc. in ppm 8-hour	Ozone b) Fourth High Conc. ppm 8-hour	Ozone b) No. Days Standard Exceeded: Old Federal > 0.124 ppm 1-hour	Current Federal > 0.070 ppm 8-hour	2008 Federal > 0.075 ppm 8-hour	1997 Federal > 0.084 ppm 8-hour	Current State > 0.09 ppm 1-hour	Current State > 0.070 ppm 8-hour	Nitrogen Dioxide c) No. Days of Data	Nitrogen Dioxide c) Max Conc. in ppb 1-hour	Nitrogen Dioxide c) 98th Percentile Conc. ppb 1-hour	Nitrogen Dioxide c) Annual Average AAM Conc. ppb	Sulfur Dioxide d) No. Days of Data	Sulfur Dioxide d) Max. Conc. in ppb 1-hour	Sulfur Dioxide d) 99th Percentile Conc. ppb 1-hour
LOS ANGELES COUNTY																						
1	Central LA	087	365	2.0	1.7	359	0.098	0.073	0.071	0	4	0	0	2	4	365	70.1	57.2	18.5	358	17.9	2.8
2	Northwest Coastal LA County	091	359	1.6	1.3	364	0.094	0.073	0.068	0	2	0	0	0	2	242	64.7	46.1	12.6	--	--	--
3	Southwest Coastal LA County	820	342	1.8	1.5	365	0.074	0.065	0.060	0	0	0	0	0	0	338	59.6	49.8	9.2	365	11.5	5.3
4	South Coastal LA County 1	072	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 3	033	364	4.7	2.1	363	0.074	0.063	0.053	0	0	0	0	0	0	359	85.3	62.7	17.3	365	10.5	9.4
4	I-710 Near Road##	032	--	--	--	--	--	--	--	--	--	--	--	--	--	355	90.3	79.1	22.3	--	--	--
6	West San Fernando Valley	074	359	3.4	2.1	362	0.120	0.101	0.094	0	49	23	12	14	49	365	57.2	50.1	12.1	--	--	--
8	West San Gabriel Valley	088	365	2.0	1.4	365	0.112	0.090	0.085	0	19	8	4	8	19	364	68.2	54.4	14.4	--	--	--
9	East San Gabriel Valley 1	060	365	1.4	1.0	364	0.139	0.099	0.097	3	42	23	10	24	42	363	70.8	56.8	14.9	--	--	--
9	East San Gabriel Valley 2	591	365	1.0	0.8	365	0.140	0.104	0.102	5	46	27	10	32	46	349	55.2	44.2	9.7	--	--	--
10	Pomona/Walnut Valley	075	365	2.1	1.8	362	0.112	0.092	0.081	0	10	8	3	7	10	365	67.9	60.4	19.4	--	--	--
11	South San Gabriel Valley	085	344	2.0	1.8	352	0.115	0.082	0.074	0	5	2	0	3	5	356	76.8	59.7	18.3	--	--	--
12	South Central LA County	112	357	4.7	3.5	365	0.075	0.063	0.058	0	0	0	0	0	0	335	68.3	55.6	15.0	--	--	--
13	Santa Clarita Valley	090	365	1.0	0.8	365	0.132	0.106	0.097	3	52	36	12	21	52	365	58.9	37.9	10.9	--	--	--
ORANGE COUNTY																						
16	North Orange County	3177	365	3.0	1.4	365	0.111	0.077	0.071	0	4	3	0	3	4	365	67.1	50.4	13.0	--	--	--
17	Central Orange County	3176	358	2.3	1.9	365	0.112	0.071	0.065	0	1	0	0	1	1	365	66.0	54.5	13.7	--	--	--
17	I-5 Near Road##	3131	320	2.7	2.2	--	--	--	--	--	--	--	--	--	--	348	61.7	55.8	20.8	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	300	1.2	0.9	365	0.121	0.088	0.074	0	9	2	2	2	9	--	--	--	--	--	--	--
RIVERSIDE COUNTY																						
22	Corona/Norco Area	4155	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	365	2.2	2.0	365	0.123	0.101	0.096	0	53	34	14	22	53	364	55.4	50.5	14.3	360	1.7	1.6
23	Metropolitan Riverside County 3	4165	358	2.6	2.4	355	0.129	0.107	0.097	1	57	32	12	21	57	358	54.5	50.4	13.7	--	--	--
24	Perris Valley	4149	--	--	--	365	0.117	0.103	0.095	0	67	47	19	31	67	--	--	--	--	--	--	--
25	Lake Elsinore	4158	361	1.1	0.8	365	0.116	0.095	0.089	0	30	26	7	16	30	359	41.3	36.4	8.5	--	--	--
26	Temecula Valley	4031	--	--	--	363	0.107	0.085	0.077	0	15	5	1	2	15	--	--	--	--	--	--	--
29	San Gorgonio Pass	4164	--	--	--	363	0.119	0.106	0.100	0	69	43	22	33	69	344	50.6	46.5	8.5	--	--	--
30	Coachella Valley 1**	4137	349	1.1	0.8	362	0.111	0.099	0.093	0	56	22	10	11	56	364	42.6	35.4	6.8	--	--	--
30	Coachella Valley 2**	4157	--	--	--	359	0.106	0.091	0.089	0	49	28	8	4	49	--	--	--	--	--	--	--
30	Coachella Valley 3**	4032	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																						
32	Northwest San Bernardino Valley	5175	365	1.7	1.2	363	0.133	0.111	0.106	6	52	32	14	25	52	355	58.7	48.9	14.7	--	--	--
33	I-10 Near Road##	5035	339	1.6	1.3	--	--	--	--	--	--	--	--	--	--	339	88.3	67.7	27.2	--	--	--
33	CA-60 Near Road##	5036	--	--	--	--	--	--	--	--	--	--	--	--	--	357	79.4	71.3	30.4	--	--	--
34	Central San Bernardino Valley 1	5197	365	1.9	1.1	365	0.141	0.111	0.106	7	69	47	18	38	69	365	63.0	55.9	18.3	362	2.9	2.5
34	Central San Bernardino Valley 2	5203	362	2.7	2.5	362	0.138	0.116	0.107	7	102	71	33	63	102	362	57.3	49.9	15.8	--	--	--
35	East San Bernardino Valley	5204	--	--	--	365	0.136	0.114	0.111	4	94	66	26	53	94	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	362	0.142	0.125	0.105	3	113	91	46	57	113	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM			4.7	3.5		0.142	0.125	0.111	7	113	91	46	63	113		90.3	79.1	30.4		17.9	9.4
	SOUTH COAST AIR BASIN			4.7	3.5		0.142	0.125	0.111	10	141	108	59	84	141		90.3	79.1	30.4		17.9	9.4

** Salton Sea Air Basin -- Pollutant not monitored ppm - Parts Per Million parts of air, by volume ppb – Parts Per Billion parts of air, by volume

AAM = Annual Arithmetic Mean ## Four near-road sites measuring one or more of the pollutants $PM_{2.5}$, CO and/or NO_2 are operating near freeways: I-5, I-10, I-710 and CA-60.

a) - The federal and state 8-hour CO standards (9 ppm and 9.0 ppm) and the federal and state 1-hour CO standards (35 ppm and 20 ppm) were not exceeded.

b) - The current (2015) O_3 federal standard was revised effective December 28, 2015.

c) - The NO_2 federal 1-hour standard is100 ppb and the federal annual standard is 53.4 ppb. The state 1-hour and annual standards are 0.18 ppm and 0.030 ppm, respectively.

d) – The federal SO_2 1-hour standard is 75 ppb (0.075 ppm). The state 1-hour SO standard is 0.25 ppm (250 ppb) and the state 24-hour SO_2 standard is 0.04 ppm (40 ppb).

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For information on the current standard levels and most recent revisions please refer to "Appendix II – Current Air Quality" of the "2016 AQMP" which can be accessed athttps://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp . Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the South Coast AQMD Current Hourly Air Quality Map, at https://www.aqmd.gov/aqimap. A printed map or copy of the AQMP Appendix II is also available free of charge from the South Coast AQMD Public Information Center at 1-800-CUT-SMOG.

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Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 e)+: No. Days of Data	Max. Conc. in µg/m3 24-hour	No. (%) Samples Exceeding Standards: Federal > 150 µg/m3 24-hour	State > 50 µg/m3 24-hour	Annual. Average Conc. f) (AAM) µg/m3	Fine Particulates PM2.5 g)#: No. Days of Data	Max. Conc. in µg/m3 24-hour	98th Percentile Conc. in µg/m3 24-hour	No (%) Samples Exceeding Federal Std. > 35 µg/m3 24-hour	Annual. Average Conc. h) (AAM) µg/m3	Lead i)++: Max. Monthly Average Conc. µg/m3	Max. 3-Months Rolling Averages µg/m3	PM10 Sulfate j): No. Days of Data	Max. Conc. in µg/m3 24-hour
LOS ANGELES COUNTY																
1	Central LA	087	363	81	0	31 (9%)	34.1	344	43.80	30.50	3 (0.9%)	12.58	0.011	0.011	53	4.5
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	Southwest Coastal LA County	820	48	45	0	0	20.5	--	--	--	--	--	0.005	0.004	48	5.2
4	South Coastal LA County 1	072	--	--	--	--	--	342	46.40	29.80	2 (0.6%)	10.99	--	--	--	--
4	South Coastal LA County 2	077	58	55	0	1 (2%)	23.9	330	47.10	27.70	2 (0.6%)	11.15	0.006	0.007	58	4.0
4	South Coastal LA County 3	033	57	84	0	4 (7%)	32.3	--	--	--	--	--	--	--	57	5.0
4	I-710 Near Road##	032	--	--	--	--	--	359	46.10	31.90	4 (1.1%)	12.75	--	--	--	--
6	West San Fernando Valley	074	--	--	--	--	--	106	31.00	22.60	0	10.32	--	--	--	--
8	West San Gabriel Valley	088	--	--	--	--	--	121	32.50	29.50	0	10.28	--	--	--	--
9	East San Gabriel Valley 1	060	60	78	0	10 (17%)	32.2	119	30.20	25.90	0	10.35	--	--	60	4.0
9	East San Gabriel Valley 2	591	317	101	0	20 (6%)	27.1	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	113	35.40	28.10	0	12.31	0.009	0.009	--	--
12	South Central LA County	112	--	--	--	--	--	117	43.00	34.20	1 (0.9%)	12.96	0.009	0.011	--	--
13	Santa Clarita Valley	090	54	49	0	0	23.4	--	--	--	--	--	--	--	54	3.5
ORANGE COUNTY																
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	320	129	0	13 (4%)	27.2	353	54.10	28.90	3 (0.8%)	11.02	--	--	61	4.1
17	I-5 Near Road##	3131	--	--	--	--	--	--	--	--	--	--	--	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	59	55	0	1 (2%)	19.0	107	20.80	18.50	0	8.31	--	--	59	4.0
RIVERSIDE COUNTY																
22	Corona/Norco Area	4155	58	100	0	3 (5%)	30.2	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	356	126	0	132 (37%)	44.0	354	50.70	26.30	2 (0.6%)	12.41	0.009	0.007	117	4.1
23	Metropolitan Riverside County 3	4165	354	148	0	168 (47%)	49.4	349	64.80	32.80	4 (1.1%)	13.87	--	--	59	3.5
24	Perris Valley	4149	60	64	0	3 (5%)	29.7	--	--	--	--	--	--	--	60	3.2
25	Elsinore Valley	4158	342	104	0	9 (3%)	22.4	--	--	--	--	--	--	--	--	--
26	Temecula Valley	4031	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	San Gorgonio Pass	4164	61	39	0	0	19.4	--	--	--	--	--	--	--	61	2.9
30	Coachella Valley 1**	4137	359	117	0	7 (2%)	21.0	122	30.20	14.30	0	6.02	--	--	61	2.7
30	Coachella Valley 2**	4157	353	146	0	43 (12%)	33.2	122	28.70	17.00	0	8.32	--	--	118	3.7
30	Coachella Valley 3**	4032	352	274	2 (1%)	63 (18%)	38.8	--	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																
32	Northwest San Bernardino Valley	5175	322	73	0	14 (4%)	32.3	--	--	--	--	--	--	--	--	--
33	I-10 Near Road##	5035	--	--	--	--	--	--	--	--	--	--	--	--	--	--
33	CA-60 Near Road##	5036	--	--	--	--	--	357	47.90	30.40	5 (1.4%)	14.31	--	--	--	--
34	Central San Bernardino Valley 1	5197	56	64	0	9 (16%)	34.1	110	29.20	26.80	0	11.13	--	--	56	3.9
34	Central San Bernardino Valley 2	5203	355	129	0	25 (7%)	30.2	114	30.10	22.90	0	11.17	0.008	0.008	58	3.8
35	East San Bernardino Valley	5204	59	74	0	2 (3%)	25.9	--	--	--	--	--	--	--	59	3.6
37	Central San Bernardino Mountains	5181	59	78	0	1 (2%)	19.5	--	--	--	--	--	--	--	59	2.4
38	East San Bernardino Mountains	5818	--	--	--	--	--	54	17.30	16.00	0	6.80	--	--	--	--
	DISTRICT MAXIMUM			148	0	168	49.4		64.8	34.2	5	14.31	0.011	0.011		5.2
	SOUTH COAST AIR BASIN			148	0	185	49.4		64.8	34.2	11	14.31	0.011	0.011		5.2

** Salton Sea Air Basin µg/m3 – Micrograms per cubic meter of air AAM – Annual Arithmetic Mean -- Pollutant not monitored

\+ High PM10 (≥ 155 µg/m3) data recorded in the Coachella Valley and the Basin attributed to high winds are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

PM2.5 concentrations above the 24-hour standard attributed to wildfire smoke and fireworks are excluded because they likely meet the exclusion criteria specified in the U.S. EPA Exceptional Event Rule. Exceptional event demonstrations will be submitted to U.S. EPA for events that have regulatory significance.

++ Higher lead concentrations were recorded at near-source monitoring sites immediately downwind of stationary lead sources. Maximum monthly and 3-month rolling averages recorded were 0. 096 µg/m3 and 0.059 µg/m3, respectively.

Four near-road sites measuring one or more of the pollutants PM2.5, CO and/or NO2 are operating near the following freeways: I-5, I-10, CA-60 and I-710.

e) PM10 statistics listed above are based on combined Federal Reference Method (FRM) and Federal Equivalent Method (FEM) data.
f) State annual average (AAM) PM10 standard is 20 µg/m3. Federal annual PM10 standard (50 µg/m3) was revoked in 2006.
g) PM2.5 statistics listed above are for the FRM data only. FEM PM2.5 continuous monitoring instruments were operated at some of the above locations for real-time alerts and forecasting only.
h) The federal and state annual standards are 12.0 µg/m3.
i) Federal lead standard is 3-months rolling average > 0.15 µg/m3; state standard is monthly average ^{3} 1.5 µg/m3. Lead standards were not exceeded.
j) State sulfate standard is 24-hour ^{3} 25 µg/m3. There is no federal standard for sulfate.

South Coast
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Fact Sheet for Applying CalEEMod to Localized Significance Thresholds

This fact sheet describes how construction mitigation measures from the new CalEEMod Land Use Model may be applied to the SCAQMD Localized Significance Threshold (LST) Methodology. The LST Methodology uses lookup tables based on site acreage to determine the significance of emissions for CEQA purposes. However, CalEEMod does not allow the user to mitigate construction emissions by directly modifying acreage disturbed.

CalEEMod calculates construction emissions (off-road exhaust and fugitive dust) based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the LST lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

1) The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions
2) The maximum number of acres disturbed on the peak day using the equipment list from above and the following table from the CalEEMod appendix

Equipment Type	Acres/8hr-day
Crawler Tractors	0.5
Graders	0.5
Rubber Tired Dozers	0.5
Scrapers	1

3) Any emission control devices added onto off-road equipment
4) Specific dust suppression techniques used on the day of construction activity with maximum emissions

Example 1

A 15-acre development proposes to use one grader, one scraper, and one tractor for eight hours each during Site Preparation activities (the peak day in this case). As the maximum daily disturbed acreage for this equipment is 2 acres (0.5+1+0.5=2), the project proponent should compare CalEEMod reported emissions against the 2-acre LST lookup tables.

Example 2

A 1-acre development proposes to use 2 dozers and 2 tractors for eight hours per day each during Grading activities. The total acreage disturbed is 2 acres per day occurring on a 1-acre site (meaning the site is graded twice in one day). In this case, the CalEEMod reported emissions should be compared against the 1-acre LST lookup tables.

Appendix B
Biological Resources Technical Memorandum

TECHNICAL MEMORANDUM

To	Marshall Styers, Environmental Specialist Los Angeles Department of Water and Power
Subject	**Toluca-Hollywood Line 1 Upgrade Project** Biological Resources Technical Memorandum
From	Arthur Popp AECOM Senior Biologist
Date	October 11, 2022

1. INTRODUCTION

The City of Los Angeles Department of Water and Power (LADWP) proposes to upgrade the approximately 1.8-mile underground portion of the existing Toluca–Hollywood 230 kilovolt (kV) Line 1 (TOL–HWD L1) cable, which runs from the Nichols Canyon Terminal Tower to the Hollywood Receiving Station. All work would be located within the road right-of-way (ROW), the confines of LADWP property, or within an easement. The proposed Toluca–Hollywood Line 1 Upgrade Project (proposed project) would include the following work:

- Trenching and installing a new underground cable adjacent to the existing underground TOL-HWD L1 alignment from Hollywood Boulevard southeast to the Hollywood Receiving Station.
- Trenching and removing the existing underground TOL-HWD L1 pipe and cable and installing a new underground pipe and cable inside the same trench/alignment within Nichols Canyon Road, north of Hollywood Boulevard to the Nichols Canyon Terminal Tower.
- Splicing the new cable in Nichols Canyon Road together with the new cable south of Hollywood Boulevard and transferring the circuit to the new cable. The existing pipe south of Hollywood Boulevard would be abandoned in place.
- Raising an existing transmission tower along the existing TOL-HWD L1 and lowering a portion of an existing Burbank Water and Power (BWP) distribution line that crosses under the TOL-HWD L1.
- Making modifications to the Nichols Canyon Terminal Tower and the Hollywood Receiving Station to accommodate the system upgrade.

AECOM was retained by LADWP to prepare a biological resource assessment of the proposed project in support of the California Environmental Quality Act (CEQA). This technical memorandum summarizes the results of database searches and a field survey conducted by AECOM to document existing biological conditions within the project area, evaluate the presence and potential for special-status species and sensitive habitats to occur in the project area or vicinity, and evaluate the need for any Best Management Practices (BMPs) or mitigation measures to minimize and avoid potential impacts to biological resources.

2. PROJECT DESCRIPTION

2.1 Project Location and Setting

The proposed project is made up of three components: the underground alignment, Tower 584, and BWP line. They are located south of, within, and north of the Hollywood Hills, respectively. The proposed project is situated near Interstate 5, United States (U.S.) Highway 101, California State Route (SR) 134 (SR-134), and SR-170 within Los Angeles County, California. The underground alignment is located between the Hollywood Receiving Station and Nichols Canyon Terminal Tower just south of the Hollywood Hills and west of U.S. Highway 101. This 1.8-mile stretch runs along North Fuller Avenue, Fountain Avenue, North Genesee Avenue, and Nichols Canyon Road. Tower 584, is located adjacent to Mulholland Drive within the Hollywood Hills. The BWP line is in the City of Burbank, west of Hollywood Way north of SR-134. Figure 1, included in Attachment A, displays the vicinity map of the project area. Figure 2 (Attachment A) depicts the immediate locations of the three components. Collectively, the three components are referred to as the 'project area', which is the footprint of all proposed project activities.

2.2 Project Background

The existing TOL-HWD L1 is currently 230kV and 313 megavolt-amperes (MVA). The first approximately 6.7 miles (between the Toluca Receiving Station and the Nichols Canyon Terminal Tower) is an overhead aluminum conductor steel reinforced (ACSR) cable. The remainder of the transmission line, the portion which comprises the majority of the proposed project, is a circuit within an underground High-Pressure Pipe Type (HPPT) cable. The HPPT cable is a rigid steel pipe that contains three conductors in a pressurized oil filled environment, and acts as both a cable and a conduit.

2.3 Project Objectives

The proposed project is essential to support LADWP's planned reduced reliance on its in-basin combustion-turbine electrical generation facilities while substantially increasing the use of renewable resources in an effort to achieve the long-term City goal of 100 percent clean energy by 2035.

The purpose of the proposed project is to increase the overall circuit rating of TOL-HWD L1 from 313 MVA to 405 MVA continuous rating. A circuit rating is the maximum current a circuit can safely withstand for a specified time. In order to increase the circuit rating, LADWP proposes to replace aging cable infrastructure of the underground portion of the TOL-HWD L1 in approximately the same location as the existing TOL-HWD L1 HPPT cable by installing a new cable. The higher circuit rating of TOL-HWD L1 would result in higher conductor temperature and sag of the overhead line originating at the Toluca Receiving Station and spanning to Nichols Canyon Terminal Tower. The anticipated increase in temperature and resulting sag on the overhead line necessitates an increase in height for one tower and a lowering of a BWP distribution line to address California Public Utilities Commission (CPUC) General Order Number 95 (GO95) clearance requirements. The increased circuit rating of the new cable would provide greater capacity to respond to

Hollywood area load requirements and would reduce stress on the Toluca-Hollywood and other (e.g., Fairfax-Hollywood, etc.) transmission pathways while providing the capacity to accommodate imported renewable energy coming from outside the Los Angeles Basin.

2.4 Description of the Project

The primary component of the proposed project is the 1.8 miles of new 230 kV cable, which would replace the existing HPPT TOL-HWD L1 cable. This underground transmission line would consist of cross-linked polyethylene insulation (XLPE) copper conductor, an external metallic covering for moisture protection, and an outer polyethylene jacket for corrosion protection.

The new XLPE cable would be routed entirely within the public ROW, either immediately adjacent to the existing alignment (south of Hollywood Boulevard) or within the existing alignment (north of Hollywood Boulevard). Because the existing TOL-HWD L1 HPPT cable must remain in service for as long as practical during construction of the proposed project, the proposed XLPE cable would be installed in a new trench parallel to the existing line (except for the portion of the underground alignment north of Hollywood Boulevard along Nichols Canyon Road where this is not possible, discussed further below).

South of Hollywood Boulevard, the proposed XLPE cable would be trenched underground within a concrete-encased bank, known as duct banks, and a new maintenance vault system. Eight (8) maintenance vaults would be required to splice together segments of cable during installation and provide a means for inspecting the integrity of the underground cable system during the operational phase of the line. Maintenance vaults would be spaced approximately 850 to 1,100 feet apart along the proposed underground alignment.

Between maintenance vaults, the underground alignment would be trenched to install 8-inch polyvinyl chloride (PVC) conduits, which would be encased within a concrete duct bank. Once the system of vaults and duct banks is complete, the proposed XLPE cable would be installed.

North of Hollywood Boulevard along Nichols Canyon Road the existing underground alignment would be used for the proposed XLPE cable due to space constraints from a number of existing underground utilities within Nichols Canyon Road. This would require draining and cleaning the HPPT section with heavy detergent; excavating, removing, and disposing of (recycling) the HPPT section; and then installing a new 12-inch PVC conduit and XLPE cable within the same trench. A short-term outage of approximately 5 months would be required during this work and to connect the XLPE cable to the terminal ends and to the portion of the line that is south of Hollywood Boulevard. This outage will not impact power supply to LADWP customers. The proposed XLPE cable would then be tested and energized. Lastly, the remainder of the existing HPPT (south of Hollywood Boulevard) would be depressurized, drained, and abandoned in place.

To accommodate the system upgrade, modifications within the Nichols Canyon Terminal Tower property and the Hollywood Receiving Station would be required to connect the underground portion of the cable to associated above ground equipment. This would include the replacement of a concrete pad, subsurface support structure, and an aboveground rack at both locations. The existing pump houses and accompanying tanks would be demolished and removed at both locations, as they would no longer be supporting an the HPPT. Within the Hollywood Receiving Station property, the existing pipe and cable would be abandoned and trenching for a new pipe/cable alignment (approximately 350 feet in length) would be required.

Additionally, the higher transmission line rating of the new underground transmission line would result in higher conductor temperature and sag of the overhead line. Analysis of operation of the increased rating identified two GO95 clearance violation locations: the first location would be from TOL-HWD L1 bottom conductor to the BWP distribution line crossing under the TOL-HWD L1 between Towers 555 and 556; and the second location would be of TOL-HWD L1 bottom conductor to ground between Towers 583 and 584. In order to resolve conductor clearance to the BWP line, BWP would lower the line (i.e., move the distribution line and other wires to a lower position on their poles). In order to resolve conductor clearance to ground between Towers 583 and 584, Tower 584 would be raised in 5-foot segments (a maximum of 15 feet) using a proprietary process that employs hydraulic jacks to lift an upper portion of the tower, requiring some foundation work at the tower footings.

2.5 Best Management Practices and Regulatory Requirements

The following BMPs and regulatory requirements would be employed during construction of the proposed project, to help minimize or eliminate potential impacts to the environment. BMPs and regulatory requirements are distinguished from mitigation measures because they are existing practices or measures required by law, regulation, or policy, and/or they are ongoing, regularly occurring practices, and they are not unique to the proposed project.

- The proposed project would implement Rule 403 dust control measures required by the South Coast Air Quality Management District (SCAQMD), which would include the following:
  - Water shall be applied to exposed surfaces at least two times per day to prevent generation of dust plumes.
  - The construction contractor shall utilize at least one of the following measures at each vehicle egress from the project site to a paved public road:
    a. Pave the surface extending at least 100 feet and at least 20 feet wide;
    b. Utilize a wheel shaker/wheel spreading device consisting of raised dividers at least 10 feet wide to remove bulk material from tires and vehicle undercarriages; or
    c. Install a wheel washing system to remove bulk material from tires and vehicle undercarriages.
  - All trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).
  - Construction activity on exposed or unpaved dirt surfaces shall be suspended when wind speed exceeds 25 miles per hour (mph).
  - A community liaison shall be identified concerning on-site construction activity including resolution of issues related to dust generation.
  - Non-toxic soil stabilizers shall be applied according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).

- Streets shall be swept at the end of the day if visible soil is carried onto adjacent public paved roads. If feasible, water sweepers with reclaimed water shall be used.

- A Storm Water Pollution Prevention Plan (SWPPP), which will include erosion and sedimentation BMPs, shall be developed and implemented for construction activities. The SWPPP may include, but would not be limited to, the following:
  - Minimizing the extent of disturbed areas and duration of exposure;
  - Stabilizing and protecting disturbed areas;
  - Keeping runoff velocities low; and
  - Retaining sediment within the construction area.
- Construction erosion control BMPs may include the following:
  - Temporary desilting basins;
  - Silt fences;
  - Gravel bag barriers;
  - Temporary soil stabilization with mattresses and mulching;
  - Temporary drainage inlet protection; and
  - Diversion dikes and interceptor swales.
- Migratory Bird Treaty Act

  Because proposed project construction activities would be continuous during the 3-year construction period, nesting bird season (which generally occurs February 1 through September 1, and as early as January for raptors) could not be avoided. Therefore, the following BMPs shall be employed to avoid and minimize impacts to nesting birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC):
  - **BMP-BIO-1** A pre-construction nesting bird survey shall be conducted by a qualified biologist within 3 days prior to the start of construction activities during the nesting season to determine whether active nests are present within or directly adjacent to the construction zone. All nests found shall be recorded.
  - **BMP-BIO-2** In the event an active nest is detected, a qualified biologist shall monitor the nest to determine if a nest avoidance buffer zone is necessary to restrict construction activities in proximity to the nest to protect the nest from failing. Any buffer zone, within which construction activities may not occur, shall be established in coordination with the qualified biologist, who shall take into account existing baseline conditions (e.g., topography, buffering buildings or other structures, etc.). In addition, observed avian response to ambient conditions (e.g., existing traffic noise and human activity) shall factor into the requirement for and size of a nest avoidance buffer.
  - **BMP-BIO-3** The qualified biologist shall monitor all active nests, including those with and without an established buffer, at least once per week to determine whether birds are being disturbed. If signs of disturbance or stress are observed, the qualified biologist shall implement adaptive measures to reduce disturbance. These measures could include establishing or increasing buffer distances, or

placing visual screens or sound dampening structures between the nest and construction activity until fledging is confirmed. The qualified biologist shall monitor each active nest until it's determined that nestlings have fledged and dispersed, or the nest is no longer active.

- **BMP-BIO-4** Should an active nest of any federal or state-listed bird species be detected during pre-construction surveys or subsequent construction monitoring, construction activity in the immediate area shall not commence or shall cease if already underway, and the applicable federal and/or state agency (U.S. Fish and Wildlife Service [USFWS] and/or California Department of Fish and Wildlife [CDFW]) shall be notified. Work in other areas of the project site may continue until the active nests has been evaluated.

3. METHODS FOR ASSESSING BIOLOGICAL RESOURCES

A search of relevant regional databases for special-status biological resources in the vicinity of the project area was conducted prior to conducting a field survey. The project alignment occurs entirely within the northwest corner of the Hollywood 7.5-minute United States Geological Survey Quadrangle (quadrangle). Additional areas of the proposed project, which include the area surrounding Tower 584 and the empty lots around BWP poles 1 and 2, occur in the center northern portion of the Hollywood quadrangle and the southwest corner of the Burbank quadrangle, respectively. A search of the Hollywood quadrangle and the surrounding eight quadrangles—Van Nuys, Burbank, Pasadena, Los Angeles, December Hills, Venice, Inglewood, and South Gate—was made of the CDFW's California Natural Diversity Database (CNDDB)[1] and the California Native Plant Society's (CNPS) on-line Inventory of Rare and Endangered Plants of California.[2] Additionally, the USFWS's online Information for Planning and Consultation (IPaC)[3] database was queried for special-status species, sensitive natural communities, and protected areas known from the proposed project vicinity.

The project area evaluated for biological resources included the proposed underground transmission line alignment in Hollywood, existing Tower 584 in Hollywood Hills, and the empty lots surrounding BWP distribution lines in the City of Burbank, plus a 500-foot survey buffer around the aforementioned areas, combined with the Biological Survey Areas (BSAs) (see Figures 3a-c). A buffer around proposed project components was evaluated to capture potential indirect effects to biological resources from implementation of the proposed project. Indirect effects could include elevated noise and dust levels, soil compaction, and increased human activity within the BSA. A 500-foot survey buffer is standard for capturing potential indirect impacts from a project on biological resources. It is anticipated that indirect impacts beyond 500 feet would be diffuse and would not significantly impact biological resources, especially because of the urban nature of the surrounding area.

Prior to conducting a field survey, aerial imagery of the BSAs was reviewed for the presence of habitats that could potentially support special-status biological resources. Because most of the BSAs are developed by hardscape features (i.e., roadways and buildings), the

[1] California Department of Fish and Wildlife. *California Natural Diversity Data Base (CNDDB).* Full report for the Hollywood, Van Nuys, Burbank, Pasadena, Los Angeles, Beverly Hills, Venice, Inglewood, and South Gate quadrangles. Generated December 8, 2021.
[2] California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants (online edition, v9-01 0.0). Available at: http://www.rareplants.cnps.org/. Accessed December 8, 2021.
[3] Information for Planning and Consultation. 2021. U.S. Fish and Wildlife Service. Available at: https://ecos.fws.gov/ipac/. Accessed December 8, 2021.

desktop review focused on identifying any significant green or otherwise open spaces that could provide suitable habitat. An initial survey of the entire Toluca-Hollywood alignment was conducted by AECOM biologists Art Popp and Rob Conohan in April 2020, including surveys along the underground transmission line alignment in the Hollywood Community of the City of Los Angeles and in the City of West Hollywood and at Tower 584 in the Hollywood Hills. On December 15, 2021, AECOM biologist Brianna Quirarte revisited the underground transmission alignment and Tower 584, and conducted a survey of the parcels in the City of Burbank. Field surveys were conducted to document existing biological resources that occur or have the potential to occur within and adjacent to the BSAs surrounding the proposed project components, and to evaluate the potential for special-status plant and wildlife species to occur within the BSAs. Binoculars were utilized to scan for evidence of wildlife activity in the BSAs. Seasonal, species-specific botanical and wildlife surveys were not conducted as part of this evaluation; however, based on the field survey conducted and an assessment of conditions in the BSAs, it is apparent that special-status plant and wildlife species are not anticipated to occur within the urbanized area in which the proposed project is located.

4. EXISTING CONDITIONS

Photographs depicting conditions within the BSAs are provided in Attachment B.

Installation of the new underground transmission line between the Nichols Canyon Terminal Tower and Hollywood Receiving Station would occur within the Hollywood Community of the City of Los Angeles and in the City of West Hollywood, as depicted on Figure 3a (Attachment A). The entire BSA along the alignment is urbanized or has otherwise been previously disturbed, primarily by residential development, with some areas of commercial development (Photos 1 through 9). Vegetation within the BSA consists primarily of plantings of non-native ornamental trees and shrubs and areas of lawn associated with residential landscapes. Poinsettia Park occurs at the southern end of the alignment, across from the Hollywood Receiving Station. The BSA surrounding the Nichols Canyon Terminal Tower captures some steep undisturbed hillside habitats composed of native shrub species; however, non-native grasses cover most of this habitat (visible in Photo 1). The alignment lies at approximately 500 feet above mean sea level (amsl) at the Nichols Canyon Terminal Tower to 270 feet amsl at the Hollywood Receiving Station.

Tower 584 is located in the Hollywood Hills (Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan Area of the City of Los Angeles) and sits atop a rocky hill along Mulholland Drive as depicted on Figure 3b. The tower lies at approximately 1,100 feet amsl and vegetation around the tower consists of wild oat (*Avena* sp.), with occasional native laurel sumac (*Malosma laurina*) shrubs (Photos 10 and 11). The surrounding BSA consists of residential parcels with ornamental landscapes that include occasional native tree or shrub species (Photos 12 and 13). Occasional tall mature pine, palm, and eucalyptus trees occur within the BSA.

The BWP distribution line that will be lowered occurs in the City of Burbank as depicted on Figure 3c. The parcels lie at approximately 570 feet amsl and consist of patchy low-growing grasses and weedy species (Photos 14 and 15). No trees or shrubs occur on these parcels. The surrounding BSA consists of dense residential development with landscaping of primarily non-native ornamental species. Most trees are small or medium-sized, with few tall mature trees occurring in the BSA.

4.1 Vegetation Communities and Plants

Vegetation communities are assemblages of plant species that commonly coexist. The classification of vegetation communities is based on the life form of the dominant species within that community and the associated species. Non-native ornamental species and occasional native species common to residential and commercial properties occur within the BSAs. A portion of the BSA north of the Nichols Canyon Terminal Tower captures some native hillside habitat consisting of native laurel sumac and California encelia (*Encelia californica*), species common in native coastal sage scrub and chaparral habitats. However, this habitat also includes a significant cover of non-native and invasive fountaingrass (*Pennisetum setaceum*) (see Photo 1, Attachment B). Common ornamental trees observed within the BSAs are included in Table 1.

One special-status plant species, southern California black walnut (*Juglans californica*), was observed within the BSA of Tower 584. Approximately six trees of this species were noted downslope from the end of Sunnydell Trail; proposed project staging for work at Tower 584 is proposed on this roadway.

4.2 Wildlife

Wildlife species observed during the April 2020 and December 2021 field surveys included primarily bird species that are common in and adapted to urban environments. The wildlife species listed in Table 2 were recorded during field surveys.

No special-status wildlife species were observed during field surveys conducted in support of this proposed project.

Table 1. Common Tree Species Observed in the BSAs

Scientific Name	Common Name
DICOTS (Woody and Herbaceous Plant Species)	
ALTINGIACEAE	**SWEET GUM FAMILY**
Liquidambar styraciflua	sweet gum
ANACARDIACEAE	**SUMAC FAMILY**
Schinus terebinthifolius	Brazilian peppertree
BIGNONIACEAE	**BIGNONIA FAMILY**
Jacaranda mimosifolia	jacaranda
CUPRESSACEAE	**CYPRESS FAMILY**
Cupressus sempervirens	Italian cypress
FAGACEAE	**BEECH AND OAK FAMILY**
Quercus agrifolia	coast live oak
FABACEAE	**PEA FAMILY**
Cassia leptophylla	gold medallion tree
Tipuana tipu	tipu
LAURACEAE	**LAUREL FAMILY**
Cinnamomum camphora	camphor tree
MORACEAE	**FIG FAMILY**
Ficus microcarpa	Indian laurel fig

Scientific Name	Common Name
PINACEAE	**PINE FAMILY**
Pinus pinea	Italian stone pine
PLATANACEAE	**SYCAMORE FAMILY**
Platanus racemosa	western sycamore
MONOCOTS (Grasses and Grass-like Plant Species)	
ARECACEAE	**PALM FAMILY**
Pheonix canariensis	Canary Island date palm
Washingtonia filifera	California fan palm
Washingtonia robusta	Mexican fan palm

Table 2. Wildlife Species Recorded during Field Surveys

Common Name	Scientific Name	April 22, 2020[1]	December 15, 2021[2]
BIRDS			
Accipitridae	**Birds of Prey**		
red-tailed hawk	*Buteo jamaicensis*	X	X
Aegithalidae	**Bushtits**		
bushtit	*Psaltriparus minimus*		X
Corvidae	**Crows, Ravens, Jays**		
American crow	*Corvus brachyrhynchos*		X
common raven	*Corvus corax*		X
Fringillidae	**Finches**		
house finch	*Haemorhous mexicanus*	X	X
lesser goldfinch	*Spinus psaltria*	X	
Mimidae	**Mockingbirds and Thrashers**		
Northern mockingbird	*Mimus polyglottos*	X	X
Parulidae	**New World Warblers**		
orange-crowned warbler	*Vermivora celata*	X	
Passerellidae	**Sparrows**		
song sparrow	*Melospiza melodia*	X	
house sparrow	*Passer domesticus*	X	
spotted towhee	*Pipilo maculatus*	X	
Trochilidae	**Hummingbirds**		
Anna’s hummingbird	Calypte anna		X
Troglodytidae	**Wrens**		
Bewick’s wren	*Thryomanes bewickii*	X	
Tyrannidae	**Flycatchers**		
Pacific-slope flycatcher	*Empidonax difficilis*	X	
black phoebe	*Sayornis nigricans*		X
Vireonidae	**Vireos**		
warbling vireo	*Vireo gilvus*	X	
Hutton’s vireo	*Vireo huttoni*	X	
MAMMALS			
Sciuriade	**Squirrels**		
Eastern fox squirrel	*Sciurus niger*		X

[1] Wildlife recorded within the BSA of the proposed underground transmission line alignment.
[2] Wildlife recorded within the BSAs of the proposed underground transmission line alignment, Tower 584, and parcels in City of Burbank

4.3 Wildlife Corridor

In an urban context, a wildlife migration corridor can be defined as a linear landscape feature of sufficient width and buffer to allow animal movement between two comparatively undisturbed habitat fragments, or between a habitat fragment and some vital resource that encourages population growth and diversity. Habitat fragments are isolated patches of habitat separated by otherwise foreign or inhospitable areas, such as urban tracts or highways. Two types of wildlife migration corridors seen in urban settings are regional corridors, defined as those linking two or more large areas of natural open space, and local corridors, defined as those allowing resident wildlife to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development.

The proposed project would be located within existing paved roadways and at existing transmission line towers/poles within the urbanized City of Los Angeles, City of West Hollywood, and City of Burbank. The BSA does not occur within or intersect a recognized/established regional wildlife corridor.

Ornamental trees within and adjacent to the BSAs provide some opportunities for cover, resting, foraging, and nesting to localized bird populations; however, they do not provide functions as a significant wildlife movement corridor.

5. SPECIAL-STATUS SPECIES

5.1 Special-Status Plant Species

Special-status plant species include those listed as Endangered, Threatened, Rare, or those species proposed for listing by USFWS under the federal Endangered Species Act (FESA), those listed by CDFW under the California Endangered Species Act (CESA), and the CNPS.[4,5,6] The CNPS inventory is sanctioned by CDFW and essentially serves as the list of candidate plant species for state listing. CNPS California Rare Plant Ranks (CRPR) 1B and 2 species are considered eligible for state listing as endangered or threatened.

A total of 67 plant species were identified from the CNDDB and CNPS database searches to have historically been recorded from the Hollywood and surrounding eight quadrangles (a land area of nearly 100 square miles), and from a search of IPaC for the project area and vicinity, including the 14 federal and/or State-listed species below:

- marsh sandwort (*Arenaria paludicola*; federally and State-listed Endangered)
- Braunton's milk-vetch (*Astragalus brauntonii*; federally-listed Endangered)
- Ventura Marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*; federally and State-listed Endangered)
- coastal dunes milk-vetch (*Astragalus tener* var. *titi*; federally and State-listed Endangered)

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[4] Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (Title 50 Code of Federal Regulations [CFR] 17.12 [listed plants], Title 50 CFR 17.11 [listed animals] and includes notices in the Federal Register for proposed species).
[5] Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (Title 14 California Code of Regulations 670.5).
[6] Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 *et seq*.).

- Nevin's barberry (*Berberis nevinii*; federally and State-listed Endangered)
- salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*; federally and State-listed Endangered)
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*; State-listed Endangered)
- beach spectaclepod (*Dithyrea maritima*; State-listed Threatened)
- slender-horned spineflower (*Dodecahema leptoceras*; federally and State-listed Endangered)
- San Diego button-celery (*Eryngium aristulatum* var. *parishii*; federally and State-listed Endangered)
- Gambel's watercress (*Nasturtium gambellii*; federally-listed Endangered, State-listed Threatened)
- spreading navarretia (*Navarretia fossalis* federally-listed Threatened)
- prostrate vernal pool navarretia (*Navarretis prostrata;* federally-listed Threatened)
- California Orcutt grass (*Orcuttia californica*; federally and State-listed Endangered)

The 67 special-status plant species identified during the database reviews, their status, and habitat requirements are provided in Table A, Attachment C.

No records of special-status plant species coincided with the BSA of the proposed underground transmission line alignment within the cities of Los Angeles and West Hollywood or the BSA surrounding the parcels where the BWP distribution line will be lowered in the City of Burbank. One record of a special-status plant species, mesa horkelia (*Horkelia cuneata* var. *puberula*; CRPR 1B.1[7]), from 100 plus years ago coincides with the BSA surrounding Tower 584. This species is expected to be extirpated from the area and was not observed during the field survey. Habitats potentially suitable for this species, and for all other special-status plant species identified during the database reviews, are absent from the BSA (see habitat descriptions in Table A, Attachment C) and special-status plant species are not expected to occur within the BSAs.

As presented in Section 4.1 of this report, southern California black walnut (CRPR 4.2[8]) trees were observed in the BSA of Tower 584, on a private residential property at the end of Sunnydell Trail. Mature southern California walnut trees are also protected under the City of Los Angeles Native Tree Protection Ordinance, as further discussed in Section 7.3 below.

No USFWS-designated Critical Habitat for any special-status plant species coincides with the BSAs.

5.2 Special-Status Wildlife Species

Special-status wildlife species include those listed by USFWS under FESA and by CDFW under CESA. USFWS and CDFW officially list species as threatened, endangered, or as candidates for listing. Additional species receive federal protection under the Bald and

[7] CRPR 1B.1 = Plants rare, threatened, or endangered in California and elsewhere
[8] CRPR 4.2 = Plants of limited distribution – a watch list; fairly endangered in California

Golden Eagle Protection Act (e.g., bald eagle, golden eagle) and the MBTA, and state protection under CEQA Section 15380(d).

All birds, except European starlings, English house sparrows, rock doves (pigeons), and non-migratory game birds such as quail, pheasant, and grouse are protected under the MBTA. However, non-migratory game birds are protected under CFGC Section 3503. Many other species are considered by CDFW to be California Species of Special Concern (SSC) and others are on a CDFW Watch List (WL). The CNDDB tracks species within California for which there is conservation concern, including many that are not formally listed, and assigns them a CNDDB Rank.[9] Although CDFW SSC and WL species and species that are tracked by the CNDDB but not formally listed are afforded no official legal status, they may receive special consideration during the environmental review process. CDFW further classifies some species as "Fully Protected" (FP), indicating that the species may not be taken or possessed except for scientific purposes, under special permit from CDFW. Additionally, CFGC Sections 3503, 3505, and 3800 prohibit the take, destruction, or possession of any bird, nest, or egg of any bird except English house sparrows and European starlings unless authorization is obtained from CDFW.

A total of 57 wildlife species were identified from the CNDDB search of the Hollywood and surrounding eight quadrangles and from a search of IPaC for the project area and vicinity, including the 17 federal and/or State-listed wildlife species below:

- tricolored blackbird (*Agelaius tricolor*; State-listed Threatened)
- Swainson's hawk (*Buteo swainsoni*; State-listed Threatened)
- western snowy plover (*Charadrius nivosus;* federally-listed Threatened)
- western yellow-billed cuckoo (*Coccyzus americanus occidentalis*; federally-listed Threatened and State-listed Endangered)
- southwestern willow flycatcher (*Empidonax traillii extimus*; federally and State-listed Endangered)
- California condor (*Gymnogyps californianus*; federally and State-listed Endangered)
- California black rail (*Laterallus jamaicensis coturniculus*; State-listed Threatened)
- Belding's savannah sparrow (*Passerculus sandwichensis beldingi*; State-listed Endangered)
- coastal California gnatcatcher (*Polioptila californica californica*; federally-listed Threatened)
- bank swallow (*Riparia riparia*; State-listed Threatened)
- California least tern (*Sternula antillarum browni*; federally and State-listed Endangered)
- least Bell's vireo (*Vireo bellii pusillus*; federally and State-listed Endangered)
- Pacific pocket mouse (*Perognathus longimembris pacificus*; federally-listed Endangered)

[9] California Department of Fish and Wildlife. 2022. California Natural Diversity Database (CNDDB). Special Animals List. January. Available at: file:///C:/Users/poppa/Downloads/CNDDB_Special_Animals_List%20(7).pdf. Accessed January 4, 2022.

- southern mountain yellow-legged frog (*R. muscosa*; federally and State-listed Endangered)
- monarch- California overwintering population (*Danaus plexippus pop.* 1; Candidate for federal listing)
- El Segundo blue butterfly (*Euphilotes battoides allyni*; federally-listed Endangered)
- Riverside fairy shrimp (*Streptocephalus woottoni* federally-listed Endangered)

The 57 special-status wildlife species identified during the database reviews, their status, and habitat requirements are provided in Table B, Attachment C.

No records of special-status wildlife species coincide with the BSAs of any of the proposed project components. Although habitats potentially suitable to support the special-status wildlife species identified during the database reviews are generally absent from the BSAs (see habitat descriptions in Table B, Attachment C), potentially suitable habitat for southern rufous-crowned sparrow (*Aimophila ruficeps canescens*; CDFW WL species) occurs at Tower 584, where steep, rocky hillside habitat covered by a mix of shrubs and grasses preferred by this species is present. Additionally, trees within the BSA of the tower provide potentially suitable nesting habitat for Cooper's hawk (*Accipter cooperii*; CDFW WL species), a special-status raptor species not identified during the database searches, but one known to successfully nest throughout urban environments within the Los Angeles Basin.[10] This species has some potential to occur in the BSAs; however, Swainson's hawk, identified during the database search, is not expected to occur within the BSA.

No USFWS-designated Critical Habitat for any special-status wildlife species coincides with the BSAs.

6. SENSITIVE NATURAL COMMUNITIES

Sensitive natural communities are those that are designated as rare in the region by the CNDDB, support special-status plant or wildlife species, or receive regulatory protection (i.e., Section 404 of the Clean Water Act [CWA] and/or Sections 1600 et seq. of the CFGC). Rare communities are given the highest inventory priority.[11,12] Based on a review of the CNDDB, eight sensitive vegetative communities have been recorded within the Hollywood and surrounding eight quadrangles: California Walnut Woodland, Riversidian Alluvial Fan Sage Scrub, Southern Coast Live Oak Riparian Forest, Southern Coastal Salt Marsh, Southern Cottonwood Willow Riparian Forest, Southern Dune Scrub, Southern Sycamore Alder Riparian Woodland, and Walnut Forest.

No sensitive natural vegetation communities or natural communities that may receive regulatory protection occur within the BSAs of Tower 584 and the vacant parcels in the City of Burbank. Some native vegetation occurs within the BSA north of the Nichols Canyon Terminal Tower at the northern terminus of the underground transmission line alignment, where steep hillside habitat consists of native shrub species, but also includes a high coverage of non-native fountaingrass. Additionally, Nichols Canyon Wash and a debris

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[10] Cooper, Daniel S. and Courtney McCammon. 2021. Los Angeles Raptor Study. Final Report. Prepared for Friends of Griffith Park. September 4. 31 pp.
[11] Holland, R. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game. The Resources Agency. 156 pp.
[12] California Department of Fish and Wildlife. 2010. List of California Terrestrial Natural Communities Recognized by the Natural Diversity Data Base. Natural Heritage Division. The Resources Agency. September.

basin along the wash occur along the west side of Nichols Canyon Road, across the road from the Nichols Canyon Terminal Tower. These features likely constitute jurisdictional waters and receive regulatory protection under the CWA and CFGC. The wash undergrounds approximately 600 feet south of the Nichols Canyon Terminal Tower and drains farther south towards Hollywood Boulevard.

7. APPLICABLE REGULATIONS

7.1 Federal Regulations and Standards

Federal Endangered Species Act (FESA)

Enacted in 1973, FESA provides for the conservation of threatened and endangered species and their ecosystems (United States Code [U.S.C.] Title 16, Chapter 35, Sections 1531–1544). FESA prohibits the "take" of threatened and endangered species except under certain circumstances and only with authorization from USFWS through a permit under Section 4(d), 7 or 10(a) of FESA. "Take" under FESA is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

Formal consultation under FESA would be required if the proposed project had the potential to affect a federally-listed species that has been detected within or adjacent to the BSAs. No federally-listed species were detected during the field surveys and suitable habitats for such species do not occur in the BSAs, or the species' known distribution does not coincide with the BSAs. Therefore, formal consultation is not anticipated.

Migratory Bird Treaty Act

Congress passed the MBTA in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA (U.S.C. Title 16, Chapter 7, Subchapter II, Sections 703–712). The prohibition applies to birds included in the respective international conventions between the United States and Great Britain, the United States and Mexico, the United States and Japan, and the United States and Russia.

No permit is issued under the MBTA; however, the proposed project would remain in compliance with the MBTA by conducting pre-construction nesting bird surveys, and, if needed, providing a qualified biologist to monitor active nests occurring in the BSAs to ensure construction does not affect species protected under the MBTA.

Clean Water Act

Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into jurisdictional waters of the U.S., which include those waters listed in 33 Code of Federal Regulations 328.3 (Definitions) (U.S.C. Title 33, Chapter 26, Sections 101–607). Section 401 of the CWA requires a water quality certification from the state for all permits issued by USACE under Section 404 of the CWA. The Regional Water Quality Control Board (RWQCB) is the state agency in charge of issuing a CWA Section 401 water quality certification or waiver.

No jurisdictional aquatic features regulated under the CWA occur within the BSAs of Tower 584 and the parcels where BWP lines would be lowered in the City of Burbank. Nichols Canyon Wash and a debris basin occur within the BSA of the proposed underground transmission line alignment in the vicinity of Nichols Canyon Terminal Tower; however, impacts to these potentially regulated features are not anticipated and a permit from USACE is not anticipated for the proposed project.

7.2 State Regulations and Standards

California Fish and Game Code

CFGC regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as impacts to natural resources such as wetlands and waters of the state. It includes CESA (Sections 2050–2115) and Lake and Streambed Alteration Agreement (LSAA) regulations (Section 1600 et seq.).

Wildlife “take” is defined by CDFW as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Protection extends to the animals, dead or alive, and all their body parts. Section 2081 of CESA allows CDFW to issue an incidental take permit for state-listed threatened or endangered species, should the proposed project have the potential to “take” a state-listed species that has been detected within or adjacent to the proposed project. Certain criteria are required under CESA prior to the issuance of such a permit, including the requirement that impacts of the take are minimized and fully mitigated.

No state-listed species were detected during the field survey and suitable habitats for such species do not occur in the BSAs, or the species’ known distribution does not coincide with the BSAs. As a result, a permit under Section 2081 is not anticipated for the proposed project.

No aquatic features potentially under CDFW jurisdiction occur within the BSAs of Tower 584 and the parcels where BWP lines would be lowered in the City of Burbank. Nichols Canyon Wash and a debris basin occur within the BSA of the proposed underground transmission line alignment in the vicinity of Nichols Canyon Terminal Tower; however, impacts to these potentially regulated features are not anticipated and an LSAA from CDFW is not anticipated for the proposed project.

Porter-Cologne Water Quality Control Act

Under Section 13000 et seq., of the Porter-Cologne Act, RWQCB is the agency that regulates discharges of waste and fill material within any region that could affect a water of the state (California Water Code [CWC] 13260[a]), (including wetlands and isolated waters) as defined by CWC Section 13050(e).

No waters of the state under RWQCB jurisdiction occur within the BSAs of Tower 584 and the parcels where BWP lines would be lowered in the City of Burbank. Nichols Canyon Wash and a debris basin occur within the BSA of the proposed underground transmission line alignment in the vicinity of Nichols Canyon Terminal Tower; however, impacts to these potentially regulated features are not anticipated and issuance of a permit under Porter-Cologne is not anticipated for the proposed project.

California Environmental Quality Act[13]

CEQA requires that biological resources be considered when assessing the environmental impacts resulting from proposed actions. CEQA does not specifically define what constitutes an "adverse effect" on a biological resource. Instead, lead agencies are charged with determining what specifically should be considered an impact. This technical memorandum has been prepared for proposed project compliance with CEQA.

7.3 **Local Regulations and Standards**

Significant Ecological Area Program

The County of Los Angeles first began to inventory biotic resources and identify important areas of biological diversity in the 1970s. Today, the primary mechanism used by the County to conserve biological diversity is a planning overlay called Significant Ecological Areas (SEAs) designated in the County's General Plan Conservation/Open Space Element. SEAs are ecologically important land and water systems that support valuable habitat for plants and animals, often integral to the preservation of rare, threatened, or endangered species and the conservation of biological diversity in Los Angeles County. While SEAs are not preserves, they are areas where the County deems it important to facilitate a balance between development and resource conservation.

Together, the General Plan overlays and a SEA conditional use permit process are referred to as the SEA Program. The SEA Program, through goals and policies of the General Plan and the SEA ordinance (Title 22 Zoning Regulations, Section 22.56.215) help guide development within SEAs. The SEA ordinance establishes the permitting, design standards, and review process for development within SEAs, and permits are reviewed by the Significant Ecological Areas Technical Advisory Committee (or SEATAC). Development activities in the SEAs are reviewed closely to conserve water and biological resources such as streams, oak woodlands, and threatened or endangered species and their habitat.

The BSAs do not coincide with an SEA. The nearest SEA is the Griffith Park SEA, which lies approximately 2 miles east of Tower 584. As a result, the SEA Program would not be applicable to the proposed project.

City of Los Angeles Native Tree Protection Ordinance

In response to the City's declining oak tree population, the City enacted an oak tree protection ordinance in 1982. To further slow the decline of native trees, the City amended the two City Municipal Code sections pertaining to oak trees in April 2006 to include southern California black walnut (*Juglans californica*), western sycamore (*Platanus racemosa*), and California bay (*Umbellularia californica*) (Section 17.02 of City Municipal Code). Additionally, trees must be 4 inches or greater in diameter at 4.5 feet above ground (diameter at breast height or DBH) to be considered protected. The Board of Public Works must issue a permit before any alterations to protected trees are made that could cause them to be damaged, relocated or removed. Pruning also requires a permit and must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture.

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[13] Public Resources Code Section 21000 et seq. and the State CEQA Guidelines, California Code of Regulations, Section 15000 et seq.

Southern California black walnut and western sycamore trees with DBH measurements exceeding 4 inches were noted during the field surveys. A western sycamore tree was observed on a private residential property along a side street off the underground transmission line alignment in Hollywood and approximately 5 to 6 walnut trees were observed downslope from the end of Sunnydell Trail within the BSA of Tower 584. These trees occur outside the footprint of the proposed project components. No protected trees are anticipated for removal or to require trimming. Further, native protected trees species that were planted or grown as part of a tree planting program are not considered "protected" under the ordinance. It is likely that the southern California black walnut and western sycamore specimens identified within the BSA were planted and are not naturally occurring and are not subject to protection under the ordinance.

8. IMPACTS ON BIOLOGICAL RESOURCES

Biological resources may be either directly or indirectly impacted by a project. Direct and indirect impacts may be either permanent or temporary in nature. These impact categories are defined below.

- **Direct**: Any alteration, physical disturbance, or destruction of biological resources that would result from project-related activities is considered a direct impact. Examples include clearing vegetation, encroaching into wetlands or a stream, and the loss of individual species and/or their habitats.
- **Indirect**: As a result of project-related activities, biological resources may also be affected in a manner that is ancillary to physical impacts. Examples include elevated noise and dust levels, soil compaction, increased human activity, decreased water quality, and the introduction of invasive wildlife (domestic cats and dogs) and plants.
- **Permanent**: All impacts that result in the long-term or irreversible removal of biological resources are considered permanent. Examples include constructing a building or permanent road on an area containing biological resources.
- **Temporary**: Any impacts considered to have reversible effects on biological resources can be viewed as temporary. Examples include the generation of fugitive dust during construction; or removing vegetation for the preparation of stream bank stabilization activities, and either allowing the natural vegetation to recolonize or actively revegetating the impact area. Surface disturbance that removes vegetation and disturbs the soil is considered a long-term temporary impact because of slow natural recovery in arid ecosystems.

8.1 Construction

The anticipated direct and indirect impacts of proposed project construction on biological resources are described below. Trenching and backfilling within paved areas to install duct work and maintenance vaults for the underground transmission line, raising Tower 584, and lowering the BWP distribution line would result in temporary impacts; no permanent impacts would occur.

Vegetation

No vegetation would be removed during installation of the underground transmission line and lowering of the BWP distribution line. Underground transmission line installation would occur within paved and previously disturbed areas, and the BWP distribution line would be lowered by staging on vacant parcels with patchy grass and weed cover. Some minor removal and/or trimming of shrubs around Tower 584 would be necessary for foundation work and to provide a work area for the tower; however, it would not be considered significant. As a result, significant direct impacts to vegetation would not occur during proposed project construction.

Indirect impacts to vegetation during proposed project construction could occur during surface disturbances that, if not controlled, could increase the potential for fugitive dust and erosion and sediment deposition beyond the project area footprints during a storm event. Such impacts would most likely occur during saw-cutting, trenching, and backfilling for the underground transmission line, where non-native ornamental trees occur along the alignment and in the surrounding BSA. Although impacts to non-native ornamental vegetation would not constitute a significant impact, implementation of standard construction practices related to fugitive dust (e.g., implementation of Rule 403 measures required by the South Coast Air Quality Management District [SCAQMD]) and erosion control (e.g., implementation of a SWPPP) as identified in Section 2.5 above, would reduce the potential for indirect impacts to any vegetation to less than significant

Special-Status Plant Species

No federal or State-listed plant species were identified during the field surveys, and special-status plants are generally not expected to occur in the BSA due to a lack of potentially suitable habitat. A few individuals of non-listed southern California black walnut were identified within the BSA of Tower 584; however, they occur outside the project area footprint of the tower and associated staging areas, and would not be directly impacted. As a result, significant direct impacts on special-status plants are not anticipated.

Indirect impacts to special-status plant species occurring outside the project area footprints could result during surface disturbance, increasing the potential for fugitive dust and during a storm event, erosion and sediment deposition beyond the project area footprints. If such impacts were to occur, they would be considered significant. Suitable habitat for special-status plants is not present in the urbanized environments of the BSAs. In the instance where southern California black walnut trees occur downslope from Sunnydell Trail within the BSA of Tower 584, proposed staging activities are not anticipated to indirectly impact these individuals. Further, implementation of standard construction measures related to fugitive dust and erosion control would reduce the potential for significant indirect impacts to vegetation outside the project area footprints. As a result, significant indirect impacts to special-status plants are not anticipated.

Sensitive Natural Communities

Implementation of the proposed project would not result in direct or indirect impacts to any sensitive natural communities. As presented in Section 6, no sensitive natural vegetation communities occur within the BSAs, although some native species cover steep hillside habitats in the BSA north of the Nichols Canyon Terminal Tower. Additionally, Nichols Canyon Wash and a debris basin occur close to the terminal tower; however, these potentially regulated aquatic features would not be impacted by activities related to installation of the underground transmission line. As a result, significant impacts to sensitive natural communities would not occur.

Protected Trees

California black walnut and western sycamore trees, which are protected under the City of Los Angeles Native Tree Protection Ordinance, were identified in the BSAs during field surveys. However, these specimens are likely planted and not naturally occurring, and are not subject to protection under the ordinance. Further, these specimens occur on private residential properties or along side streets where they will not be impacted by the proposed project and no trees are currently proposed for removal under the proposed project. As a result, a Tree Removal Permit in compliance with the City's Native Tree Protection Ordinance is not anticipated, and no significant impacts would occur to ordinance-protected trees.

Common Wildlife Species

Elements of proposed project construction could potentially result in the direct mortality of individual wildlife species, particularly those species with limited mobility. Additionally, indirect impacts during construction on wildlife, primarily common urban bird species (discussed further below), would occur due to dust, noise, and vibration disturbances caused by heavy equipment and increased human activity. Other than mobile bird species, few common wildlife species are expected to occur in the project area and significant direct impacts to common wildlife are not anticipated.

Ornamental trees in the BSAs do provide potentially suitable nesting habitat for common urban bird species, which are protected under the MBTA and by CFGC. No vegetation removal would occur for installation of the underground transmission line and during lowering of the BWP distribution line. Only minor vegetation removal and/or trimming would be necessary at Tower 584 for foundation work and to provide a work space for activities; however, no significant loss of bird nesting habitat would occur at this location. Additionally, by adhering to the MBTA BMPs BIO-1 through BIO-4 outlined in Section 2.5 related to pre-construction surveys and providing qualified biological monitors as necessary, direct impacts to any birds protected under the MBTA and by CFGC would be reduced to less than significant.

Indirect impacts to common nesting birds that may occur within the BSAs could occur during construction as a result of dust, noise and vibration disturbances, and increased human activities. Such disturbances could result in increased nestling mortality due to nest abandonment or decreased feeding frequency, which would be considered significant. However, by implementing standard construction measures related to fugitive dust, noise, and vibrations, and by adhering to the MBTA BMPs BIO-1 through BIO-4 outlined in Section 2.5, indirect impacts to common nesting birds protected under the MBTA and by CFGC would be reduced to less than significant.

Special-Status Wildlife Species

Individual special-status wildlife species could be directly and indirectly impacted during construction in the same manner as described above. No federal or State-listed wildlife species have been identified in the BSAs, and potentially suitable habitat for such species is generally absent from the BSAs. However, as discussed in Section 5.2, southern California rufous-crowned sparrow and Cooper's hawk, both CDFW WL species, could occur within the BSA of Tower 584. No vegetation suitable for nesting by these species would be removed, and by adhering to the MBTA BMPs BIO-1 through BIO-4 outlined in Section 2.5 related to pre-construction surveys and providing qualified biological monitors as necessary, direct impacts to special-status wildlife are not anticipated. Further, as discussed above, implementing standard construction measures related to fugitive dust, noise, and vibration, and by adhering to the MBTA BMPs BIO-1 through BIO-4 outlined in Section 2.5, indirect impacts to non-listed special-status bird species, such as southern California rufous-crowned sparrow and Cooper's hawk, would be reduced to less than significant.

Wildlife Movement Corridor

The BSAs do not occur within or serve as regional wildlife corridors and, as a result, direct impacts to a regional wildlife movement corridor would not occur.

8.2 Operation

Significant impacts to biological resources during operations and routine maintenance of the proposed project are not anticipated. Operational and maintenance activities would be conducted within paved roadways or previously disturbed areas and would not change conditions from those present prior to proposed project implementation.

9. CONCLUSION

Based on the analysis presented in this technical memorandum, significant impacts to non-listed special-status birds and nesting birds protected under the MBTA and CFGC could occur during proposed project construction. However, by implementing and adhering to the MBTA BMPs BIO-1 through BIO-4 outlined in Section 2.5, significant impacts to biological resources would be reduced to a level below significance.

Should you have any questions or comments regarding this memo, or if additional information is required, please feel free to contact me.

Sincerely,

Arthur Popp

Arthur Popp
Senior Biologist

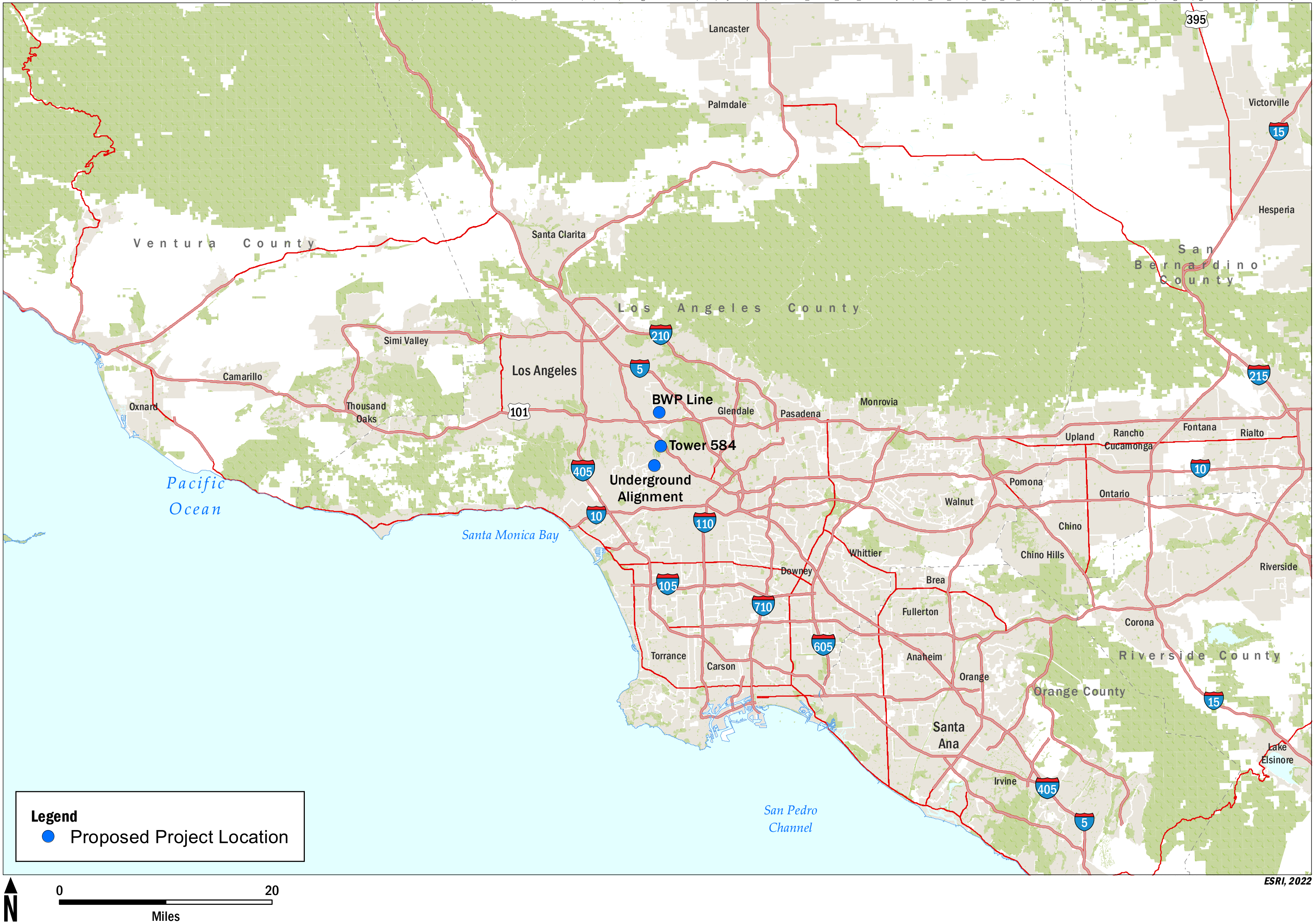
Attachments:

Attachment A: Figures
Attachment B: Photographs
Attachment C: Special-Status Plant and Wildlife Species and Natural Communities

ATTACHMENT A

Figures

AECOM Oakland CA 10/11/2022 USER ScopM1 PATH \\na.aecomnet.com\lfs\AMER\LosAngeles-USLAX02\DCS\Projects\BDL\60669683_LADWP_TO76_TolucaHollywd\900_CAD_GIS\920_929_GIS_Graphics\02_Maps\02_Report_Maps\Biological\Figure 1 - Bio - Project Vicinity.mxd



AECOM

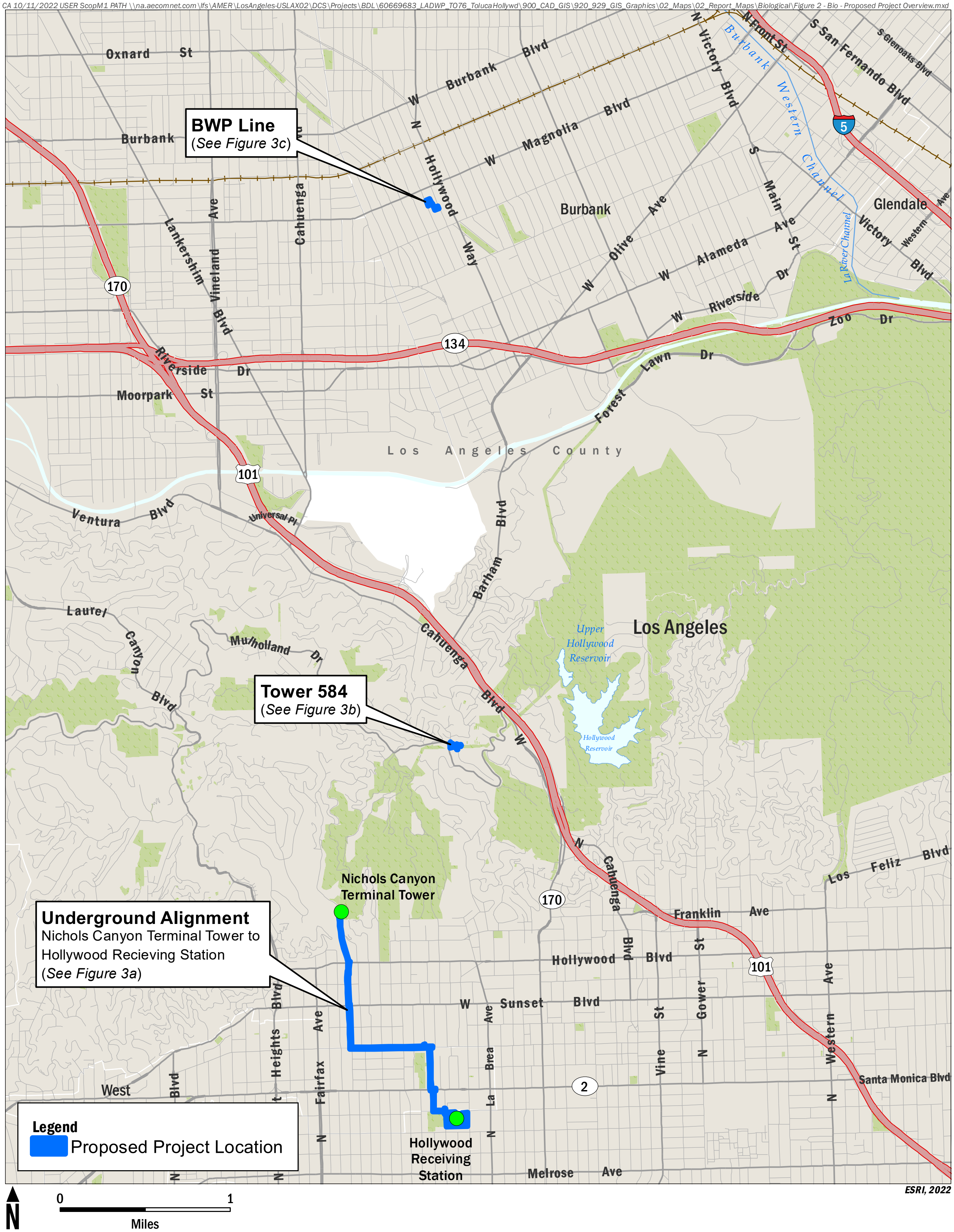
Los Angeles Department of Water and Power (LADWP)

Toluca-Hollywood Line 1 Upgrade Project

BIOLOGICAL RESOURCES TECHNICAL MEMORANDUM,
LOS ANGELES COUNTY, CALIFORNIA

FIGURE 1

Project Vicinity Map



AECOM

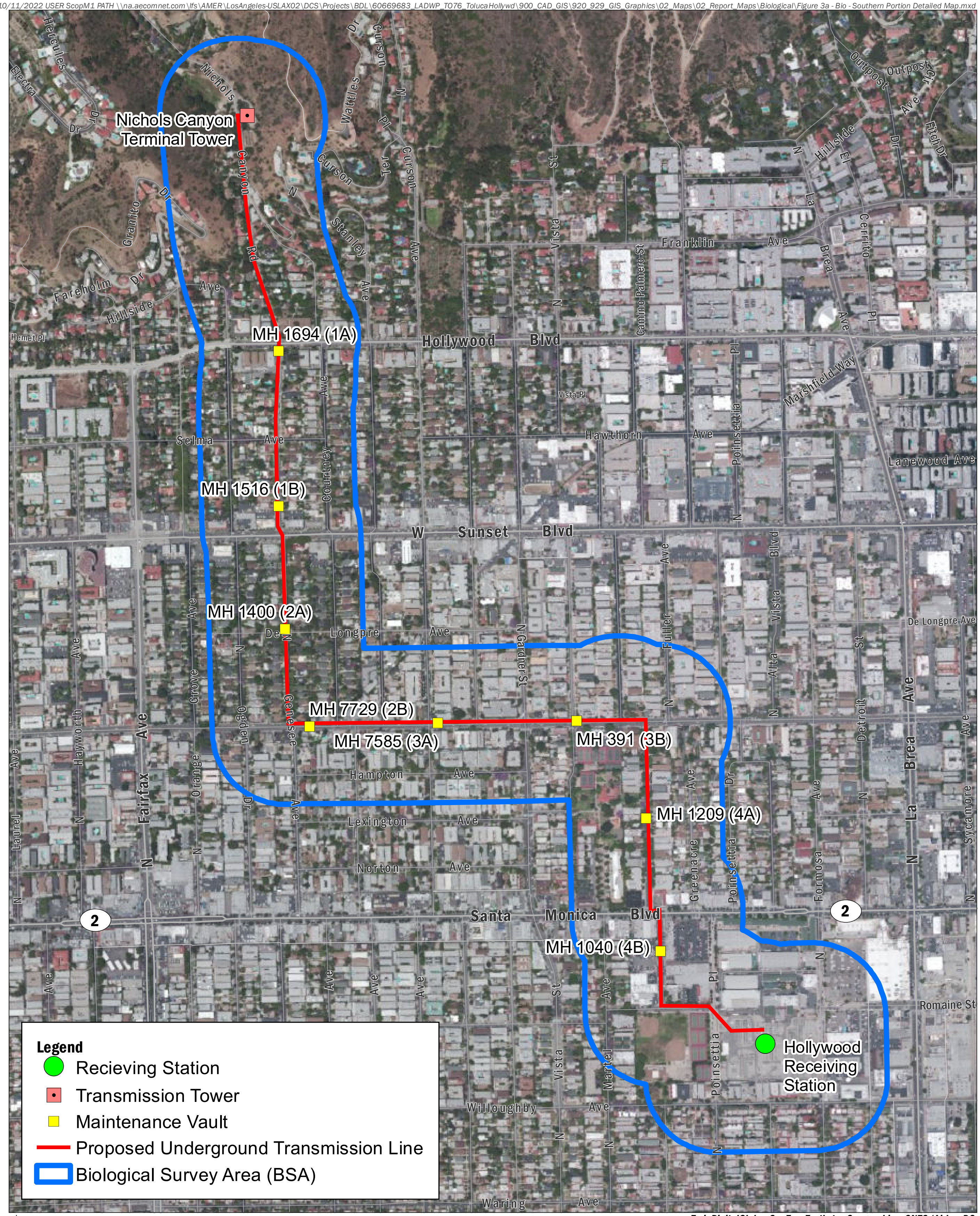
FIGURE 2

Proposed Project Overview

Los Angeles Department of Water and Power (LADWP)

Toluca-Hollywood Line 1 Upgrade Project

BIOLOGICAL RESOURCES TECHNICAL MEMORANDUM,
LOS ANGELES COUNTY, CALIFORNIA



Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, 2022

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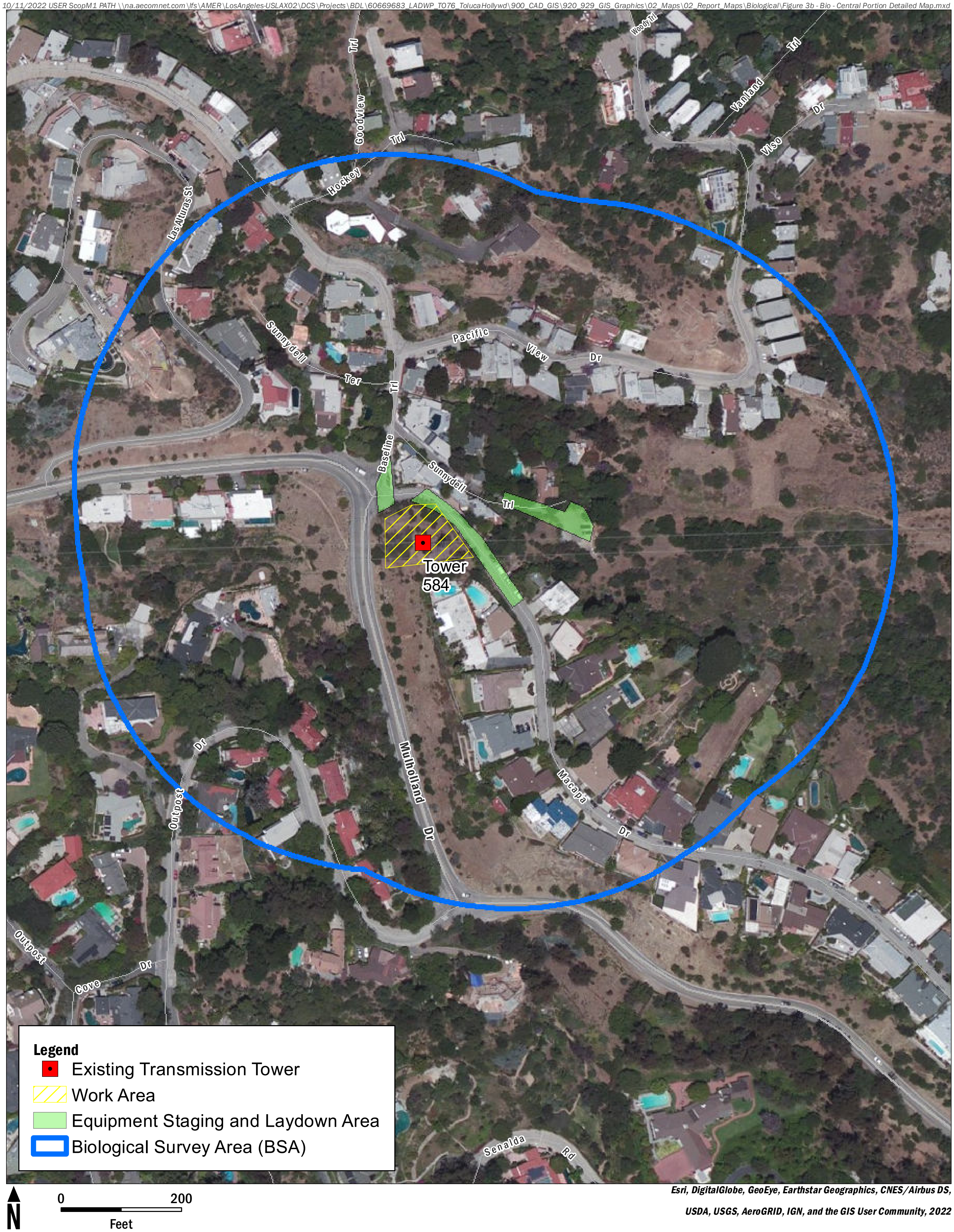
Los Angeles Department of Water and Power (LADWP)
Toluca-Hollywood Line 1 Upgrade Project
BIOLOGICAL RESOURCES TECHNICAL MEMORANDUM,
LOS ANGELES COUNTY, CALIFORNIA

FIGURE 3A
Detailed Map - Underground Alignment



Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, 2022

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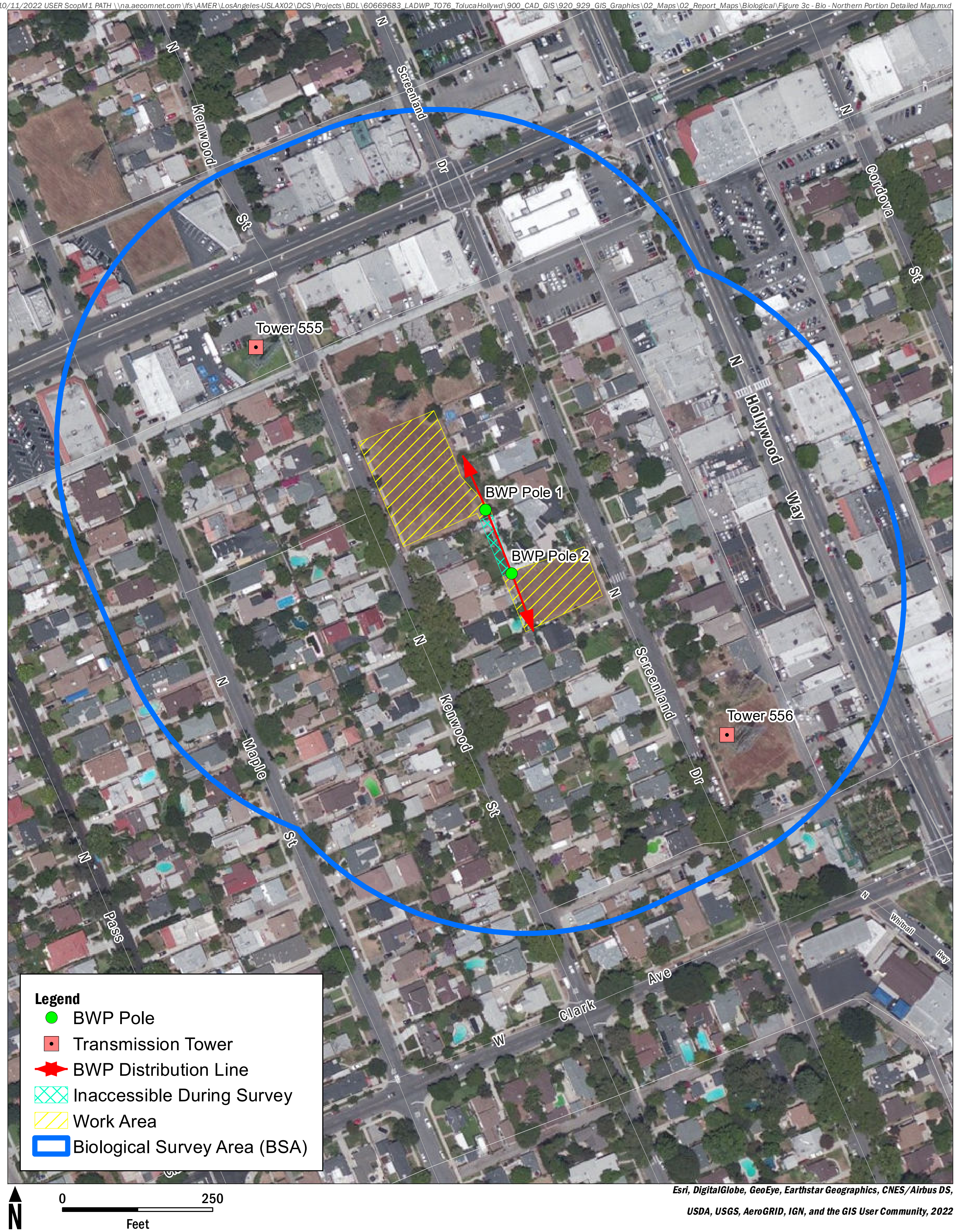
Los Angeles Department of Water and Power (LADWP)
Toluca-Hollywood Line 1 Upgrade Project
BIOLOGICAL RESOURCES TECHNICAL MEMORANDUM,
LOS ANGELES COUNTY, CALIFORNIA

FIGURE 3B

Detailed Map - Tower 584



Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, 2022

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Los Angeles Department of Water and Power (LADWP)

Toluca-Hollywood Line 1 Upgrade Project

BIOLOGICAL RESOURCES TECHNICAL MEMORANDUM,
LOS ANGELES COUNTY, CALIFORNIA

FIGURE 3C

Detailed Map - BWP Line

ATTACHMENT B

Photographs of Existing Conditions within the BSA

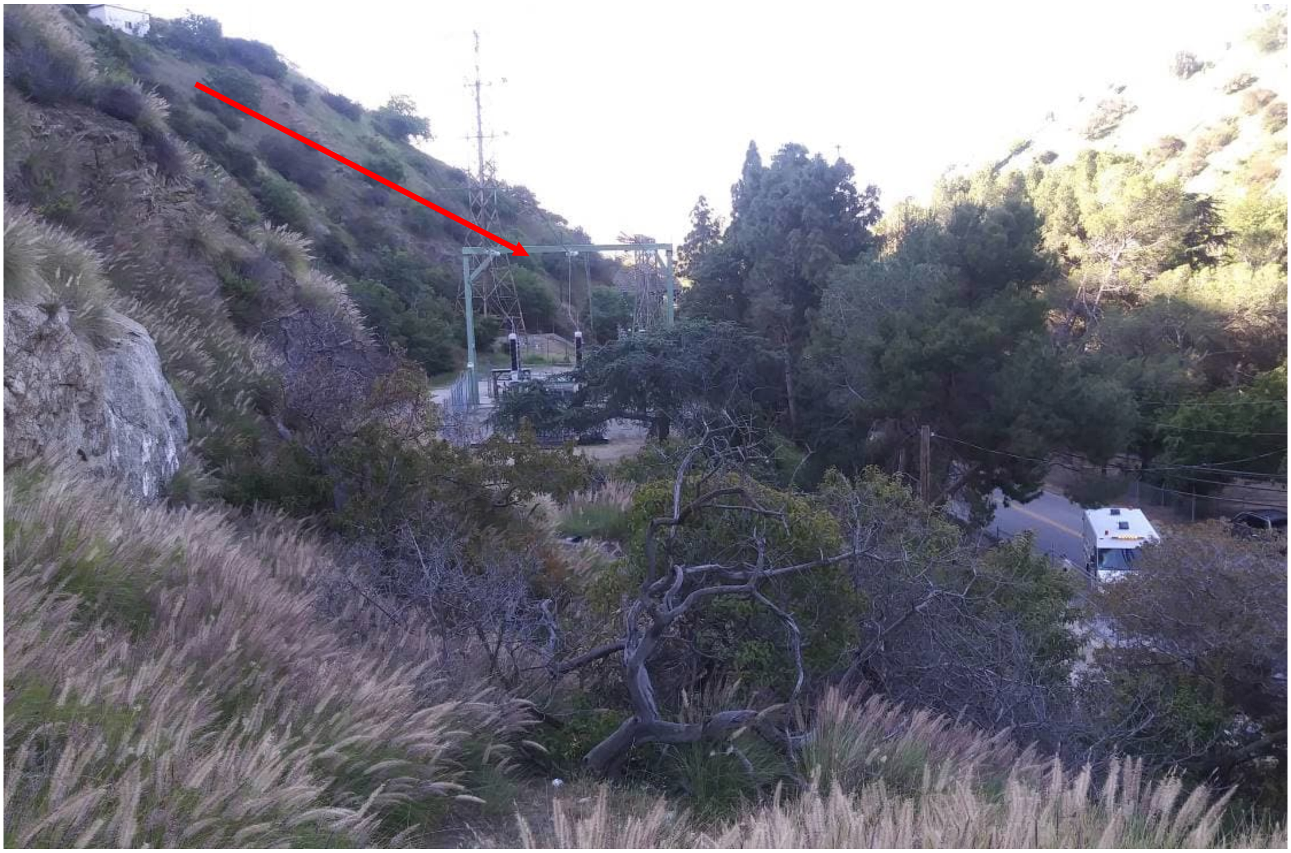

Photo 1: South-facing view of the Nichols Canyon Terminal Tower (red arrow), with Nichols Canyon Road below at left.

Photo 2: South-facing view along Nichols Canyon Road from the Nichols substation at the northern end of the underground transmission line alignment.

Photo 3: South-facing view along Genesee Avenue at intersection with Hollywood Boulevard.

Photo 4: South-facing view along Genesee Avenue at intersection with Sunset Boulevard.

Photo 5: East-facing view along Fountain Avenue at intersection with Curson Avenue.

Photo 6: East-facing view along Santa Monica Boulevard at intersection with Fuller Avenue.

Photo 7: South-facing view along Fuller Avenue in vicinity of intersection with Santa Monica Boulevard.

Photo 8: North-facing view along Poinsettia Place, with the Hollywood Receiving Station out of photo view at right.

Photo 9: East-facing view entrance to the Hollywood Receiving Station.

Photo 10: East-facing view of existing Tower 584.

Photo 11: West-facing view of existing Tower 584.

Photo 12: Northeast-facing view along Mulholland Drive at intersection with Macapa Drive and Baseline Trail where project staging for work at Tower 584 would occur.

Photo 13: Southeast-facing view along Macapa Drive where project staging for work at Tower 584 would occur.

Photo 14: Southeast-facing view of vacant parcel adjacent to BWP Pole 1.


Photo 15: West-facing view of vacant lot adjacent to BWP Pole 2.

ATTACHMENT C

Table A. Special-Status Plant Species and Natural Vegetation Communities
Table B. Special-Status Wildlife Species

TABLE A. SPECIAL-STATUS PLANT SPECIES AND NATURAL VEGETATION COMMUNITIES[1]

Common Name ***Scientific Name***[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
red sand-verbena *Abronia maritima*	Federal: None State: None CRPR: 4.2	Found in coastal dune habitats. Occurs between 0-100 meters (0-330 feet). Blooms February-November.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
San Gabriel manzanita *Arctostaphylos glandulosa* ssp. *gabrielensis*	Federal: None State: None CRPR: 1B.2	Found in rocky chaparral habitats. Known only from the Mill Creek Summit divide in the San Gabriel Mountains. Occurs between 595-1,500 meters (1,950-4,920 feet). Blooms in March.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs and the project area fall outside the elevation range known for this species.
marsh sandwort *Arenaria paludicola*	Federal: FE State: SE CRPR:1B.1	Found in sandy openings in freshwater or brackish marshes and swamps. Occurs between 3-170 meters (10-560 feet). Blooms May-August.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs and the project area fall outside the elevation range known for this species.
Braunton's milk-vetch *Astragalus brauntonii*	Federal: FE State: None CRPR:1B.1	Found in closed-cone coniferous forest, chaparral, coastal scrub, and valley and foothill grassland. Prefers recent burns or disturbed areas, in stiff gravelly clay soils overlying granite or limestone. Occurs between 4-640 meters (13-2,100 feet). Blooms January-August.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Ventura Marsh milk-vetch *Astragalus pycnostachyus* var. *lanosissimus*	Federal: FE State: SE CRPR:1B.1	Occurs in coastal dunes, coastal scrub, and edges of coastal salt or brackish marshes and swamps. Occurs between 0-35 meters (0-115 feet). Blooms June-October.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs and the project area fall outside the elevation range known for this species.
coastal dunes milk-vetch *Astragalus tener* var. *titi*	Federal: FE State: SE CRPR:1B.1	Found in vernally mesic areas in coastal bluff scrub, coastal dune, and coastal prairie habitats. Occurs between 0-50 meters (0-165 feet). Blooms March-May.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs and the project area fall outside the elevation range known for this species.
Coulter's saltbush *Atriplex coulteri*	Federal: None State: None CRPR: 1B.2	Often found in alkaline or clay habitats of coastal bluff scrub, coastal dunes, coastal scrub and valley and foothill grasslands. Occurs between 0-460 meters (0-1,510 feet). Blooms March-October.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
south coast saltscale *Atriplex pacifica*	Federal: None State: None CRPR: 1B.2	Found in alkali sink, coastal sage scrub, wetland-riparian playas and coastal habitats. Occurs between 0-140 meters (0-460 feet). Blooms March-October.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Parish's brittlescale *Atriplex parishii*	Federal: None State: None CRPR: 1B.1	Found in alkaline chenopod scrub, playas, and vernal pool habitats. Occurs between 25-1,900 meters (80-6,230 feet). Blooms June-October.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Davidson's saltscale *Atriplex serenana* var. *davidsonii*	Federal: None State: None CRPR: 1B.2	Found in coastal bluff scrub and coastal scrub habitats. Prefers alkaline soil. Occurs between 10-200 meters (30-660 feet). Blooms April-October.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Nevin's barberry *Berberis nevinii*	Federal: FE State: SE CRPR: 1B.1	Found in chaparral, cismontane woodland, coastal scrub, and riparian scrub habitats. Occurs between 70-825 meters (230 to 2,700 feet). Blooms (Feb) March-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Catalina mariposa lily *Calochortus catalinae*	Federal: None State: None CRPR: 4.2	Found in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats. Occurs between 15-700 meters (50-2,300 feet). Blooms February-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
slender mariposa-lily *Calochortus clavatus* var. *gracilis*	Federal: None State: None CRPR: 1B.2	Found in chaparral and coastal scrub habitats in shaded foothill canyons. Also found on grassy slopes within other habitats. Occurs between 320-1,000 meters (1,050-3,280 feet). Blooms March–June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Plummer's mariposa-lily *Calochortus plummerae*	Federal: None State: None CRPR: 4.2	Found in coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, and lower montane coniferous forest habitats, on rocky and sandy sites (granitic or alluvial material). Occurs between 100–1,700 meters (330-5,580 feet). Blooms May-July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
lucky morning-glory *Calystegia felix*	Federal: None State: None CRPR: 1B.1	Sometimes found in alkaline meadows and seeps and alluvial riparian scrub. Historically associated with wetland and marshy places, but possibly in drier situations as well. Possibly found in silty loam and alkaline soils. Occurs between 30-215 meters (100-705 feet). Blooms March-September.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Lewis's evening-primrose *Camissoniopsis lewisii*	Federal: None State: None CRPR: 3	Prefers sandy or clay soils in coastal bluff scrub, Cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland habitats. Occurs between 0-300 meters (0-985 feet). Blooms March-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
southern tarplant *Centromadia parryi* ssp. *australis*	Federal: None State: None CRPR: 1B.1	Found in margins of marshes and swamps, valley and foothill grassland and vernal pools. Occurs between 0–480 meters (0-1,570 feet). Blooms May-November.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
smooth tarplant *Centromadia pungens* ssp. *laevis*	Federal: None State: None CRPR: 1B.1	Prefers alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland habitats. Occurs between 0-640 meters (0-2,100 feet). Blooms April-September.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Orcutt's pincushion *Chaenactis glabriuscula* var. *orcuttiana*	Federal: None State: None CRPR: 1B.1	Found in sandy coastal bluff scrub and coastal dune habitats. Occurs between 0-100 meters (0-330 feet). Blooms January- August.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
coastal goosefoot *Chenopodium littoreum*	Federal: None State: None CRPR: 1B.2	Found in coastal dune habitats. Occurs between 10-30 meters (30-100 feet). Blooms April-August.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
salt marsh bird's-beak *Chloropyron maritimum* ssp. *maritimus*	Federal: FE State: SE CRPR: 1B.2	Found in coastal dunes and coastal salt marshes and swamps. Occurs between 0-30 meters (0-100 feet). Blooms May-October (November).	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs and the project area fall outside the elevation range known for this species.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
San Fernando Valley spineflower *Chorizanthe parryi* var. *fernandina*	Federal: None State: SE CRPR: 1B.1	Prefers sandy coastal scrub and valley and foothill grassland habitats. Occurs between 150-1,220 meters (495-4,000 feet). Blooms April-July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Parry's spineflower *Chorizanthe parryi* var. *parryi*	Federal: None State: None CRPR: 1B.1	Prefers sandy or rocky soils in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats. Occurs between 275-1,220 meters (900-4,005 feet). Blooms April-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
monkey-flower savory *Clinopodium mimuloides*	Federal: None State: None CRPR: 4.2	Found in streambanks and mesic areas in chaparral and North Coast coniferous forest habitats. Occurs between 305-1,800 meters (1,000-5,905 feet). Blooms June-October.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
small-flowered morning-glory *Convolvulus simulans*	Federal: None State: None CRPR:4.2	Prefers clay soils, seeps, and serpentinite in openings in chaparral, coastal scrub and valley and foothill grassland habitats. Occurs between 30-740 meters (100-2430 feet). Blooms March- July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
paniculate tarplant *Deinandra paniculate*	Federal: None State: None CRPR: 4.2	Prefers vernally mesic or sandy areas in coastal scrub, valley foothill grassland, and vernal pool habitats. Occurs between 25-940 meters (80-3,085 feet). Blooms (March) April-November.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
western dichondra *Dichondra occidentalis*	Federal: None State: None CRPR: 4.2	Found in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats. Occurs between 50-500 meters (160-1,640 feet). Blooms (January) March-July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
beach spectaclepod *Dithyrea maritima*	Federal: None State: ST CRPR: 1B.1	Found in coastal dune and sandy coastal scrub habitats. Occurs between 0-50 meters (5-165 feet). Blooms March-May.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
slender-horned spineflower *Dodecahema leptoceras*	Federal: FE State: SE CRPR: 1B.1	Found in sandy chaparral, cismontane woodland, and alluvial fan coastal scrub habitats. Occurs between 200-760 meters (890–2,510 feet). Blooms April–June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.

Common Name ***Scientific Name***[2]	**Status**[3]	**General Habitat Description**[4]	**Potential for Occurrence in the BSA**[5]
many-stemmed dudleya *Dudleya multicaulis*	Federal: None State: None CRPR: 1B.2	Found in chaparral, coastal scrub, and valley and foothill grassland habitats. Often found in clay soils. Occurs between 15-790 meters (50-2,520 feet). Blooms April-July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
San Diego button-celery *Eryngium aristulatum* var. *parishii*	Federal: FE State: SE CRPR: 1B.1	Prefers mesic areas in coastal scrub, valley and foothill grassland, and vernal pool habitats. Occurs between 20-620 meters (65-2,035 feet). Blooms April-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
island wallflower *Erysimum insulare*	Federal: None State: None CRPR: 1B.3	Found in coastal bluff scrub and coastal dune habitats. Occurs between 0-300 meters (0-985 feet). Blooms March-July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
suffrutescent wallflower *Erysimum suffrutescens*	Federal: None State: None CRPR: 4.2	Found in coastal bluff scrub, maritime chaparral, and coastal scrub habitats. Occurs between 0-150 meters (0-495 feet). Blooms January-July (August).	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Santa Barbara bedstraw *Galium cliftonsmithii*	Federal: None State: None CRPR: 4.3	Found in cismontane woodland habitats. Occurs between 200-1,220 meters (655-4,005 feet). Blooms May-July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Palmer's grapplinghook *Harpagonella palmeri*	Federal: None State: None CRPR: 4.2	Found in chaparral, coastal scrub, and valley and foothill grassland habitats. Occurs between 20-955 meters (65-3,130 feet). Blooms March–May.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Los Angeles sunflower *Helianthus nuttallii* ssp. *parishii*	Federal: None State: None CRPR: 1A	Found in coastal salt and freshwater marshes and swamps. Occurs between 10-1,675 meters (30-5,490 feet). Blooms August-October.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
vernal barley *Hordeum intercedens*	Federal: None State: None CRPR: 3.2	Found in coastal dunes, coastal scrub, vernal pools, and in saline flats and depressions in valley and foothill grassland habitats. Occurs between 5-1,000 meters (15-3,280 feet). Blooms March-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.

Common Name ***Scientific Name***[2]	**Status**[3]	**General Habitat Description**[4]	**Potential for Occurrence in the BSA**[5]
mesa horkelia *Horkelia cuneata* var*. puberula*	Federal: None State: None CRPR: 1B.1	Prefers sandy or gravelly sites in chaparral, cismontane woodland, and coastal scrub. Occurs between 70-810 meters (230-2,660 feet). Blooms February-September.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Southern California black walnut *Juglans californica*	Federal: None State: None CRPR: 4.2	Prefers alluvial sites in chaparral, cismontane woodlands, coastal scrub, and riparian woodland. Occurs between 50-900 meters (160-2,950 feet). Blooms March-August.	**Present:** Approximately 6 individuals of this species were observed within the BSA of Tower 584, at the end of Sunnydell Trail.
southwestern spiny rush *Juncus acutus* ssp. *leopoldii*	Federal: None State: None CRPR: 4.2	Found in mesic coastal dunes, alkaline meadows and seeps, and coastal salt marshes and swamps. Occurs between 0-900 meters (0-2,955 feet). Blooms (March) May-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Federal: None State: None CRPR: 1B.1	Found in coastal salt marshes, playas, and vernal pools. Occurs between 0-1,220 meters (0-4,000 feet). Blooms February-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
fragrant pitcher sage *Lepechinia fragrans*	Federal: None State: None CRPR: 4.2	Found in chaparral habitats. Occurs between 20-1,310 meters (65-4,300 feet). Blooms March-October.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Robinson's pepper-grass *Lepidium virginicum* var. *robinsonii*	Federal: None State: None CRPR: 4.3	Found in chaparral and coastal scrub habitats. Occurs between 0-885 meters (0-2,905 feet). Blooms January-July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
ocellated Humboldt lily *Lilium humboldtii* ssp. *ocellatum*	Federal: None State: None CRPR: 4.2	Prefers openings in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland. Occurs between 30-1,800 meters (100-5,900 feet). Blooms March-August.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Davidson's bush-mallow *Malacothamnus davidsonii*	Federal: None State: None CRPR: 1B.2	Found in chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats. Occurs between 185-855 meters (610-2,800 feet). Blooms June-January.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
mud nama *Nama stenocarpa*	Federal: None State: None CRPR: 2B.2	Found in marshes and swamps, lake margins, and riverbanks. Occurs between 5-500 meters (15-1,640 feet). Blooms January-July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Gambel's water cress *Nasturtium gambellii*	Federal: FE State: ST CRPR: 1B.1	Found in freshwater or brackish marshes and swamps. Occurs between 5-330 meters (15-1,080 feet). Blooms April-October.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
spreading navarretia *Navarretia fossalis*	Federal: FT State: None CRPR: 1B.1	Chenopod scrub, marshes and swamps, playas, and vernal pools. Occurs between 30-655 meters (100-2,150 feet). Blooms April-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
prostrate vernal pool navarretia *Navarretia prostrata*	Federal: FT State: None CRPR: 1B.2	Prefers mesic coastal scrub, meadows and seeps, alkaline valley and foothill grassland, and vernal pool habitats. Occurs between 15-1,210 meters (50-3,970 feet). Blooms April-July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
California Orcutt grass *Orcuttia califórnica*	Federal: FE State: SE CRPR: 1B.1	Found in vernal pools. Occurs between 15-660 meters (50-2,165 feet). Blooms April-August.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Hubby's phacelia *Phacelia hubbyi*	Federal: None State: None CRPR: 4.2	Prefers gravelly, rocky, or talus sites in chaparral, coastal scrub, and valley and foothill grassland habitats. Occurs between 0-1,000 meters (0-3,280 feet). Blooms April-July.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
south coast branching phacelia *Phacelia ramosissima* var. *austrolitoralis*	Federal: None State: None CRPR: 3.2	Prefers sandy or rocky areas in chaparral, coastal dune, coastal scrub, and coastal salt marsh and swamp habitats. Occurs between 5-300 meters (15-985 feet). Blooms March-August.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Brand's star phacelia *Phacelia stellaris*	Federal: None State: None CRPR: 1B.1	Occurs in coastal dune and coastal scrub habitats. Occurs between 0-400 meters (0-1,320 feet). Blooms March-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Ballona cinquefoil *Potentilla multijuga*	Federal: None State: None CRPR: 1A	Found in brackish meadows and seeps. Occurs between 0-5 meters (0-20 feet). Blooms June-August.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs and the project area fall outside the elevation range known for this species.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
white rabbit-tobacco *Pseudognaphalium leucocephalum*	Federal: None State: None CRPR: 2B.2	Prefers sandy or gravelly sites in riparian woodland, cismontane woodland, coastal scrub, and chaparral habitats. Occurs between 0-2,100 meters (0-6,890 feet). Blooms July-December.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Nuttall's scrub oak *Quercus dumosa*	Federal: None State: None CRPR: 1B.1	Prefers sandy or clay loam sites in closed-cone coniferous forest, chaparral, and coastal scrub. Occurs between 15-400 meters (50-1,310 feet). Blooms February-August.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
San Gabriel oak *Quercus durata* var. *gabrielensis*	Federal: None State: None CRPR: 4.2	Found in chaparral and cismontane woodland habitats. Occurs between 450-1000 meters (1,475-3,280 feet). Blooms April-May.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs and the project area fall outside the elevation range known for this species.
Engelmann oak *Quercus engelmannii*	Federal: None State: None CRPR: 4.2	Found in chaparral, cismontane woodland, riparian woodland and valley and foothill grassland habitats. Occurs between 50-1,300 meters (165-4,265 feet). Blooms March-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Parish's gooseberry *Ribes divaricatum* var. *parishii*	Federal: None State: None CRPR: 1A	Inhabits riparian woodland habitats. Occurs between 65-300 meters (210-985 feet). Blooms February-April.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Coulter's matilija poppy *Romneya coulteri*	Federal: None State: None CRPR: 4.2	Often found in burns in chaparral or coastal scrub habitats. Occurs between 20-1,200 meters (65-3,940 feet). Blooms March-July (August).	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Parish's rupertia *Rupertia rigida*	Federal: None State: None CRPR: 4.3	Found in chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, pebble (pavement) plain, and valley and foothill grassland habitats. Occurs between 700-2,500 meters (2,300-8,200 feet). Blooms June-August.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs and the project area fall outside the elevation range known for this species.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
salt spring checkerbloom *Sidalcea neomexicana*	Federal: None State: None CRPR: 2B.2	Prefers alkaline or mesic sites in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas. Occurs between 15-1,530 meters (50-5,020 feet). Blooms March-June.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
woolly seablite *Suaeda taxifolia*	Federal: None State: None CRPR: 4.2	Found in coastal bluff scrub habitats, coastal dunes, and marshes and swamps. Occurs between 0-50 meters (0-165 feet). Blooms January-December.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
San Bernardino aster *Symphyotrichum defoliatum*	Federal: None State: None CRPR: 1B.2	Prefers sites near ditches, streams, and springs in coastal scrub, meadows and seeps, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland habitats. Occurs between 0- 2,040 meters (5-6,690 feet). Blooms July-November.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Greata's aster *Symphyotrichum greatae*	Federal: None State: None CRPR: 1B.3	Prefers mesic sites in broad-leafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland habitats. Occurs between 300-2,010 meters (980-6,590 feet). Blooms June-October.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
Sonoran maiden fern *Thelypteris puberula* var. *sonorensis*	Federal: None State: None CRPR: 2B.2	Found in meadows and seeps (seeps and streams). Occurs between 50–610 meters (165–2,015 feet). Blooms January–September.	**Not Expected:** Potentially suitable habitat for this species is absent from the BSAs.
California Walnut Woodland			Southern California black walnut trees were observed in the BSA of Tower 584; however, they consisted of a small clusters of a few individuals and did not constitute a walnut woodland. Additionally, these specimens appear planted.
Riversidian Alluvial Fan Sage Scrub			**Not Present**
Southern Coast Live Oak Riparian Forest			**Not Present**
Southern Coastal Salt Marsh			**Not Present**

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
Southern Cottonwood Willow Riparian Forest			**Not Present**
Southern Dune Scrub			**Not Present**
Southern Sycamore Alder Riparian Woodland			**Not Present**
Walnut Forest			**Not Present**

BSA = Biological Survey Area

[1] Regional special-Status species known from the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) to occur on the Hollywood, Van Nuys, Burbank, Pasadena, Los Angeles, Beverly Hills, Venice, Inglewood, and South Gate quadrangles.

[2] Nomenclature for special-status plant species conforms to CNPS.

[3] Sensitivity Status Codes

Federal **FT** - Federally Threatened under the Federal Endangered Species Act (FESA)
FE - Federally Endangered under FESA
FC – A Federal Candidate for listing under FESA

State **ST** - State Threatened under the California Endangered Species Act (CESA)
SE - State Endangered under CESA

CRPR CNPS California Rare Plant Rank (CRPR)
1A: Plants presumed extinct in California
1B: Plants rare, threatened, or endangered in California and elsewhere
2: Plants rare, threatened, or endangered in California, but more common elsewhere
3: Plants more information is needed for
4: Plants of limited distribution – a watch list
0.1: Seriously threatened in California
0.2: Fairly endangered in California
0.3: Not very endangered in California

[4] General Habitat Descriptions from CNPS (2021).

[5] Potential for each regional special-status species to occur within the project area and vicinity is based on the following guidelines:

- **Present:** Species was observed in or immediately adjacent to the project area during the field survey, or survey conducted within the past 5 years.
- **High:** Habitat (including soils and elevation factors) and known historical range for the species occurs in the project area and a known occurrence has been recorded from within 5 miles within the past 30 years.
- **Moderate:** Habitat for the species occurs in the project area and a known occurrence exists from between 5 and 10 miles of the project area, within the past 30 years.
- **Low:** Limited habitat for the species occurs in the project area and a known occurrence is from greater than 10 miles from the project area or over 30 years old, or habitat to support the species is of marginal quantity or quality. A low potential to occur is also assigned when focused surveys for a species have been conducted numerous times within the past 10 years without positive results.
- **Not Expected:** Beyond those factors listed for Low Potential, the species is easily identifiable throughout the year and was not observed, or specific habitat requirements are not found within or adjacent to the project area.

TABLE B. SPECIAL-STATUS WILDLIFE SPECIES[1]

Common Name ***Scientific Name*[2]**	**Status[3]**	**General Habitat Description[4]**	**Potential for Occurrence in the BSA[5,6]**
Invertebrates			
Crotch bumble bee *Bombus crotchii*	Federal: None State: None Other: CNDDB	Occurs at relatively warm and dry sites, including the inner Coast Range of California and the margins of the Mojave Desert.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Belkin's dune tabanid fly *Brennania belkini*	Federal: None State: None Other: CNDDB	Occurs in salt marsh habitats.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
sandy beach tiger beetle *Cicindela hirticollis gravida*	Federal: None State: None Other: CNDDB	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco bay to northern Mexico. Inhabits clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
senile tiger beetle *Cicindela senilis frosti*	Federal: None State: None Other: CNDDB	Inhabits coastal mud flats, salt flats, salt marshes, and inland alkali mud flats.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
globose dune beetle *Coelus blobosus*	Federal: None State: None Other: CNDDB	Inhabits coastal sand dune habitats, from Bodega Head in Sonoma County, south to Ensenada, Mexico. Found in foredunes and sand hummocks, burrowing beneath the sand surface. Common beneath dune vegetation.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
monarch butterfly-California overwintering population *Danaus plexippus pop. 1*	Federal: Candidate State: None Other: CNDDB	Winter roosts occur along California coast from Mendocino County, south to Baja California, Mexico. Roosts in wind-protected tree groves (eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Henne's eucosman moth *Eucosma hennei*	Federal: None State: None Other: CNDDB	Inhabits undisturbed sand dunes, including open to moderately vegetated areas. Requires *Phacelia* sp. as larval food source.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Busck's gallmoth *Eugnosta busckana*	Federal: None State: None Other: CNDDB	Found in Southern California. On wing from November-February.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5,6]
El Segundo blue butterfly *Euphilotes battoides allyni*	Federal: FE State: None Other: CNDDB	Obligate resident of coastal dunes. Requires presence of its host plant, seacliff buckwheat (*Eriogonum parvifolium*). Only three colonies remain in	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
San Gabriel chestnut *Glyptostoma gabrielense*	Federal: None State: None Other: CNDDB	Found in humid areas in rocky hills and mountains at low elevations.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
western ridged mussel *Gonidea angulata*	Federal: None State: None Other: CNDDB	Found in streams, rivers, and lakes with substrates ranging from gravel to firm mud. Requires at least some silt, sand, or clay.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Lange's El Segundo Dune weevil *Onychobaris langei*	Federal: None State: None Other: CNDDB	Occurs in El Segundo Dunes in Los Angeles County.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
wandering (=saltmarsh) skipper *Panoquina errans*	Federal: None State: None Other: CNDDB	Inhabits salt marshes and other wetland habitats; occasionally found in sand dunes. Requires saltgrass (*Distichlis spicata*) as larval food source.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Gertsch's socalchemmis spider *Socalchemmis gertschi*	Federal: None State: None Other: CNDDB	Inhabits sage scrub, chaparral, oak woodland, and coniferous forest, generally in rocky outcrops or talus slopes in non-arid climates. Known only from Brentwood and Topanga Canyon.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Riverside fairy shrimp *Streptocephalus woottoni*	Federal: FE State: None Other: CNDDB	Lives in vernal pools of at least 30 centimeters in depth, from January through March. Found in Riverside and San Diego Counties. Also found in northern Baja California.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Dorothy's El Segundo Dune weevil *Trigonoscuta dorothea dorothea*	Federal: None State: None Other: CNDDB	Found in coastal sand dunes.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5,6]
mimic tryonia (=California brackishwater snail) *Tryonia imitator*	Federal: None State: None Other: CNDDB	Prefers coarse brackish sediments at the mouths of creeks, streams and rivers of southern California.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Amphibians			
southern mountain yellow-legged frog *Rana muscosa*	Federal: FE State: SE Other: WL	Found in the southern Sierra Nevada mountains in lakes, ponds, and streams. Requires breeding habitat that does not dry out year-round.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
western spadefoot *Spea hammondii*	Federal: None State: None Other: SSC	Grasslands with shallow temporary pools are optimal habitats for the western spadefoot. Elevations of occurrence extend from near sea level to 1,363 meters amsl (4,460 feet). This species occurs primarily in grasslands, but occasional populations also occur in valley-foothill hardwood woodlands.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Coast Range newt *Taricha torosa*	Federal: None State: None Other: SSC	Found in coastal drainages from Mendocino to San Diego County. Lives in terrestrial habitats and will migrate over 1 kilometer to breed in ponds, reservoirs, and slow-moving streams.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Reptiles			
California legless lizard *Anniella* spp.	Federal: None State: None Other: SSC	Prefer coastal dune, valley foothill grassland, chaparral, and coastal scrub habitats. Found primarily in areas with moist, loose sandy or organic soils where there is plenty of leaf litter for cover.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
southern California legless lizard *Anniella stebbinsi*	Federal: None State: None Other: SSC	Found in a broader range of habitats than any of the other species in the genus. Often locally abundant, specimens are found in coastal sand dunes and a variety of interior habitats, including sandy washes and alluvial fans.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5,6]
California glossy snake *Arizona elegans occidentalis*	Federal: None State: None Other: SSC	Prefers desert habitats but also occurs in chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grassland habitats.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
coastal whiptail *Aspidoscelis tigris stejnegeri*	Federal: None State: None Other: CNDDB	Found in deserts and semiarid areas with sparse vegetation and open areas. Also occurs in woodland and riparian areas. Substrate may be firm soils, sandy, or rocky.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
western pond turtle *Emys marmorata*	Federal: None State: None Other: SSC	Inhabits permanent or nearly permanent bodies of water in many habitat types, below 1,830 meters (6,000 feet). This species requires basking sites such as partially submerged logs, vegetation mats, or open mud banks. Also needs suitable nesting sites.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
coast horned lizard *Phrynosoma blainvillii*	Federal: None State: None Other: SSC	Inhabits coastal sage scrub and chaparral in arid and semiarid climates. Prefers friable, rocky, or shallow sandy soils.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Birds			
tricolored blackbird *Agelaius tricolor*	Federal: None State: None Other: SSC	Inhabits annual grasslands, wet and dry vernal pools, seasonal wetlands. Frequently found in and around agricultural areas.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
southern California rufous-crowned sparrow *Aimophila ruficeps canescens*	Federal: None State: None Other: WL	Resident in southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	**Moderate Potential** to occur at within the BSA of Tower 584, where rocky hillside habitat with remanent native chaparral vegetation and grass patches occurs and may be suitable for this species. A known record of this species from 2014 occurs within 1 mile southeast of the tower. **Not Expected** to occur within the BSAs of the underground transmission alignment in the cities of Los Angeles and West Hollywood, or where BWP lines would be lowered in City of Burbank.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5,6]
burrowing owl *Athene cunicularia*	Federal: None State: None Other: SSC, BCC	Inhabits open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, California ground squirrel.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Swainson's hawk *Buteo swainsoni*	Federal: None State: ST Other: BCC	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
western snowy plover *Charadrius alexandrines nivosus*	Federal: FT State: None Other: SSC	Breeds along sandy coastal beaches, bays, estuaries and coastal rivers along the west coast, from Washington to Baja California.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	Federal: FT State: SE Other: BCC	Breeds in low to moderate elevation native forests lining the rivers and streams of western United States. Prefers cottonwood-willow forests. Migrates to wintering grounds in South America.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
yellow rail *Coturnicops noveboracensis*	Federal: None State: None Other: SSC	Inhabits sedge marshes and meadows with moist soil or shallow standing water.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
southwestern willow flycatcher *Empidonax traillii extimus*	Federal: FE State: SE Other: CNDDB	Inhabits riparian woodlands in southern California. Nests in extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters, between 610-2,440 meters (2,000-8,000 feet). Dense willow thickets are required for nesting and roosting. Low, exposed branches are used for singing posts/hunting perches.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
American peregrine falcon *Falco peregrinus anatum*	Federal: Delisted State: Delisted Other: FP	Frequents bodies of water in open areas with cliffs and canyons nearby for cover and nesting.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5,6]
California condor *Gymnogyps californianus*	Federal: FE State: SE CDFW: FP	Occurs in mountainous country at low and moderate elevations, especially rocky and brushy areas with cliffs available for nest sites, with foraging habitat encompassing grasslands, oak savannas, mountain plateaus, ridges, and canyons. Often roosts in snags or tall open-branched trees near important foraging grounds.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
California black rail *Laterallus jamaicensis coturniculus*	Federal: None State: ST Other: FP	Inhabits saline, brackish, and fresh emergent wetlands.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Belding's savannah sparrow *Passerculus sandwichensis beldingi*	Federal: None State: SE Other: CNDDB	Inhabits southern coastal wetlands.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
California brown pelican *Pelecanus occidentalis californicus*	Federal: Delisted State: Delisted Other: FP	Inhabits salt bays, beaches, and oceans. Mostly over shallower waters, especially sheltered bays. May occasionally be found on inland freshwater lakes.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
coastal California gnatcatcher *Polioptila californica californica*	Federal: FT State: None Other: SSC	Obligate, permanent resident of coastal sage scrub below 760 meters amsl (2,500 feet) in southern California. Inhabits low, coastal sage scrub in arid washes, on mesas and slopes.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
bank swallow *Riparia riparia*	Federal: None State: ST Other: CNDDB	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, and ocean to dig nesting hole.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5,6]
California least tern *Sternula antillarum browni*	Federal: FE State: SE Other: FP	Found along coastal beaches, bays, large rivers, and salt flats. Known to feed in shallow coastal waters and occasionally inland.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
least Bell's vireo *Vireo bellii pusillus*	Federal: FE State: SE Other: CNDDB	Summer resident of southern California in low riparian habitat in vicinity of water or in dry river bottoms, below 610 meters (2,000 feet).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Mammals			
pallid bat *Antrozous palidus*	Federal: None State: None Other: SCC, WBWG-H	Found in deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rock areas for roosting. Roosts must protect bats from high temperatures; very sensitive to disturbance of roosting sites.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
western mastiff bat *Eumops perotis californicus*	Federal: None State: None Other: SCC, WBWG-H	Known from open semiarid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grassland, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels. Roost locations are generally high above the ground providing a 3-meter minimum clearance below the entrance for flight. Requires large open-water drinking sites.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
silver-haired bat *Lasionycteris noctivagans*	Federal: None State: None Other: CNDDB, WBWG-M	Common, but erratic in abundance. During spring and fall migrations the silver-haired bat may be found anywhere in California. Primarily a coastal and montane forest dweller feeding over streams, ponds, and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes and rarely under rocks. Needs drinking water.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5,6]
hoary bat *Lasiurus cinereus*	Federal: None State: None Other: CNDDB, WBWG-M	May be found at any location in California. Winters along the coast and in southern California, breeding inland and north of the winter range. During migration, may be found at locations far from the normal range. Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees, feeds primarily on moths; requires water.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
western yellow bat *Lasiurus xanthinus*	Federal: None State: None Other: SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in dead palm fronds and other trees, sometimes in urban areas.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
south coast marsh vole *Microtus californicus stephensi*	Federal: None State: None Other: SCC	Occurs in tidal marshes in Los Angeles, Orange and southern Ventura Counties.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
San Diego desert woodrat *Neotoma lepida intermedia*	Federal: None State: None Other: SCC	Found in coastal scrub of southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops and rocky cliffs and slopes.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
pocketed free-tailed bat *Nyctinomops femorosaccus*	Federal: None State: None Other: SSC, WBWG-M	Occurs in desert scrub and arid lowlands, not far from riparian areas. Roosts in small groups in rock crevices, caves and buildings.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
big free-tailed bat *Nyctinomops macrotis*	Federal: None State: None Other: SSC, WBWG-MH	Occurs in low-lying arid hilly areas in Southern California to about 1,830 meters (6,000 feet). Roosts in crevices and cliffs, buildings, and cavities in trees.	

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5,6]
southern grasshopper mouse *Onychomys torridus ramona*	Federal: None State: None Other: SSC	Occurs in desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Los Angeles pocket mouse *Perognathus longimembris brevinasus*	Federal: None State: None Other: SCC	Found in lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin; open ground with fine sandy soils; may not dig extensive burrows, instead may be found hiding under weeds and dead leaves.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
Pacific pocket mouse *Perognathus longimembris pacificus*	Federal: FE State: None Other: SSC	Inhabits areas with fine-grained sandy substrates in coastal dunes, river alluvium, and coastal sage scrub habitats within 3 miles of the ocean.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
southern California saltmarsh shrew *Sorex ornatus salicornicus*	Federal: None State: None Other: SSC	Occurs in coastal salt marshes, preferring those dominated by pickleweed and saltgrass.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.
American badger *Taxidea taxus*	Federal: None State: None Other: SSC	Occurs in dry, open stages of shrub, forest, and herbaceous habitats. Prefers areas with fine-textured or sandy soils for digging burrows.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSAs.

BSA = Biological Survey Area

[1] Special-Status species known from the California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) to occur on the Hollywood, Van Nuys, Burbank, Pasadena, Los Angeles, Beverly Hills, Venice, Inglewood, and South Gate quadrangles.

[2] Nomenclature for special-status wildlife conforms to CNDDB.

[3] Sensitivity Status Codes

Federal	**FT**	- Federally Threatened under Federal Endangered Species Act (FESA)
	FE	- Federally Endangered under FESA
State	**ST**	- State Threatened under California Endangered Species Act (CESA)
	SE	- State Endangered under CESA
	SC	- State Candidate for listing under CESA
Other	**SSC**	- Designated as a Species of Special Concern by California Fish & Wildlife (CDFW)
	WL	- Designated as a Watch List species by CDFW
	CNDDB	- Tracked by CDFW in the California Natural Diversity Data Base or considered locally sensitive
	WBWG-H	- Designated by the Western Bat Working Group (WBWG)[14] as High Priority - species that are imperiled or are at high risk of imperilment

[14] Western Bat Working Group (WBWG). 2017. Species Matrix. Available at: http://wbwg.org/matrices/species-matrix/. Accessed December 8, 2021.

WBWG-M - Designated by the WBWG as Medium Priority – a level of concern that should warrant closer evaluation, more research, and conservation actions of both species and possible threats.

WBWG-L - Designated by the as Low Priority – an indication that existing data supports stable populations for the species and that the potential for major changes in status in the future is considered unlikely.

[4] General Habitat Descriptions from CNDDB.

[5] Historical occurrence data from CNDDB.

[6] Potential for each regional special-status species to occur within the project area is based on the following guidelines:

- **Present:** Species was observed in or immediately adjacent to the project area during the field survey, or survey conducted within the past 5 years.
- **High:** Habitat (including soils and elevation factors) and known historical range for the species occurs in the project area and a known occurrence has been recorded from within 5 miles within the past 30 years.
- **Moderate:** Habitat for the species occurs in the project area and a known occurrence exists from between 5 and 10 miles of the project area, within the past 30 years.
- **Low:** Limited habitat for the species occurs in the project area and a known occurrence is from greater than 10 miles from the project area or over 30 years old, or habitat to support the species is of marginal quantity or quality. A low potential to occur is also assigned when focused surveys for a species have been conducted numerous times within the past 10 years without positive results.
- **Not Expected:** Beyond those factors listed for Low Potential, the species is easily identifiable throughout the year and was not observed, or specific habitat requirements are not found within or adjacent to the project area.

Appendix C
Cultural Resources Technical Report

TOLUCA-HOLLYWOOD LINE 1
UPGRADE PROJECT
CULTURAL RESOURCES TECHNICAL REPORT
LOS ANGELES COUNTY, CALIFORNIA

Prepared for:
Los Angeles Department of Water and Power
Environmental Affairs
111 North Hope Street, Room 1044
Los Angeles, California 90012

Prepared by:
AECOM
300 South Grand, Suite 900
Los Angeles, California 90071

Author:
Alec Stevenson, M.A., RPA
Evan Mackall, M.A., RPA
Monica Wilson, M.A., RPA

October 2022

Acres: Approximately 14 acres

USGS 7.5' Quadrangles: Burbank, Hollywood

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EXECUTIVE SUMMARY

AECOM was retained by the City of Los Angeles Department of Water and Power (LADWP) to conduct a Phase I cultural resources assessment for the Toluca-Hollywood Line 1 (TOL-HWD L1) Upgrade Project (proposed project). The purpose of the proposed project is to increase the overall circuit rating of TOL-HWD L1 from 313 Megavolt-amperes (MVA) to 405 MVA continuous rating. In order to increase the circuit rating, LADWP proposes to replace aging cable infrastructure of the underground portion of the TOL-HWD L1 in approximately the same location as the existing TOL-HWD L1 High-Pressure Pipe Type (HPPT) cable by installing a new cable. The increased circuit rating of the new cable would provide greater capacity to respond to Hollywood area load requirements and would reduce stress on the Toluca-Hollywood and other (e.g., Fairfax-Hollywood, etc.) transmission pathways while providing the capacity to accommodate imported renewable energy coming from outside of the Los Angeles Basin. The proposed project is essential to support LADWP's planned reduced reliance on its in-basin combustion-turbine electrical generation facilities while substantially increasing the use of renewable resources in an effort to achieve the long-term City of Los Angeles (City) goal of 100 percent clean energy by 2035.

The proposed project would include the following work:

- Trenching and installing a new underground cable adjacent to the existing underground TOL-HWD L1 alignment from Hollywood Boulevard southeast to the Hollywood Receiving Station.
- Trenching and removing the existing underground TOL-HWD L1 pipe and cable and installing a new underground pipe and cable inside the same trench/alignment within Nichols Canyon Road, north of Hollywood Boulevard to the Nichols Canyon Terminal Tower.
- Splicing the new cable in Nichols Canyon Road together with the new cable south of Hollywood Boulevard and transferring the circuit to the new cable. The existing pipe south of Hollywood Boulevard would be abandoned in place.
- Raising an existing transmission tower along the existing TOL-HWD L1 and lowering a portion of an existing Burbank Water and Power (BWP) distribution line that crosses under the TOL-HWD L1.
- Making modifications to the Nichols Canyon Terminal Tower and the Hollywood Receiving Station to accommodate the system upgrade.

This document identifies potential impacts to cultural resources in compliance with provisions of the California Environmental Quality Act. The cultural resources study for the proposed project included archival research, field survey, evaluation of resources in the project area, and assessment of potential impacts on historical resources and archaeological resources.

A records search was conducted for this project in March 2020 at the South Central Coastal Information Center housed at California State University, Fullerton. A 0.5-mile buffer for archaeological resources and 500-foot buffer for historical built resources was used. This area is known as the study area throughout the report. The records search revealed that 54 previous cultural resource investigations were conducted within the study area, five of which overlapped the project area (i.e., the footprint of proposed project activities). In addition, nine previously recorded cultural resources were identified within the study area, none of which overlapped the project area. Approximately 33 percent of the project was previously surveyed.

The records search also included review of the Built Environment Resource Directory (BERD), the Historic Properties Directory (HPD), and the Los Angeles Historic Resources Inventory (HRI). The review identified 76 built environment resources that are adjacent to or face the project area. Of these, six are eligible, or potentially eligible. The BERD listed two historical resources at 7300 and 7546 Fountain Avenue (individually eligible for local listing), the HPD listed two at 1135 and 1243 North Fuller Avenue (contributors to a multicomponent resource that appears eligible for local listing or designation), and the HRI listed two at 7750 West Sunset Boulevard and 1401 North Spaulding Avenue. Because the project will have only temporary above-ground impacts and construction will take place in only the road at this location, no impacts to the character-defining features of these historical resources are anticipated.

A field survey was conducted on December 15, 2021, as part of this assessment to identify the presence of any cultural resources in the project area. During the survey, no archaeological resources were discovered. However, two built resources were identified in the project area that are more than 45 years old and required evaluation under the criteria of the California Register of Historical Resources (CRHR) and the National Register of Historic Places (NRHP). The Nichols Canyon Terminal Tower and the Hollywood Receiving Station were evaluated and recorded on California Department of Parks and Recreation forms. The resources did not exhibit any historical or architectural significance, and do not meet the eligibility criteria for the CRHR or the NRHP. No historical resources or known archaeological resources are present in the project area.

LADWP and AECOM sought to identify potential impacts to tribal cultural resources within the project area. No prehistoric or historic-period sites of Native American origin that might include tribal cultural resources were identified within the project area during the survey or records search. Consultation concerning tribal cultural resources is being conducted by LADWP. The process is ongoing, and the results will be recorded in a separate document.

Based on the results of this assessment, the project area has a low sensitivity for archaeological resources and tribal cultural resources. However, the lack of surface evidence of archaeological materials does not preclude the possibility that subsurface materials may exist. The presence of alluvium may indicate that surface evidence of archaeological materials has been buried and could potentially be encountered during excavation. Regardless, due to disturbance and lack of finds during the survey and records search, the likelihood of finding archaeological and tribal cultural resources is low.

To reduce impacts to unanticipated archaeological resources, BMP-CUL-1 would be implemented to provide training on cultural resources that may be present in the project area to construction personnel and supervisory staff to establish an understanding of what to look for during ground-disturbing activities.

BMP-CUL-1 All field supervisors and all construction workers shall participate in training on cultural resources awareness prior to the initiation of project construction on project sites that involve ground-disturbing activities. The training shall include a description of the types of cultural resources (including tribal cultural resources and human remains) that could inadvertently be encountered during ground-disturbing activities, the sensitivity of the resources, the legal basis for protection of the resources, and the penalties for unauthorized collection of or knowingly damaging the resources. The training shall address the proper procedures in the event of an inadvertent discovery of a cultural resource, including the immediate halting of work in the area of the discovery, notification of appropriate individuals of the discovery, the establishment of appropriate protective buffer zones around the discovery, and the continued avoidance of the protected area until the resource has been evaluated by qualified individuals and an appropriate treatment plan has been developed and implemented. These procedures shall be documented in a cultural resources monitoring plan (CRMP) that shall establish, in the event of inadvertent discovery of cultural resources, monitoring procedures (including potential Native American monitors), notification procedures, key staff, and preliminary treatment measures for potential discoveries. The CRMP shall be written to ensure compliance with appropriate state and federal laws. The training presentation and CRMP shall be available to additional supervisory or construction personnel who may join after project construction has begun.

Although not expected to occur due to the low potential in the APE, in the event of an inadvertent discovery of archaeological resources during construction activities, the proposed project would be subject to California Public Resources Code (PRC) Section 21083.2(i) regarding provisions related to the accidental discovery of archaeological resources. These provisions include immediately halting construction work in the vicinity of the find (within a 50-foot buffer), and LADWP retaining a qualified archaeologist meeting Secretary of Interior standards to evaluate the significance of and determine appropriate treatment for the resource in accordance with the provisions of CEQA Guidelines Section 15064.5 and the National Historic Preservation Act.

If the resource is determined to be potentially of Native American in origin, Mitigation Measure (MM) TCR-1 would be required to mitigate potential impacts to a less than significant level. If the resource is determined to be non-Native American in origin and is determined to be potentially significant, a treatment or avoidance plan shall be developed within 48-hours of the discovery. Work in the area may not resume until evaluation and treatment of the resource is completed or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while the evaluation and treatment of archaeological resources take place.

MM TCR-1 In the event that an archaeological resource inadvertently discovered during project construction is determined to be potentially of Native American origin based on the initial assessment of the find by a qualified archaeologist pursuant to California Public Resources Code Section 21083.2(i), the Native American Tribes that consulted on the proposed project pursuant to California Assembly Bill 52 shall be notified and be provided information about the find to allow for early input from the tribal representatives with regards to the potential significance and treatment of the resource.

> If, as a result of the resource evaluation and tribal consultation process, the resource is considered to be a tribal cultural resource in accordance with California Public Resources Code Section 21074, determined to be eligible for inclusion in the California Register of Historic Resources or a local register of historical resources or determined to be significant by LADWP (the CEQA lead agency), the qualified archaeologist shall monitor all remaining ground-disturbing activities in the area of the resource, and a tribal monitor from a consulting Native American Tribe shall be invited to monitor the ground-disturbing activities. The tribal monitor shall be ancestrally affiliated with the project area and qualified by their tribe to monitor tribal cultural resources.
>
> The input of all consulting Tribes shall be considered in the preparation of any required treatment plan for the resources prepared by the qualified archaeologist. Work in the area of the discovery may not resume until evaluation and treatment of the resource is completed and/or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while evaluation and treatment of the resource takes place.

If human remains are discovered, work in the immediate vicinity of the discovery will be suspended, and the Los Angeles County Coroner will be contacted. If the remains are deemed Native American in origin, the Coroner will contact the Native American Heritage Commission and identify a Most Likely Descendant pursuant to Public Resources Code Section 5097.98 and California Code of Regulations Section 15064.5. Work may be resumed at the landowner's discretion but will only commence after consultation and treatment have been concluded. Work may continue on other parts of the project while consultation and treatment are conducted. If any archaeological materials are recovered during the course of the project, final disposition should be determined by the qualified archaeologist and LADWP in consultation with interested Native American parties if they are Native American in origin. This process could include curation at an approved facility.

CHAPTER 1
INTRODUCTION

This Cultural Resources Technical Report describes a Phase I cultural resources assessment for the Toluca-Hollywood Line 1 (TOL-HWD L1) Upgrade Project (proposed project). The City of Los Angeles Department of Water and Power (LADWP) proposes to increase the overall circuit rating of the overhead segment of the TOL-HWD L1 from 313 Megavolt-amperes (MVA) to 405 MVA continuous rating. In order to increase the circuit rating, LADWP proposes to replace aging cable infrastructure of the underground portion of the TOL-HWD L1 in approximately the same location as the existing TOL-HWD L1 High-Pressure Pipe Type (HPPT) cable by installing a new cable. The upgrades to the Toluca-Hollywood system are the purpose of the proposed project to be addressed in this document.

This document was prepared in support of a Mitigated Negative Declaration in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and with the State CEQA Guidelines, California Code of Regulations Section 15000 et seq.

REPORT ORGANIZATION

This report is organized following the Archaeological Resource Management Reports Guidelines (State of California Office of Historic Preservation 1990). These guidelines provide a standardized format and suggested report content, scaled to the size of the project. This report first includes a project description, including project location and setting. Next, the environmental and cultural settings of the project area are presented, followed by the archival research methods and results. Then, the survey methodology and results are described. The final two sections summarize regulatory settings and provides recommendations and conclusions for project mitigation.

PROJECT PERSONNEL

AECOM personnel involved in the cultural resources assessment are as follows:

- Alec Stevenson, M.A. RPA, served as the report author, performed the archaeological survey, and provided geographic information system support;
- Evan Mackall, M.A., and Monica Wilson, M.A., addressed architectural history and provided built environment desktop research and resource evaluations;
- Marc Beherec, Ph.D., RPA, conducted the archival research; and
- Jennifer Redmond, M.A., RPA, performed the senior review.

CHAPTER 2
PROJECT DESCRIPTION

PROJECT BACKGROUND

The existing TOL-HWD L1 is currently 230 kilovolts (kV) and 313 MVA. This line consists of 6.7 miles of overhead aluminum conductor steel reinforced overhead cable and 1.8 miles of underground HPPT cable. This HPPT cable contains three separate conductors within pressurized oil, acting as both a cable and conduit. The cable was installed in 1975.

PROJECT SETTING

The proposed project is made up of three components: the underground alignment, Tower 584, and BWP line. They are located south of, within, and north of the Hollywood Hills, respectively. The proposed project is situated near Interstate 5, United States (U.S.) Highway 101, California State Route (SR) 134 (SR-134), and SR-170 within Los Angeles County, California. Figure 1 displays the vicinity map of the project area and Figures 2 and 3 display overview and detailed maps for the locations of the three components. Collectively, the three components are referred to as the ‘project area’, which is the footprint of all proposed project activities.

- Underground Alignment (Figure 3a)
    - The southern portion of the proposed project (referred to as the “underground alignment”) is the approximately 1.8-mile segment of the TOL-HWD L1, which is located between the Hollywood Receiving Station and Nichols Canyon Terminal Tower just south of the Hollywood Hills and west of U.S. Highway 101.
- Tower 584 (Figure 3b)
    - The central portion of the proposed project (referred to as “Tower 584”) is located at Tower 584, adjacent to Mulholland Drive within the Hollywood Hills.
- BWP Line (Figure 3c)
    - The northern portion of the proposed project (referred to as the “BWP line”) is in the City of Burbank, west of Hollywood Way at a crossing of the BWP line located north of SR-134.

PROPOSED PROJECT

The proposed project is essential to support LADWP’s planned reduced reliance on its in-basin combustion-turbine electrical generation facilities while substantially increasing the use of renewable resources in an effort to achieve the long-term City of Los Angeles (City) goal of 100 percent clean energy by 2035.

The purpose of the proposed project is to increase the overall circuit rating of TOL-HWD L1 from 313 MVA to 405 MVA continuous rating. In order to increase the circuit rating, LADWP proposes to replace the existing aging infrastructure of the underground portion of the TOL-HWD L1 in approximately the same location (Figure 3a). The higher circuit rating of TOL-HWD L1 would result in higher conductor temperature and sag of the overhead line originating at the Toluca Receiving Station and spanning to Nichols Canyon Terminal Tower. The anticipated increase in temperature and resulting sag on the overhead line necessitates an increase in height at Tower 584 (Figure 3b) and a lowering of BWP distribution line in one location (Figure 3c) to address California Public Utilities Commission General Order Number 95 (GO95) clearance requirements. The increased circuit rating of the new cable would provide greater capacity to respond to Hollywood area load requirements and would reduce stress on the Toluca-Hollywood and other (e.g., Fairfax-Hollywood, etc.) transmission pathways while providing the capacity to accommodate imported renewable energy coming from outside the Los Angeles Basin.

Project Components and Tasks

The primary component of the proposed project is the 1.8 miles of new 230 kV cable, which would replace the existing HPPT TOL-HWD L1 cable. This underground transmission line would consist of cross-linked polyethylene insulation (XLPE) copper conductor, an external metallic covering for moisture protection, and an outer polyethylene jacket for corrosion protection.

The new XLPE cable would be routed entirely within the public ROW, either immediately adjacent to the existing alignment (south of Hollywood Boulevard) or within the existing alignment (north of Hollywood Boulevard). Because the existing TOL-HWD L1 HPPT cable must remain in service for as long as practical during construction of the proposed project, the proposed XLPE cable would be installed in a new trench parallel to the existing line (except for the portion of the underground alignment north of Hollywood Boulevard along Nichols Canyon Road where this is not possible, discussed further below).

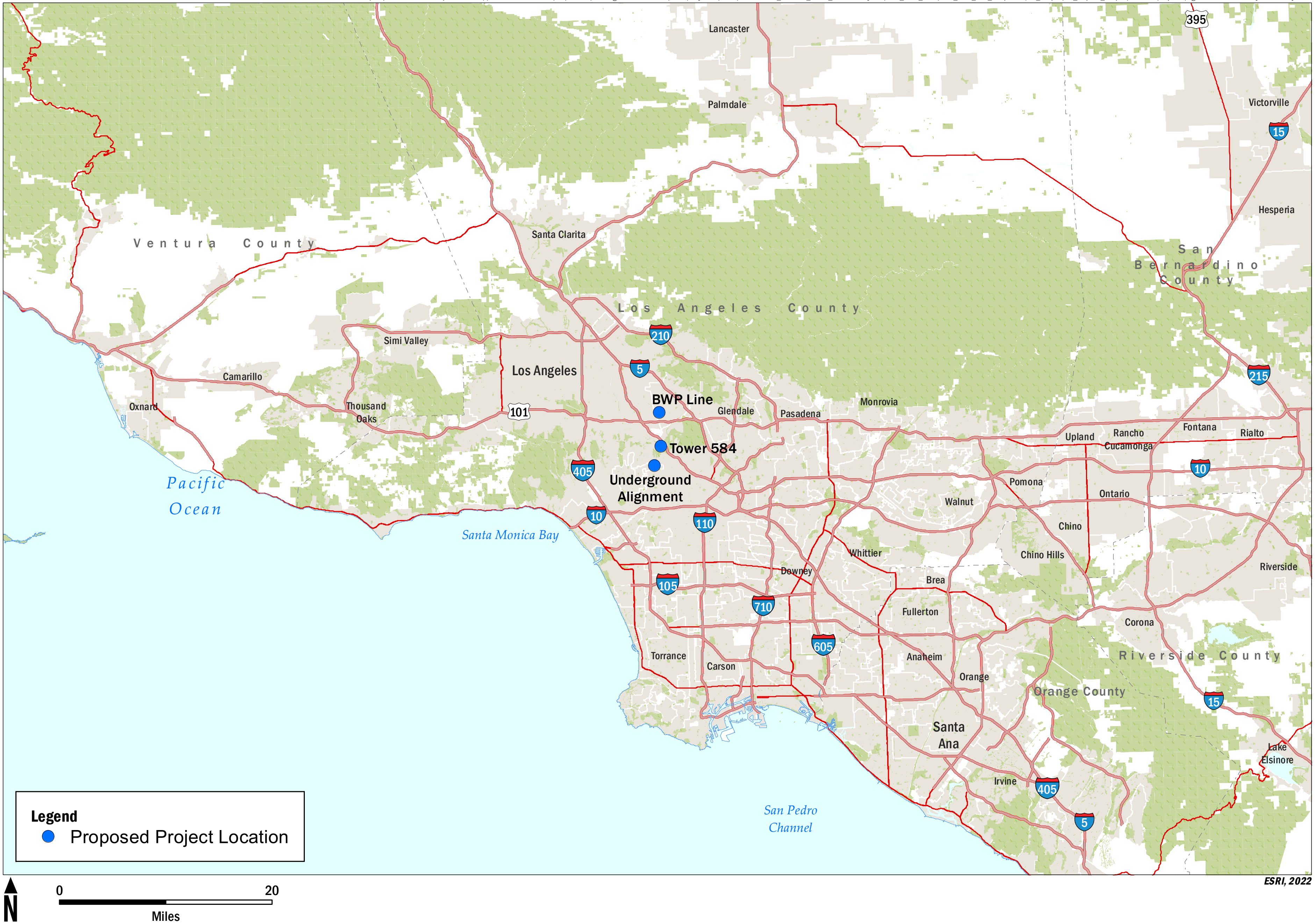
South of Hollywood Boulevard, the proposed XLPE cable would be trenched underground within a concrete-encased bank, known as duct banks, and a new maintenance vault system. Eight (8) maintenance vaults would be required to splice together segments of cable during installation and provide a means for inspecting the integrity of the underground cable system during the operational phase of the line. Maintenance vaults would be spaced approximately 850 to 1,100 feet apart along the proposed underground alignment.

Between maintenance vaults, the underground alignment would be trenched to install 8-inch polyvinyl chloride (PVC) conduits, which would be encased within a concrete duct bank. Once the system of vaults and duct banks is complete, the proposed XLPE cable would be installed.

North of Hollywood Boulevard along Nichols Canyon Road the existing underground alignment would be used for the proposed XLPE cable due to space constraints from a number of existing underground utilities within Nichols Canyon Road. This would require draining and cleaning the HPPT section with heavy detergent; excavating, removing, and disposing of (recycling) the HPPT section; and then installing a new 12-inch PVC conduit and XLPE cable within the same trench. A short-term outage of approximately 5 months would be required during this work and to connect the XLPE cable to the terminal ends and to the portion of the line that is south of Hollywood Boulevard. This outage will not impact power supply to LADWP customers. The proposed XLPE cable would then be tested and energized. Lastly, the remainder of the existing HPPT (south of Hollywood Boulevard) would be depressurized, drained, and abandoned in place.

To accommodate the system upgrade, modifications within the Nichols Canyon Terminal Tower property and the Hollywood Receiving Station would be required to connect the underground portion of the cable to associated above ground equipment. This would include the replacement of a concrete pad, subsurface support structure, and an aboveground rack at both locations. The existing pump houses and accompanying tanks would be demolished and removed at both locations, as they would no longer be supporting an the HPPT. Within the Hollywood Receiving Station property, the existing pipe and cable would be abandoned and trenching for a new pipe/cable alignment (approximately 350 feet in length) would be required.

Additionally, the higher transmission line rating of the new underground transmission line would result in higher conductor temperature and sag of the overhead line. Analysis of operation of the increased rating identified two GO95 clearance violation locations: the first location would be from TOL-HWD L1 bottom conductor to the BWP distribution line crossing under the TOL-HWD L1 between Towers 555 and 556; and the second location would be of TOL-HWD L1 bottom conductor to ground between Towers 583 and 584. In order to resolve conductor clearance to the BWP line, BWP would lower the line (i.e., move the distribution line and other wires to a lower position on their poles). In order to resolve conductor clearance to ground between Towers 583 and 584, Tower 584 would be raised in 5-foot segments (a maximum of 15 feet) using a proprietary process that employs hydraulic jacks to lift an upper portion of the tower, requiring some foundation work at the tower footings.



AECOM

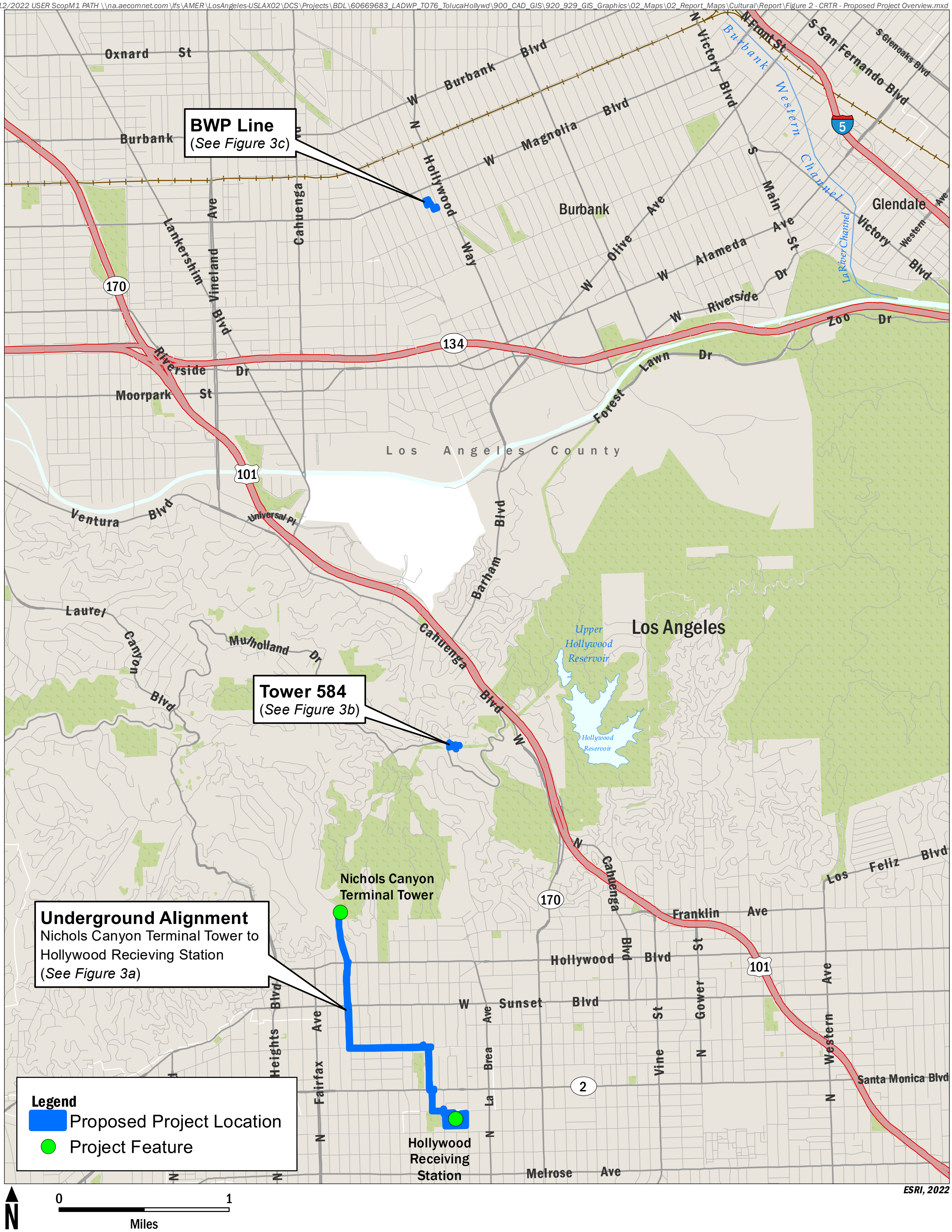
Los Angeles Department of Water and Power (LADWP)

Toluca-Hollywood Line 1 Upgrade Project

CULTURAL RESOURCES TECHNICAL REPORT,
LOS ANGELES COUNTY, CALIFORNIA

FIGURE 1

Project Vicinity Map



AECOM

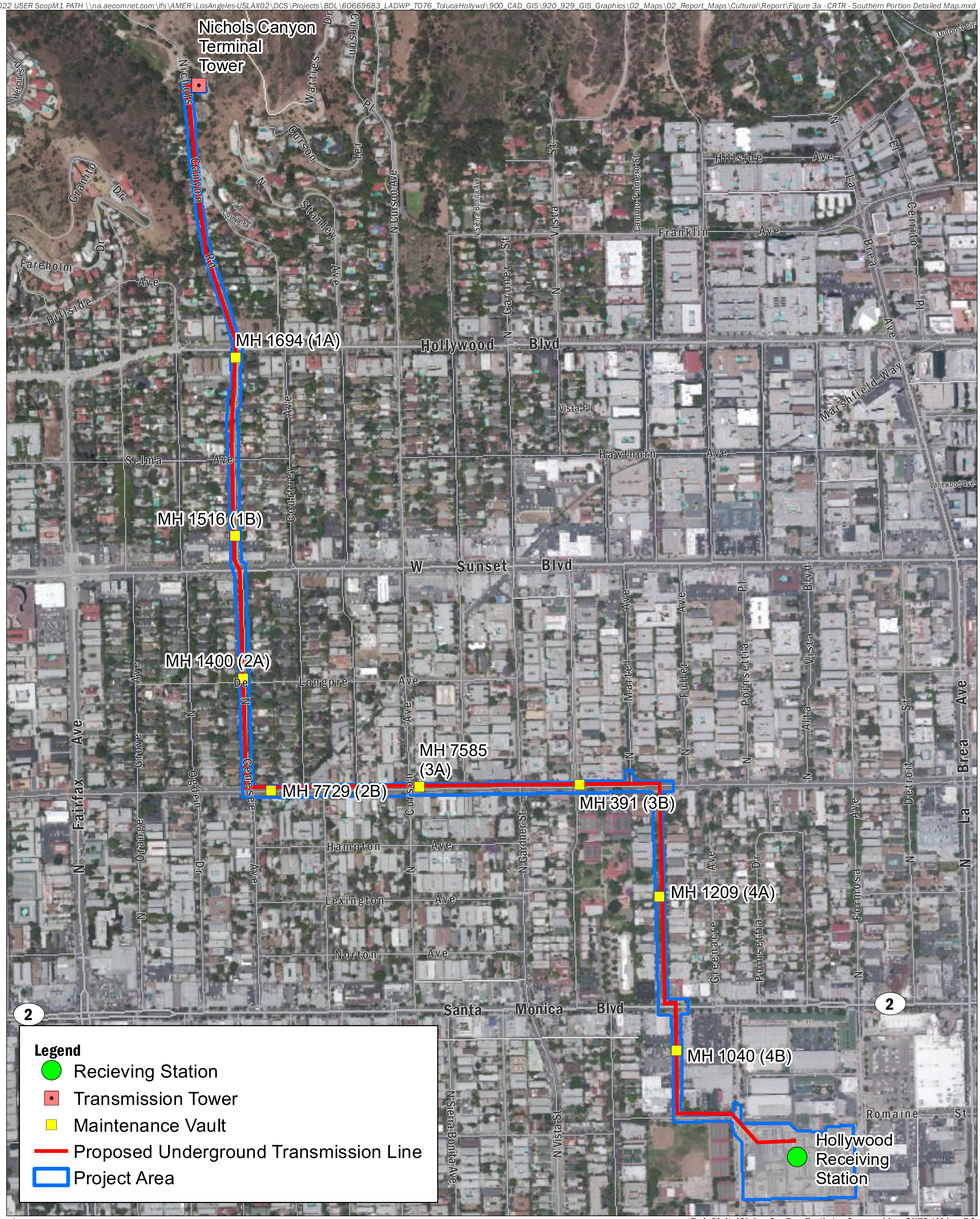
Los Angeles Department of Water and Power (LADWP)

Toluca-Hollywood Line 1 Upgrade Project

CULTURAL RESOURCES TECHNICAL REPORT,
LOS ANGELES COUNTY, CALIFORNIA

FIGURE 2

Proposed Project Overview



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Feet

Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, 2022

AECOM

Los Angeles Department of Water and Power (LADWP)

Toluca-Hollywood Line 1 Upgrade Project

CULTURAL RESOURCES TECHNICAL REPORT,
LOS ANGELES COUNTY, CALIFORNIA

FIGURE 3A

Detailed Map - Underground Alignment

Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, 2022

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Los Angeles Department of Water and Power (LADWP)

Toluca-Hollywood Line 1 Upgrade Project

CULTURAL RESOURCES TECHNICAL REPORT,
LOS ANGELES COUNTY, CALIFORNIA

FIGURE 3B

Detailed Map - Tower 584

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Los Angeles Department of Water and Power (LADWP)

Toluca-Hollywood Line 1 Upgrade Project

CULTURAL RESOURCES TECHNICAL REPORT,
LOS ANGELES COUNTY, CALIFORNIA

FIGURE 3C

Detailed Map - BWP Line

CHAPTER 3
SETTING

ENVIRONMENTAL SETTING

The project components are located within the southern San Fernando Valley Basin at 600 feet above mean sea level (amsl), the northwestern Los Angeles Basin at 250 feet amsl, and the eastern Santa Monica Mountains (Hollywood Hills) at 1,100 feet amsl. The Los Angeles River is 1.5 miles away, between the northern and central project components. The generally Mediterranean climate is characterized as mild, with warm, nearly rainless summers and mild winters with only occasional storms. The nearby Central Transverse Mountain Ranges Province forms an east-west–trending northern backdrop, while the northwest-oriented Peninsular Ranges Province bounds to the south (Dibblee and Ehrenspeck 1991).

The Santa Monica Mountains are a coastal mountain range that is approximately 40 miles running in an east-west direction along the coast of California. The Los Angeles River, within the floodplain of Los Angeles, begins in the Simi Hills and Santa Susana Mountains. Historically, the river and its tributaries, including the Tujunga Wash and Pacoima Wash, meandered through the San Fernando Valley. The surface sediment in the project area consists of a sandstone, siltstone conglomerate that has been uplifted within the Santa Monica Mountains; and gravels and alluvium within the Los Angeles and San Fernando Valley floodplains deposited by major and minor tributaries to the Los Angeles River, including Pacoima Wash and Tujunga Wash (Dibblee and Ehrenspeck 1991).

Tower 584 and the northern part of the underground alignment of the project area is rocky and shallow and is unlikely to contain buried deposits. The remaining portions of the project are a mixture of old and young alluvial fans that have a higher likelihood to contain buried resources (Dibblee and Ehrenspeck 1991).

Natural vegetation communities within the vicinity of the project components consist mostly of willow woodland, mule fat scrub, and coastal sage scrub. Also present are areas of disturbed and non-native vegetation, including park, ruderal, and pond that can be characterized as primarily park/ruderal habitat. Landscaping consists of ornamental tree plantings and maintained grass lawns, as well as areas composed of ornamental trees with an understory of ruderal species. Ruderal grassland occurs in disturbed areas where vegetation consists mainly of early successional native herbaceous plants.

CULTURAL SETTING

As a framework for discussing the types of cultural resources that might be encountered in the vicinity of the project components, the following section summarizes AECOM's current understanding of major prehistoric and historic developments in and around Los Angeles, the San Fernando Valley, and the Santa Monica Mountains. This section is followed by a more focused discussion of the history of the project area.

Prehistoric Overview

The earliest occupation of southern California may be associated with the peoples who first colonized North America in the terminal Pleistocene/earliest Holocene. The material culture associated with these peoples is characterized by fluted bifaces. Among southern California's fluted bifaces is a fluted obsidian point found at CA-SDI-2506. That point was shaped from obsidian from the Casa Diablo source in Mono County and was found in a stratified deposit beside what may be an ancient lakebed in Lost Valley, in the mountains of eastern San Diego County (Kline and Kline 2007). Other fluted bifaces have been reported at other locations in Santa Barbara and San Diego counties (Rondeau 2009). Closer to the project area, the Farpoint Site near Malibu (CA-LAN-451) has yielded a fluted point, and its excavator argues that the point is a Clovis point and that the site should be associated with the Clovis culture (Stickel 2008). Clovis is the earliest universally recognized material culture in North America, and dates to approximately 11,500 radiocarbon years before present (B.P.).

While people are known to have inhabited southern California beginning at least 13,000 B.P. (Arnold et al. 2004), the first evidence of human occupation in the Los Angeles area dates to at least 9000 B.P. and is associated with a period known as the Millingstone Cultural Horizon (Wallace 1955; Warren 1968). Millingstone populations established permanent settlements that were located primarily on the coast and in the vicinity of estuaries, lagoons, lakes, streams, and marshes where a variety of resources, including seeds, fish, shellfish, small mammals, and birds, were used. Early Millingstone occupations are typically identified by the presence of handstones (manos) and millingstones (metates), while those Millingstone occupations dating later than 5000 B.P. contain a mortar and pestle complex as well, signifying the exploitation of acorns in the region.

Although many aspects of Millingstone culture persisted, by 3500 B.P., several socioeconomic changes occurred (Erlandson 1994; Wallace 1955; Warren 1968). These changes are associated with the period known as the Intermediate Horizon (Wallace 1955). Increasing population size necessitated the intensification of existing terrestrial and marine resources (Erlandson 1994). This intensification was accomplished in part through use of new technological innovations such as the circular shell fishhook on the coast, and in inland areas, use of the mortar and pestle to process an important new vegetal food staple (acorns) and the dart and atlatl, resulting in a more diverse hunting capability. Evidence for shifts in settlement patterns has been noted as well at a variety of locations at this time and is seen by many researchers as reflecting increasingly territorial and sedentary populations. The Intermediate Horizon marks a period in which specialization in labor emerged, trading networks became an increasingly important means by which both utilitarian and non-utilitarian materials were acquired, and travel routes were extended.

The Late Prehistoric period, spanning from approximately 1500 years B.P. to the Spanish mission era, is the period associated with the florescence of contemporary Native American groups. The northern San Fernando Valley was the northernmost extent of the territory occupied by people whom the Spanish referred to as the Fernandeño, whose name was derived from nearby Mission San Fernando. The Fernandeño spoke one of four regional Uto-Aztecan dialects of Gabrielino, a Cupan language in the Takic family, and were culturally identical to the Gabrielino. The Tataviam and Chumash, of the Hokan Chumashan language family, lived to the north and west of this territory, respectively, and it is likely that the territorial boundaries between these linguistically distinct groups fluctuated in prehistoric times (Bean and Smith 1978; Shipley 1978).

Occupying the southern Channel Islands and adjacent mainland areas of Los Angeles and Orange counties, the Gabrielino are reported to have been second only to their Chumash neighbors in terms of population size, regional influence, and degree of sedentism (Bean and Smith 1978). The Gabrielino are estimated to have numbered around 5,000 in the pre-contact period (Kroeber 1925). Maps produced by early explorers indicate the existence of at least 40 Gabrielino villages, but as many as 100 may have existed prior to contact with Europeans (Bean and Smith 1978; McCawley 1996; Reid 1939[1852]).

Prehistoric subsistence consisted of hunting, fishing, and gathering. Small terrestrial game was hunted with deadfalls and rabbit drives, and by burning undergrowth, while larger game such as deer were hunted using bows and arrows. Fish were taken by hook and line, nets, traps, spears, and poison (Bean and Smith 1978; Reid 1939[1852]). The primary plant resources were the acorn, gathered in the fall and processed with mortars and pestles, and various seeds that were harvested in late spring and summer and ground with manos and metates. The seeds included chia and other sages, various grasses, and islay or holly leafed-cherry (Reid 1939[1852]). Seeds and nuts were pulverized in stone and wood mortars, ground on stone metates, and stored in stone bowls.

Historic-Period Overview

Spanish explorers made brief visits to Gabrielino territory in both 1542 and 1602, and on both occasions the two groups exchanged trade items (McCawley 1996). Sustained contact with Europeans did not commence until the onset of the Spanish Period, which began in 1769 when Gaspar de Portola and a small Spanish contingent began their exploratory journey along the California coast from San Diego to Monterey. Mission San Fernando Rey de España, located 9 miles northwest of the project area and the seventeenth of the 21 Franciscan missions in Alta California, was founded on September 8, 1797, and completed less than a year later. Its location was chosen as a stopping point between Mission San Gabriel and Mission San Buenaventura (Engelhardt 1927). Mission San Fernando was founded in a location already populously inhabited. Several villages are documented near Mission San Fernando. The most populous was the village of Pasheeknga or Passenga (McCawley 1996).

Mission San Fernando prospered by selling cattle hides and tallow and various fruit crops to the nearby Pueblo of Los Angeles (Wright 1992). Agriculture was made possible in the relatively dry area through the construction of a stone masonry dam in 1808, bringing water from the mountains to mission vineyards by way of a 1.3-mile-long aqueduct, completed in 1811.

Gabrielino villages are reported by early explorers to have been most abundant along the dominant rivers of the Los Angeles Basin, including the Los Angeles, San Gabriel, and Santa Ana rivers. Ten important villages were located within the San Fernando Valley, and the most populous of these was Pasheeknga, located near where the Mission was established (Jackson 1999).

By the early 1800s, the majority of the surviving Gabrielino population had entered the mission system. Mission life offered the Indians security in a time when their traditional trade and political alliances were failing, and epidemics and subsistence instabilities were increasing (Jackson 1999). These lifestyle changes also brought significant negative consequences for Gabrielino health and cultural integrity.

Alta California became a state, with its capital at Monterey, when Mexico won its independence from Spain in 1821. The authority of the California missions gradually declined, culminating with their secularization in 1834. Although the Mexican government directed that each mission's lands, livestock, and equipment be divided among its converts, many of these holdings quickly fell into non-Indigenous hands. Mission buildings were abandoned and soon fell into decay. If mission life was difficult for Native Americans, secularization was typically worse. After two generations of dependence on the missions, they were suddenly disenfranchised. After secularization, "nearly all of the Gabrielinos went north while those of San Diego, San Luis, and San Juan overran this county, filling the Angeles and surrounding ranchos with more servants than were required" (Reid 1977 [1851]:104). Upon his 1852 visit to Los Angeles, John Russel Barlett wrote, "I saw more Indians about this place than in any part of California I had yet visited. They were chiefly mission Indians, i.e., those who had been associated with the missions and had derived their support from them until the suppression of those establishments. … They have no means of obtaining a living, as their lands are taken from them, and the missions for which they labored and which provided after a sort for many thousands of them, are abolished" (as cited in Sugranes 1909:77).

The first party of U.S. immigrants arrived in Los Angeles in 1841, although surreptitious commerce had previously been conducted between Mexican California and residents of the U.S. and its territories. Included in this first wave of immigrants were William Workman and John Rowland, who soon became influential landowners. As the possibility of a takeover of California by the U.S. loomed large, the Mexican government increased the number of land grants to keep the land in the hands of upper-class Californios like the Domínguez, Lugo, and Sepúlveda families (Wilkman and Wilkman 2006:14–17). Governor Pío Pico and his predecessors made more than 600 rancho grants between 1833 and 1846, putting most of the state's lands into private ownership for the first time (Gumprecht 1999). Alta California Governor Pío Pico sold the San Fernando Valley to Eulogio de Celis for $14,000 U.S. around this time. Having been established as a pueblo, property within Los Angeles could not be dispersed by the governor, and this task instead fell under the city council's jurisdiction (Robinson 1979).

The U.S. took control of California after the Mexican–American War of 1846, and seized Monterey, San Francisco, San Diego, and Los Angeles (then the state capital) with little resistance. Local unrest soon bubbled to the surface, and Los Angeles slipped from U.S. control in 1847. Hostilities officially ended with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the U.S. agreed to pay Mexico $15 million for the conquered territory, which included California, Nevada, and Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. The conquered territory represented nearly half of Mexico's pre-1846 holdings. California joined the U.S. in 1850 as the 31st state (Wilkman and Wilkman 2006:15).

The discovery of gold in northern California led to an enormous influx of American citizens in the 1850s and 1860s, and these settlers rapidly displaced the old rancho families. In 1873, the U.S.

government confirmed legal title to old Rancho ex-Mission San Fernando at 116,858.43 acres, the largest private land parcel in California. The Southern Pacific Railroad extended its line from San Francisco to Los Angeles in 1876, passing through the San Fernando Valley thanks to a new tunnel through Newhall Pass. Newcomers continued to pour into Los Angeles and the population nearly doubled between 1870 and 1880. The completion of the second transcontinental line, the Santa Fe, took place in 1886 causing a fare war that drove fares to an unprecedented low. More settlers continued to head west and the demand for real estate skyrocketed. The city's population rose from 11,000 in 1880 to 50,000 by 1890 (Meyer 1981:45).

At the dawn of the 20th century, the pace of development within the Los Angeles Basin was stifled due to a limited water supply. Under the direction of City Engineer William Mulholland, the Los Angeles Bureau of Water Works and Supply constructed the 238-mile-long Los Angeles Aqueduct. This 5-year project, completed in 1913, employed the labor of over 5000 men and brought millions of gallons of water into the San Fernando (now Van Norman) Reservoir (Wilkman and Wilkman 2006).

The beginning of the 20th century saw the florescence of a uniquely suburban metropolis, where a vast network of residential communities overshadowed city centers, where the single-family home was valued over the high-rise, and where private space took precedence over public space (Hawthorne 2006). This landscape demanded an innovative transportation solution, and Los Angeles embraced automobiles and freeways like no other city had. The first homemade car puttered down city streets in 1897. Seven years later, the first grand theft auto was reported by Los Angeles Police (Wilkman and Wilkman 2006:50). Inexpensive automobiles gained popularity in the 1920s, soon creating tremendous congestion in the centers of cities and necessitating alternate transportation routes. The Arroyo Seco Parkway, connecting Los Angeles to Pasadena, was among the earliest "express auto highways" in the U.S., opening in December 1940 (Balzar 2006). Dozens of freeways were constructed in the post-World War II years, radically altering the character of Los Angeles by simultaneously dividing local neighborhoods and connecting outlying communities.

During the first three decades of the 20th century, more than two million people moved to Los Angeles County, transforming it from a largely agricultural region into a major metropolitan area. By 1945, Los Angeles had undertaken 95 annexations, expanding from a 28-square-mile agrarian pueblo into a densely populated city covering more than 450 square miles (Robinson 1979:245).

History of the Project Area

San Fernando Valley

Los Angeles was readily accessible in 1874 through the Southern Pacific Railroad line, and in just two short years the San Fernando Valley was connected to San Francisco. With Chinese men as the primary labor, the San Fernando Tunnel was completed in a near 16-month construction feat by 1876 (Robinson 1942; 1963). In addition, the valley experienced a real estate boom in 1887 and 1888, and its immense fertile lands lured residents and developers. The Lankershim Ranch Land and Water Company purchased the east 1,200 acres of the southern half of the Rancho Ex-Mission of San Fernando from the Los Angeles Farm and Milling Company (formerly known as the San Fernando Homestead Association mentioned above). These acres were subdivided by the company into 10- to 40-acre parcels that sold for $5 to $150 each. In the northern half of the valley, land was also purchased for subdivision, and once again the San Fernando Valley was packaged and sold on the real estate market as a fertile agriculture endeavor. However, this agronomic promise was also a reality. The wheat-producing business that was pioneered by Lankershim and Van Nuys in the early 1870s had become a production machine by the late 1800s. Flour milling was supplemental to wheat farming; in 1888, 510,000 bushels of wheat were produced and milled by the Los Angeles Farm and Milling Company (Robinson 1942).

Hollywood and the Hollywood Hills

Hollywood, a community within Los Angeles, was established toward the beginning of the 20th century. Originally purchased by H.J. Whitley for ranching in 1887, later additions including a post office and hotel led to its incorporation as a municipality in 1903 (Los Angeles Times 1903). From here, Whitley sold one of the first residential areas, the Ocean View Tract. To further bolster these additions, he paid thousands of dollars for electricity, built a bank, and constructed a road through the Cahuega Pass. By 1903, Hollywood was incorporated as a municipality, and then later merged with Los Angeles in 1910 (Mintz and McNeil 2013).

In 1912, major motion picture companies moved into the region to escape patents controlled by Thomas Edison. This set Hollywood as the capital of the film industry, a development that helped bolster the popularity and size of this small town to a growing vitalized city (Mintz and McNeil 2013). The growth of Hollywood into what it is today coincides with the growth of the Los Angeles Basin as a whole; Los Angeles is currently the second most populous city in the nation (Wilkman and Wilkman 2006).

Los Angeles Department of Water and Power

In the middle of the 19th century, Los Angeles experienced a rapid population growth, magnifying already existing issues with its current water distribution system. During this time, the Los Angeles water supply was a series of unorganized polluted open ditches. As its population expanded, the City began to rectify this problem through the construction of underground water mains by 1857. Original attempts were unsuccessful as the City allowed private companies to develop leased Los Angeles River water on the City's behalf, leading to multiple scandals. This caused a shift in popular support towards municipal control (Layne 1957).

A scarcity of water eventually led to proposals made by Fred Eaton, a former Los Angeles Mayor, to use tax revenue to pay for, operate, and maintain the City water supply. As part of this City takeover of water, came proposals made by William Mulholland to create the Los Angeles Aqueduct. The Los Angeles Aqueduct brought water from the Owens Valley in the High Sierra to Los Angeles. The construction of the aqueduct, and President Theodore Roosevelt's prohibition of selling Owens Valley water outside the city, led to the annexation of most of the San Fernando Valley into the City (Kahrl 2013). To take advantage of the water supply for the dry farming area, most of the various valley communities agreed to be annexed by Los Angeles at different times from 1915 through 1923. Because of the prosperity the aqueduct brought to the San Fernando Valley, Pacoima was briefly renamed Mulholland (Robinson 1963).

Proposals and actions to increase the City's water supply were both a response to and the cause of rising population. As population grew, so did the need for electrical power creation and distribution. Initially, the City produced electrical power specifically for the construction of the Los Angeles Aqueduct. The Bureau of Los Angeles Aqueduct Power was then developed to provide hydroelectric power for the City. In 1937, the Bureau of Power and Light merged with the Bureau of Water Works forming the LADWP (Layne 1957).

In addition to a growing need for water development in Los Angeles and its surrounding communities was the expansion of the consumption of electricity. As related specifically to power, since its foundation, LADWP oversaw the construction of multiple power generating systems and electrical transmission networks not only within Los Angeles but outside facilities providing services to Los Angeles. As Los Angeles continued to grow in population and size throughout the late 1800s, this need for additional electricity became an emergency. To remedy this need, a California Engineer named John S. Eastwood began to search for an adequate power source that could power the city for years to come (Jackson 2005).

In 1902, he took these plans to the Pacific Light and Power Company, a business that was struggling to keep up with the growing energy needs of Los Angeles. This struggle became worse as light rail systems were being utilized at a greater rate, consuming almost 80 percent (%) of the energy in the region (Hanson 2013). By 1905, Eastwood proposed a complex dam system along Big Creek, a major river in the San Joaquín Valley, consisting of a large reservoir and two powerhouses (Jackson 2005). Construction of this complex, now known as the Big Creek Hydroelectric System Historic District, was built over multiple phases between 1910 and 1987. After Phase 1 was finished in 1914, Los Angeles suffered significant power failure over a competing generating plant, causing the City to sign a contract to switch over to the Big Creek Hydroelectric System. By its second phase in 1921, the Big Creek Hydroelectric System was providing significant power to support Los Angeles and multiple surrounding communities (Hanson 2013). Today, Los Angeles receives power from all over the county, state, and country, ranging from local services all the way to Arizona, Wyoming, Utah, and Oregon.

CHAPTER 4
ARCHIVAL RESEARCH

The cultural resource investigation for this project involved archival research, including cultural resources records searches and other background research.

ARCHIVAL RESEARCH

Archival research for this project was conducted in March 2020. The research focused on the identification of previously recorded cultural resources within the project area as well as within a 1/2-mile radius of the project area for archaeological resources, and a 500-foot radius for historical built resources (study area). The archival research included review of previously recorded archaeological site records and reports, historical site and property inventories, and historical maps. Inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the Built Environment Resource Directory (BERD), California State Historic Resources Inventory (HRI), California Historical Landmarks (CHL), and California Points of Historical Interest were also reviewed to identify cultural resources within both the project and study areas.

Records Search

The records search revealed that 54 cultural resource investigations were previously conducted within a 1/2 mile of the project components. Approximately 33% of the project area has been previously surveyed or otherwise investigated (Table 1).

Table 1: Previous Cultural Resources Studies within 1/2 Mile of the Toluca-Hollywood Line 1 Upgrade Project

Report No. (LA-)	Author	Title/Description	Date
00289	Desautels, Roger J.	Archaeological Survey Report on 130 Acres of Properties Known as the Huntington Hartford Estate Located in the Santa Monica Mountains Area of the City of Los Angeles, California	1975
00994	Armstrong, Douglas and Brian Dillon	An Archaeological and Historical Resource Survey and Impact Assessment Of "PM 3641 Parcel A" Los Angeles, Los Angeles County, California	1981
01011	Wlodarski, Robert J.	Cultural Resource Survey of 14 Acres (Tentative Tract 38171), City of Los Angeles, County of Los Angeles, California	1991

Report No. (LA-)	Author	Title/Description	Date
01229	Singer, Clay A.	Cultural Resource Survey and Impact Assessment for Tentative Tract No. 39213, the Former Huntington Hartford Estate in the Hollywood Hills, Los Angeles County, California	1982
01364	Singer, Clay A.	Cultural Resource Survey and Impact Assessment for Tentative Tract No. 39213, the Former Huntington Hartford Estate in the Hollywood Hills, Los Angeles County, California	1982
01578*	Anonymous	Technical Report Archaeological Resources Los Angeles Rapid Rail Transit Project Draft Environmental Impact Statement and Environmental Impact Report	1983
01968*	Bissell, Ronald M.	Cultural Resources Literature Review of Metro Rail Red Line Western Extension Alternatives, Los, Angeles, Los Angeles County, California	1989
02040	Singer, Clay A. and E. John Atwood	Cultural Resources Survey and Impact Assessment for Tentative Tracts 47367 and 47979, Near Hollywood Reservoir, Los Angeles County, California	1990
03354	Maki, Mary K.	A Phase 1 Cultural Resource Survey of 0.53 Acre at 1151,1155, 1201, and 1212 Detroit Street City of West Hollywood, Los Angeles County, California	1995
03496*	Anonymous	Draft Environmental Impact Report Transit Corridor Specific Plan Park Mile Specific Plan Amendments	ND
03525	Chartkoff, Kerry and Joe Chartkoff	Ucas-092 Route 2 Freeway Los Angeles County West, Los Angeles, Beverly Hills	1966
03855	Greenwood, Roberta S.	Cultural Resources Survey and Impact Assessment for the Lake Hollywood Water Quality Improvement Project, City of Los Angeles, California	1997
04459	Greenwood, Roberta S. and Shelley Marie Owen	Cultural Resources Monitoring Report for Phase I of the Lake Hollywood Water Quality Improvement Project, City of Los Angeles, California	1998
04574	Greenwood, Roberta S. and Shelley Marie Owen	Cultural Resources Monitoring Report for Phase I of the Lake Hollywood Water Quality Improvement Project, City of Los Angeles, California	1998
04909	Atchley, Sara M.	Cultural Resources Investigation for the Nextlink Fiber Optic Project, Los Angeles and Orange Counties, California	2000
05090	Gray, Deborah	Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 454-02, in the County of Los Angeles, Ca	1999
05730	Duke, Curt	Cultural Resource Assessment: Cingular Wireless Facility No. Vy 097-02 Los Angeles County, California	2001

Report No. (LA-)	Author	Title/Description	Date
06000	Bonner, Wayne H.	Records Search Results for Sprint Pcs Facility La35xc882a (Sunset & Fairfax Site), Located in Los Angeles, Los Angeles County, California	1999
06406	Duke, Curt	Cultural Resource Assessment AT&T Wireless Services Facility No. D478a Los Angeles County, California	2002
07345	Hirsch, Jennifer	Historical Evaluation Report for the Sierra Bonita Air Treatment Facility Los Angeles, California	2005
07348	Foster, John M	Archaeological Investigation for Nichols Canyon Sewer Realignment Project Work Order Szc11401 City of Los Angeles, California	2005
07375	Wlodarski, Robert J.	A Phase I Archaeological Study for 1343-1345 North Laurel Avenue the Linick-Weisman House West Hollywood, Los Angeles County, California	2004
07425	McMorris, Christopher	City of Los Angeles Monumental Bridges 1900-1950: Historic Context and Evaluation Guidelines	2004
07772	Duke, Curt and Judith Marvin	Cultural Resource Assessment Cingular Wireless Facility No. Sm 182-02 West Hollywood, Los Angeles County, California	2003
07773	Bonner, Wayne H.	Records Search Results and Site Visit for Sprint Telecommunications Facility La54xc123e (pole #20454spr) 2780-1/2 Wonderview Drive, Los Angeles, Los Angeles County, California	2004
08251	Gust, Sherri and Heather Puckett	Los Angeles Metro Red Line Project, Segments 2 and 3 Archaeological Resources Impact Mitigation Program Final Report of Findings	2004
08269	Maki, Mary K.	Negative Archaeological Survey Report of Approximately 0.3 Acre for the Sierra Bonita Construction Project, 7530 Santa Monica Boulevard, West Hollywood, Los Angeles County, California	2007
09304*	Ehringer, Candace, Angel Tomes, and Monica Strauss	Cultural Resources Assessment for the Proposed Formosa Specific Plan at Santa Monica Boulevard, West Hollywood Los Angeles County, California	2007
09538	Bonner, Wayne H.	Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC Candidate EL0130-01 (Villa Rosa), 7850 West Sunset Blvd, Los Angeles, California	2008
09799*	Candace Ehringer and Angel Tomes	Cultural Resources Assessment for the Proposed Movietown Specific Plan Project, West Hollywood, Los Angeles County, CA	2008

Report No. (LA-)	Author	Title/Description	Date
10149	Stewart, Noah M.	Finding of no adverse effect: US 101 from Alameda Street Underpass to Barham Boulevard Overcrossing	2009
10386	Bonner, Wayne and Kathleen Crawford	Direct APE Historic Architectural Assessment for Clearwire Candidate CA-LOS5564C/CA5579 (Goldwyn Studios), 7494 Santa Monica Blvd., West Hollywood, Los Angeles County, California.	2010
10446*	Loftus, Shannon	Historic Structures Survey Report Movietown Plaza, 7300-7328 Santa Monica Blvd. City of West Hollywood, Los Angeles County, California	2008
10507	Anonymous	Technical Report - Historical/Architectural Resources – Los Angeles Rail Rapid Transit Project "Metro Rail" Draft Environmental Impact Statement and Environmental Impact Report	1983
10543	Gust, Sherri	Archaeological Initial Study Report and mitigation plan for the San Fernando Valley MRT Fiber Optic Line Project, Cities of Canoga Park, Burbank and Los Angeles, California	2003
10568*	Anonymous	City of West Hollywood Historic Resources Survey 1986-1987 Final Report	1987
10917	Bonner, Wayne	Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC Facility LAC779-01, USID 11770 (Melrose/La Brea), 716 North La Brea Avenue, Los Angeles, Los Angeles County, California	2011
11005*	Anonymous	Westside Subway Extension Historic Property Survey Report and Cultural Resources Technical Report	2010
11216	Maki, Mary	Phase I Archaeological Investigation of Approximately0.27 Acre for the Courtyard at La Brea Project 1145-1151 North La Brea Avenue, West Hollywood, Los Angeles County, California	2011
11644	Loftus, Shannon	Cultural Resource Records Search and Site Survey, AT&T Site LA0286, Magnolia Park, 730 Whitnall Highway Burbank, Los Angeles County, California 91505	2011
11677	Loftus, Shannon	Cultural Resource Records Search and Site Survey, AT&T Site EL0130, Villa Rosa 7850 West Sunset Boulevard, Los Angeles, Los Angeles County, California 90046	2011

Report No. (LA-)	Author	Title/Description	Date
11678	Johnson, Brent	Cultural Resources Records Search And Site Visit, LAC428/Hollywood/West, 7401 Sunset Boulevard, Los Angeles, California 90046, Los Angeles County	2011
11783	Stewart, Noah and Noah Allison	Supplemental Finding of No Adverse Effect, Upgrade Bridge Rails in L.A. County on Highway 101	2012
11797	Chattel, Robert	Historic Resources Survey Hollywood Redevelopment Project Area	2010
11944	Bonner, Wayne	Cultural Resources Records Search and Site MBA Visit Results for T-Mobile West, LLC Candidate SV00097A (LA097 LA-097-00),716 North La Brea Avenue, Los Angeles, Los Angeles County, California	2012
11992	Stewart, Noah	Findings of No Adverse Effect, Upgrade Bridge Rails in L.A. County om Highway 101	2009
12153	Bonner, Wayne and Crawford, Kathleen	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SV00238A (SMBaklayan Bldg.) 7408 Santa Monica Boulevard, West Hollywood, Los Angeles County, California	2012
12412	Bonner, Wayne and Crawford, Kathleen	Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC Candidate LAC779 (Melrose/La Brea) 716 North La Brea Avenue, Los Angeles, Los Angeles County, California CASPR No. 3551278788	2013
13073	Wills, Carrie D. and Kathleen A. Crawford	Cultural Resources Records Search and Site Visit Results for T Mobile West, LLC Candidate EL0130 (Villa Rosa), 7850 West Sunset Boulevard, Los Angeles, Los Angeles County, California, CASPR No. 3551455495	2014
13076	Bonner, Diane F., Carrie D. Wills, and Kathleen A. Crawford	Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC Candidate LAC428 (Hollywood/ West), 7401 Sunset Boulevard, Los Angeles, Los Angeles County, California, CASPR No. 3551844819	2014
13188	Brunzell, David	Cultural Resources Assessment of the Burbourn Project, North Hollywood, Los Angeles, County, California (BCR Consulting Project No. TRF1408)	2014
13251	Becker, Wendy L. Tinsley	Historical Resource Analysis Report/ Historic Property Survey Report, SCE MacNeil Substation	2017

Notes:
*Indicates a report that partially overlaps the project area.
No. = Number

Previously Recorded Cultural Resources

The records search results revealed nine cultural resources within the entire study area. Of these nine, two are historic-era archaeological resources within the 1/2-mile area and seven are historic-period built resources, within the 500-foot buffer. None overlap the project area. Table 2 lists previously recorded archaeological resources within the study area.

Table 2: Previously Recorded Archaeological Resources within 1/2 Mile, and Historic Built Resources within 500 feet, of the Project Area

Primary Number (P-19-)	Other Identifier	Description	Time Period	Eligibility Status
002736	009/010, 013-030	Isolated historical artifacts such as glass bottles and metal items observed in disturbed soil.	1954-1967	Not eligible for NRHP or CRHR
003173	Linick/Weisman House	Two-story Colonial Revival dwelling divided into four apartments.	1928	Recommended eligible under CEQA and NRHP
173142	Plummer Park	Plummer Park and former site of Eugene Ralph Plummer home.	1870s	Recommended ineligible for listing in the NRHP, not evaluated for the CRHR.
176758	United Artists/ Samuel Goldwyn Studios Property	Historical buildings at 1041 Formosa Avenue, West Hollywood, CA.	1919	Recommended eligible under Criterion A for the NRHP and Criterion 1 for the CRHR.
187439	Vanetta Building Property	Two-story Beaux Arts brick building.	1924	Recommended ineligible for listing in the NRHP.
188459	AT&T Mobility LLC EL00130-01	Four-story Spanish Eclectic style apartment building.	1925	Recommended ineligible for listing in the NRHP.
188479	Cahuenga Pass Transportation Corridor	A 2.08-kilometer (1.3-mile) section of the Hollywood Freeway (U.S. 101), including the Barham Boulevard, Mulholland, and Pilgrimage Overcrossings.	1940	Appears eligible for the NRHP
190575	Plummer Park Community Clubhouse	Works Progress Administration constructed park clubhouse.	1938	Appears eligible for the NRHP
192744	St. Ambrose Catholic Church	Historic church building.	1924	Appears eligible for listing in the NRHP and CRHR

California Historical Landmarks

The list of CHLs was searched to identify CHLs located within 1/2 mile of the project area. This search identified one landmark within a 1/2 mile: Plummer Park, Monument Number CHL-160 located at 7377 Santa Monica Boulevard, Hollywood, California. No CHLs overlap with the project components themselves.

Los Angeles Historic-Cultural Monuments

The Los Angeles Historic-Cultural Monuments (LAHCMs) list was searched to identify resources within a 1/2 mile of the project area. Two were located. These are the Roland E. Hill House, LAHCM-917, located at 3268 North Bennett Drive, Los Angeles; and the Margaret and Harry Hay House, LAHCM-981, located at 3132 North Oakcrest Drive, Los Angeles, California. No LAHCMs overlap with the project components.

Built Environment Resource Directory

The BERD provides non-archaeological resource data stored in the Office of Historic Preservation's inventory. The BERD replaces the former Historic Properties Directory (HPD). The main purpose of the BERD is to provides status information of these listed resources; however, it also provides the built date, address, and parcel number. There may be some properties listed in the HPD that are not listed in the BERD. This omission is due to confidentiality concerns.

The BERD was searched to identify built resources adjacent to and/or facing the project area. A total of 30 resources were identified, all of which are in the area of the underground alignment of the project area. Twenty-eight of them are along Fountain Avenue and the remaining two are on North Genesee Avenue. Out of the 30 resources identified, two are individually listed or designated locally as historically significant by the local government. However, none of these resources will be impacted because all projected permanent impacts will be subsurface at this location. In addition, work will occur only within the confines of the road (Table 3).

Table 3: Built Resources Listed in the BERD Facing or Adjacent to the Proposed Project

P-Number (P-19-)	City [or Community] Name	Address/Description	Time Period	Eligibility Status
None	West Hollywood	7300 Fountain Avenue	--	Individually listed or designated locally as historically significant.
None	West Hollywood	7400 Fountain Avenue	1954	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7408 Fountain Avenue	1921	None
None	West Hollywood	7500 Fountain Avenue	1920	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7504 Fountain Avenue	1917	Determined ineligible for NR by consensus through Section 106. Not evaluated for CR or local listing.

P-Number (P-19-)	City [or Community] Name	Address/Description	Time Period	Eligibility Status
None	West Hollywood	7512 Fountain Avenue	1959	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7516 Fountain Avenue	--	None
None	West Hollywood	7520 Fountain Avenue	1948	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7526 Fountain Avenue	1955	None
None	West Hollywood	7530 Fountain Avenue	1957	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7540 Fountain Avenue	1961	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7546 Fountain Avenue	1912	Individually listed or designated locally as historically significant.
None	West Hollywood	7550 Fountain Avenue	1958	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7600 Fountain Avenue	1914	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7604 Fountain Avenue	1948	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7612 Fountain Avenue	1921-1931	None
None	West Hollywood	7612 Fountain Avenue	1921	Determined ineligible for NR by consensus through Section 106. Not evaluated for CR or local listing.
None	West Hollywood	7612 Fountain Avenue	1921	Determined ineligible for NR by consensus through Section 106. Not evaluated for CR or local listing.
None	West Hollywood	7618 Fountain Avenue	1922-1931	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7622 Fountain Avenue	1957-1958	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7624 Fountain Avenue	1961	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7654 Fountain Avenue	1962-1963	None
None	West Hollywood	7656 Fountain Avenue	1923-1923	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7660 Fountain Avenue	1924	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	7706 Fountain Avenue	1915	Determined ineligible for NR by consensus through Section 106. Not evaluated for CR or local listing.
None	West Hollywood	7712 Fountain Avenue	1915-1920	Determined ineligible for NR by consensus through Section 106. Not evaluated for CR or local listing.
None	West Hollywood	7714 Fountain Avenue	1924	Identified in Reconnaissance Level Survey: Not evaluated.

P-Number (P-19-)	City [or Community] Name	Address/Description	Time Period	Eligibility Status
None	West Hollywood	7750 Fountain Avenue	1921	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1246 North Genesee Avenue	1919-1921	Determined ineligible for NR by consensus through Section 106. Not evaluated for CR or local listing.
None	West Hollywood	1250 North Genesee Avenue	1922	Identified in Reconnaissance Level Survey: Not evaluated.

Historic Property Data File Historic Resources Inventory

The Directory of Properties in the Historic Property Data File HRI was consulted to identify historic properties within or facing any project components. There are no documented properties within, and 35 adjacent to and facing, the project area. Of these 35, two are eligible for a local listing or designation. None of these resources will be impacted because all projected permanent impacts will be subsurface at this location. In addition to this, work will only occur within the confines of the road (Table 4).

Table 4: Built Resources Listed in the Historic Property Data File HRI Facing the Proposed Project

P-Number (P-19-)	City [or Community] Name	Address/Description	Time Period	Eligibility Status
None	West Hollywood	1115 North Fuller Avenue	-	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1120 North Fuller Avenue	1963	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1122 North Fuller Avenue	1940	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1123 North Fuller Avenue	-	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1125 North Fuller Avenue	-	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1130 North Fuller Avenue	1963	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1131 North Fuller Avenue	1963	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1134 North Fuller Avenue	1939	Identified in Reconnaissance Level Survey: Not evaluated.
None	**West Hollywood**	**1135 North Fuller Avenue**	**1914**	**Appears to be a contributor to a multicomponent resource that appears eligible for Local Listing or designation.**
None	West Hollywood	1141 North Fuller Avenue	1920	Identified in Reconnaissance Level Survey: Not evaluated.

P-Number (P-19-)	City [or Community] Name	Address/Description	Time Period	Eligibility Status
None	West Hollywood	1142 North Fuller Avenue	1962	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1145 North Fuller Avenue	1925	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1146 North Fuller Avenue	1954	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1148 North Fuller Avenue	1923	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1154 North Fuller Avenue	1923	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1155 North Fuller Avenue	1920	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1159 North Fuller Avenue	1922	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1200 North Fuller Avenue	1963	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1205 North Fuller Avenue	1959	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1208 North Fuller Avenue	1953	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1212 North Fuller Avenue	1962	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1215 North Fuller Avenue	1958	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1216 North Fuller Avenue	1958	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1226 North Fuller Avenue	1964	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1227 North Fuller Avenue	1959	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1230 North Fuller Avenue	1957	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1233 North Fuller Avenue	1955	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1236 North Fuller Avenue	1922	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1240 North Fuller Avenue	1922	Identified in Reconnaissance Level Survey: Not evaluated.
None	**West Hollywood**	**1243 North Fuller Avenue**	**1909**	**Appears to be a contributor to a multicomponent resource that appears eligible for Local Listing or designation.**
None	West Hollywood	1246 North Fuller Avenue	1922	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1250 North Fuller Avenue	1923-1925	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1251 North Fuller Avenue	1962	Identified in Reconnaissance Level Survey: Not evaluated.
None	West Hollywood	1252 North Fuller Avenue	1923	Determined ineligible for NRHP by consensus through Section 106 process – Not evaluated for CRHR or Local Listing.

P-Number (P-19-)	City [or Community] Name	Address/Description	Time Period	Eligibility Status
None	West Hollywood	1258 North Fuller Avenue	1920	Identified in Reconnaissance Level Survey: Not evaluated.

Los Angeles Historic Resources Inventory

The Los Angeles Historic Resources Inventory (HistoricPlacesLA 2017; SurveyLA 2020) was consulted to identify historic properties within or facing any project components. There are no documented properties within, and 11 adjacent to and facing, the project area. Four have been determined ineligible for local listing. One is the Spaulding Square Historic District Historic Preservation Overlay Zone (HPOZ), a multi-component resource that is listed or designated locally. Three are contributors to the Spaulding Square Historic District. One is unevaluated, one is eligible for NRHP, CRHR, and local register listing, and one is local register listed. None of these resources will be impacted because all projected permanent impacts will be subsurface at this location. In addition to this, work will only occur within the confines of the road (Table 5).

Table 5: Los Angeles Historic Resources Inventory Facing the Proposed Project

P-Number (P-19-)	City [or Community] Name	Address/Description	Time Period	Eligibility Status
None	Hollywood Hills West	1635 North Genesee Avenue	1908	Identified in Reconnaissance Level Survey: Not evaluated.
None	**Hollywood Hills West**	**7750 West Sunset Boulevard/ Screen Actors Guild Headquarters**	**1955**	**Appears eligible for NRHP, CRHR and local register listing through survey evaluation. (NRHP Status Code 3CS, 3S, 5S3)**
None	Hollywood Hills West	1438 North Genesee Avenue	-	Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning. (NRHP Status Code 6L)
None	Hollywood Hills West	1435 North Genesee Avenue	-	Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning. (NRHP Status Code 6L)
None	Hollywood Hills West	1422 North Genesee Avenue	-	Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning. (NRHP Status Code 6L)

P-Number (P-19-)	City [or Community] Name	Address/Description	Time Period	Eligibility Status
None	**Hollywood Hills West**	**1401 North Spaulding Avenue**	**-**	**Contributor to a multi-component resource that is listed or designated locally. (NRHP Status Code 5D1)**
None	**Hollywood Hills West**	**Spaulding Square Historic District (HPOZ)**	**1916-1926**	**Individually listed or designated locally. (NRHP Status Code 5S1)**
None	Hollywood Hills West	1339 North Genesee Avenue	-	Determined ineligible for local listing or designation through local government review process; may warrant special consideration in local planning. (NRHP Status Code 6L)
None	**Hollywood Hills West**	**7711 West Fountain Avenue**	**1916-1926**	**Contributor to a multi-component resource that is listed or designated locally. (NRHP Status Code 5D1)**
None	**Hollywood Hills West**	**1300 North Ogden Drive**	**1916-1926**	**Contributor to a multi-component resource that is listed or designated locally. (NRHP Status Code 5D1)**
None	**Hollywood Hills West**	**1845 North Courtney Avenue/ Hellman House**	**1964**	**Individually listed or designated locally. (NRHP Status Code 5S1)**

NATIVE AMERICAN CONSULTATION

LADWP is conducting government-to-government consultation with Native American representatives. The results of the consultation program are documented separately.

HISTORICAL MAPS

Historical map research was conducted to gain an understanding of the level of disturbance in the area as well as identify possible locations of archaeological sensitivity within the project area. Because of its late development and annexation history, relevant historic Sanborn Fire Insurance (Sanborn) maps do not exist for the project area. However, numerous historical maps exist of the project area, including ethnographic maps, early survey maps, and historic U.S. Geological Survey (USGS) topographic maps, all of which provide insight into the development of the project area and the surrounding vicinity.

Ethnographic Maps

Maps prepared by anthropologists or at the direction of local tribes were consulted, including maps published by A. L. Kroeber and William McCawley (Kroeber 1925; McCawley 1996); *Tongva Villages: Gabrieleno-Fernandeno of the Los Angeles Basin,* prepared by Keepers of Indigenous Ways (Sutimiv-Pa'alat 2010); *Kizh Tribal Territory (Gabrieleno Indian Lands),* prepared by archaeologist Gary Stickel for the Gabrieleno Band of Mission Indians-Kizh Nation (Flaherty

2016); and the interactive online map prepared by the Fernandeño Tataviam Band of Mission Indians, *Ancestral Villages of Tataviam Citizens* (Fernandeño Tataviam Band of Mission Indians 2018).

The closest major village to the proposed project is the village of Cahuenga, which is generally shown at the northern end of the Cahuenga Pass, in the vicinity of the Campo de Cahuenga. The *Kirkman-Harriman Pictorial and Historical Map of Los Angeles County, 1860-1937* depicts a church labeled 1805 at Campo de Cahuenga. Also, at the southern end of the pass, the *Kizh Tribal Territory* map and the *Kirkman-Harriman Pictorial and Historical Map of Los Angeles County, 1860-1937* show a line of unnamed villages along the south side of the Hollywood Hills (Flaherty 2016).

It is difficult to pinpoint the exact location of any village; however, none are likely to be within the project area. In summation, the ethnographic maps indicate that Native American villages are known to exist in and around the Hollywood Hills, although the exact locations of these villages are only approximately known.

Historical United States Geological Survey Maps

USGS topographic maps are often the most reliable historic maps for undeveloped and underdeveloped lands in the first half of the 20th century. A series of early 20th century USGS maps was consulted and compared with other available maps.

Toluca-Hollywood Line 1 Replacement

At the BWP line project component, the project area (BWP Pole 1 and BWP Pole 2) is undeveloped in the 1894 and 1900 Los Angeles 1:62500 and 1896, 1898, 1902, 1920, and 1921 Santa Monica 1:62500 USGS maps. Although, during this time, surrounding areas are increasingly built up. In the 1926 Burbank 1:24000 map, the location is still undeveloped; however, a transmission line appears along the existing alignment. It is labeled as a Southern California Edison Power Line. In the 1948 Burbank 1:24000 map, the alignment shows two parallel transmission lines northwest of the point where the existing Toluca-Hollywood powerline branches off to the south.

At Tower 584, the project area looks undeveloped as late as the mid-1900s. The 1894 and 1900 Los Angeles 1:62500 maps; the 1896, 1898, 1902 and 1921 Santa Monica 1:62500 maps; and the 1926 Burbank 1:24000 map show no structures or features of any kind. Development is not exhibited until the 1948 Burbank 1:24000 map. This map illustrates housing, roads, and a transmission line that appears to follow the same trajectory as the existing one today.

The underground alignment component of the project area (Nichols Canyon Terminal Tower to the Hollywood Receiving Station) along North Fuller Avenue, Fountain Avenue, North Genesee Avenue, and Nichols Canyon Road shows some existing development as early as 1894. As shown in the 1894 and 1900 Los Angeles 1:62500 maps and 1896, 1898, and 1902 Santa Monica 1:62500 maps, adjacent to the project area are structures built along an east to west trending road just north of Fountain Avenue. However, even later into the early 1920s, as shown in the 1920 and 1921 Santa Monica 1:62500 maps, the project area is still undeveloped and adjacent to an ephemeral drainage. But the area to the north of Santa Monica Boulevard has become heavily developed, and the area south of Melrose Avenue is occupied by oil fields. Later, into the mid-1920s, the project area is still undeveloped, as shown in the 1924 and 1926 Hollywood 1:24000 USGS maps, although it is almost surrounded by streets and buildings. The 1953 Hollywood 1:24000 map shows roads and features as they exist today, with development within and around the project area. Buildings, likely associated with United Artists' Studios, were built on the perimeter of the later location, now the Hollywood Receiving Station. In the 1966 Hollywood 1:24000 map, the location of the Hollywood Station is labeled "Recreation Center," and one small building stands on the western edge of the property. In the 2012 Hollywood 1:24000 map, the project area, and the parcels to the north, are labeled "Goldwyn Studios" (see Table 6).

Table 6: Historical USGS Maps Reviewed

Map Name	Scale	Date
Los Angeles, California Quadrangle	1:62500	1894
Santa Monica, California Quadrangle	1:62500	1896
Santa Monica, California Quadrangle	1:62500	1898
Los Angeles, California Quadrangle	1:62500	1900
Santa Monica, California Quadrangle	1:62500	1902
Santa Monica, California Quadrangle	1:62500	1920
Santa Monica, California Quadrangle	1:62500	1921
Hollywood, California Quadrangle	1:24000	1924
Burbank, California Quadrangle	1:24000	1926
Hollywood, California Quadrangle	1:24000	1926
Burbank, California Quadrangle	1:24000	1948
Hollywood, California Quadrangle	1:24000	1953
Hollywood, California Quadrangle	1:24000	1966
Hollywood, California Quadrangle	1:24000	2012
Hollywood, California Quadrangle	1:24000	2015

CHAPTER 5
SURVEY METHODS AND RESULTS

SURVEY METHODOLOGY

A survey of the project area was conducted by AECOM archaeologist Alec Stevenson M.A., RPA, on December 15, 2021. Survey methodologies varied depending on accessibility and local conditions. The survey area consisted of all potential ground-disturbance locations including equipment laydown areas, work areas, and the entire road ROW for the underground alignment. The survey was broadened to this extent because the exact locations of the individual vaults within the road are not certain. Any slope more than 45 degrees was not surveyed due to safety concerns.

A windshield survey was conducted along paved road segments that represents the underground alignment between the Hollywood Receiving Station and the Nichols Canyon Terminal Tower, on Nichols Canyon Road north of Hollywood Boulevard, including portions of Fuller Avenue, Fountain Avenue, North Genesee Avenue, and Nichols Canyon Road. These areas were also walked whenever parking was possible. Although many road alignments within the project area are historic in age (over 45 years old), the roads were not recorded, because the character and visible attributes of these actively maintained and paved roadways will not be altered by the proposed project.

Unpaved segments of the project area were subject to an intensive pedestrian survey in linear transects spaced between 5 and 15 meters apart, including the Tower 584 work area, three equipment staging/laydown areas associated with Tower 584, BWP Pole 1, BWP Pole 2, and two surrounding work areas that encompass empty parcels adjacent to the BWP poles. The corridor between BWP Pole 1 and BWP Pole 2 was inaccessible due to property constraints. The corridor was on private property and in the backyard of two housing parcels.

Resource locations were determined using a cloud-based global positioning system maintained through ArcGIS Portal and recorded in ESRI Collector. Although not used, a submeter GeoXH6000 was available if necessary.

ARCHAEOLOGICAL SURVEY RESULTS

The reconnaissance survey was conducted on December 15, 2021. The survey area can be separated into three main components; the southern portion included the Hollywood Receiving Station to the Nichols Canyon Terminal Tower along the existing route, the central portion included Tower 584 and associated work areas, and the northern portion included BWP Poles 1 and 2 as well as two work areas.

Southern Survey Portion

The southern portion of the survey was located between the Hollywood Receiving Station and Nichols Canyon Terminal Tower along North Fuller Avenue, Fountain Avenue, North Genesee

Avenue, and Nichols Canyon Road (the underground alignment). Although there were eight vaults identified, the entire length of the underground alignment between the Nichols Canyon Terminal Tower and the Hollywood Receiving Station within the boundary of the road was surveyed, either on foot or with a vehicle due to an uncertainty of final vault placement.

Vegetation consisted of occasional weeds and ornamental trees including Indian laurel fig (*Ficus macrocarpa*), camphor tree (*Cinnamomum camphora*), coast live oak (*Quercus agrifolia*), western sycamore (*Platanus racemose*), Italian stone Pine (*Pinus pinea*), and three types of palm trees. This portion of the proposed project had 5% visibility with the only exposed soils being at the base of ornamental flora. Soils were a medium brown silty sand, most likely fill. Otherwise, the entirety of the survey in this area was paved (Plate 1). No new artifacts, features, or other cultural materials were observed in this portion of the survey.

Plate 1: Southern Portion within the Project Area.

One previously recorded resource, P-19-173142 or Plummer Park, that partially overlaps the project area was revisited. Plummer Park is located at 1208 North Fuller Avenue in the City of West Hollywood, California. The park was developed around the 1870 Plummer residence, said to be the oldest house in Hollywood. That building has since been moved to a new location in Calabasas, but a historic Works Progress Administration-constructed clubhouse still stands in the park. No documented features of the park are located within the project area, which overlaps an approximately 10-foot-wide portion of the eastern edge of the park (Plate 2). No resources were observed within that part of the project area that overlaps the park.

Plate 2: P-19-173142 Plummer Park Overview Adjacent to Project Area.

Central Survey Portion

The central portion of the survey was located near Tower 584. All three laydown and equipment staging areas contained no exposed soils and were entirely covered in asphalt. The work area, including the footprint of Tower 584, had 90% exposed soils. There were some seasonal grasses and shrubs within the work area as well as palm trees bordering the southern end. The soil was a light brown silty sand intermixed with a fine-grained granitic and basaltic subangular gravel, pebbles, cobble, and boulders. Bedrock of this rock type was exposed (Plate 3). No artifacts, features, or other cultural materials were observed in this portion of the survey.

Plate 3: Tower 584 within the Project Work Area.

Northern Survey Portion

Two work areas were surveyed in the northern portion of the project area, adjacent to BWP Poles 1 and 2. Both work areas were flat empty parcels, mostly covered in a mixed species of residential lawn grass (Plate 4). The grass was mixed dormant and had been recently cut. In addition, there were various ornamental and fig trees located along the sidewalk and border fence opposite the road. Ground visibility was approximately 75%. The soil was a light brown silty sand with some granitic gravel. There was concrete rubble along the inner walls opposite the road and modern garbage throughout both work areas. The corridor between the two work areas, where trenching may occur, was within private property and not accessible. Therefore, it was not surveyed. From a distance, the soil and flora looked the same as the surveyed areas. No artifacts, features, or other cultural materials were observed in this portion of the survey.

Plate 4: Overview of the Work Area in the Northern Portion of the Proposed Project.

BUILT ENVIRONMENT SURVEY RESULTS

The 76 built resources adjacent to or facing the project area that are historical resources for the purposes of CEQA were not revisited, because there will be no permanent above-ground impacts for the underground alignment component of the project area. Potential project impacts near these resources will be subsurface and will not have indirect visual, audible, or atmospheric impacts on these historical resources.

Two built resources were surveyed and identified within the project area, the Nichols Canyon Terminal Tower located along the east side of Nichols Canyon Road facing north, and the Hollywood Receiving Station located at 940 N. Poinsettia Place. AECOM architectural historian Evan Mackall, M.A., recorded and evaluated on California Department of Parks and Recreation (DPR) forms two built resources in the project area that will be altered by the proposed project: the Nichols Canyon Terminal Tower and Hollywood Receiving Station (Appendix A). Neither resource meets the eligibility criteria for the NRHP or CRHR and are not considered historical resources for the purposes of CEQA.

Nichols Canyon Terminal Tower

The Nichols Canyon Terminal Tower, constructed in 1974 and owned and operated by LADWP, is located on a 55,242 square-foot parcel (APN 5571031907) along Nichols Canyon Road. The parcel is north of Hollywood Boulevard and situated in Nichols Canyon between Los Angeles to the south and the San Fernando Valley to the north. LADWP constructed the structure on a western-facing hill slope. The facility is characterized by two sections, the north section and the south section. The north section includes electrical transformers while the southern section includes the terminal towers and additional transformers that connect to the underground HPPT cable. The HPPT cable, also known as the TOL-HWD L1, and installed in 1975, travels 1.8 miles south from the Nichols Canyon Terminal Tower to the Hollywood Receiving Station. The cable currently transports 230 kilovolts (kV) and 313 Mega Volt-Amps (MVA) of power to the receiving station. For purposes of this project, work will only occur within the boundary of the northern section. Regardless, both the southern and northern sections will be evaluated as one resource.

The north section of the facility has a perimeter fence and is accessed by a metal sliding gate and concrete paved driveway along Nichols Canyon Road (Plate 5). The concrete driveway curves south and terminates at an additional perimeter fence that encloses industrial electrical equipment. Equipment includes electrical transformers and towers with a vertical orientation, as well as a gas tank, air canisters, utility boxes, and exterior industrial signage. Electrical wiring from the north section of the facility extends south over a fence and attaches to the south section of the facility.

The south section of the facility is accessed by a concrete driveway and metal-framed gate that also opens onto Nichols Canyon Road. The gate includes public signage warning of high voltage and a sign indicating the property is owned by LADWP. The area includes two levels. The ground level, directly past the metal-framed gate, features three visible electrical transformer components that are housed behind a brick wall. The brick is constructed of a running bond pattern and features five concrete pilasters that face Nichols Canyon Road. Either side of the brick wall includes a single-entry fenced gate that allows access into the transformer space. The second level is accessed by a set of concrete stairs located on the southern end facility. The concrete stairs allow access to four metal-framed electrical towers enclosed in an additional fenced perimeter with a concrete retaining wall that separates the ground level from the second level. The four towers connect to the north section of the facility, as well as the below transformer components, and sit on a concrete foundation supported by additional surrounding cinder blocks. Additional details include attached exterior lighting, utility boxes, and signage (Plates 6 and 7).

Plate 5: Entrance to the north section of the Nichols Canyon Terminal Tower along Nichols Canyon Road; camera facing southeast. (Google Street View 2021).

Plate 6: View of an aboveground electrical transformer in the north section of the Nichols Canyon Terminal Tower; camera facing south. August 2022.

Plate 7: View of the above ground terminal towers and transformers in the south section of the Nichols Canyon Terminal Tower; camera facing southeast. (Google Street View 2022).

In 1974, LADWP constructed the Nichols Canyon Terminal Tower as an additional component to the City's electrical power grid. LADWP constructed the facility as a means to transport 230 kV and 313 MVA of power via the TOL-HWD L1. The TOL-HWD L1 travels underground for 1.8 miles and terminates south at the Hollywood Receiving Station. At the time of this evaluation, the Nichols Canyon Terminal Tower is slated for various modifications that include replacement of the existing concrete pad and support structure of the existing TOL-HWD L1 rack removal and replacement of the aboveground TOL-HWD L1 rack/equipment, and subsurface structural supports, as well as demolition of the existing pump house and accompanying tank.

Under NRHP Criterion A and CRHR Criterion 1, the Nichols Canyon Terminal Tower has no significant association with important historic events. The terminal tower, constructed in 1974, is associated with the development Los Angeles's electrical power grid; however, the terminal tower was constructed late in the developmental period and exists as one of several components to a larger system. Research did not reveal that it played a distinct or important role in the development of the LADWP's and the City's electrical system. Therefore, the Nichols Canyon Terminal Tower does not meet eligibility for the NRHP or CRHR under Criterion A/1.

Under NRHP Criterion B and CRHR Criterion 2, the Nichols Canyon Terminal Tower is not significant for any associations with the lives or persons important to history. Research did not indicate that any individuals, such as LADWP engineers, architects, or official personnel, related to the development and use of the terminal tower made demonstrably important contributions to history at a national, state, or local level. Therefore, the Nichols Canyon Terminal Tower does not meet eligibility for the NRHP or CRHR under Criterion B/2.

Under NRHP Criterion C or CRHR Criterion 3, the Nichols Canyon Terminal Tower is not significant because it is not an important example of a type, period, or method of construction. The Nichols Canyon Terminal Tower does demonstrate evidence of distinctive industrial engineering; however, it does not demonstrate an obvious architectural design. The Nichols Canyon Terminal tower includes two groupings of electrical equipment on the north and south sections of the facility. Both sections operate together in order to transmit power via the underground TOL-HWD L1 that travels south to the Hollywood Receiving Station. The facility operates as one of several industrial properties owned and operated by LADWP throughout Los Angeles County. As a result, the structure on this parcel lacks the high artistic value, as well as a distinctive design and engineering, that would merit it listing on the NRHP or CRHR. There is no master architect or builder associated with this building; therefore, it is not significant as the work of a master. Therefore, the Nichols Canyon Terminal Tower does not meet eligibility for the NRHP or CRHR under Criterion C/3.

Under NRHP Criterion D or CRHR Criterion 4, the Nichols Canyon Terminal Tower is not significant as a source (or likely source) of important information regarding history. It does not appear to have any likelihood of yielding important information about historic construction materials or technologies. Therefore, the Nichols Canyon Terminal Tower does not meet eligibility for the NRHP or CRHR under Criterion D/4.

In summary, the Nichols Canyon Terminal Tower does not demonstrate any historical or architectural significance that meets the NRHP or CRHR criteria, nor does it demonstrate a high level of integrity to convey its historical significance. As a result, the Nichols Canyon Terminal Tower does not meet eligibility for the NRHP or CRHR under any of the significance criterion.

See Appendix A for additional details.

Hollywood Receiving Station

The Hollywood Receiving Station is a 340,184 square-foot industrial facility located at 940 North Poinsettia Place. The facility is surrounded by urban development and enclosed within a concrete wall that spans the east and west boundaries; the north and south boundaries abut neighboring commercial and residential buildings. The east and west boundaries operate as the points of access for the facility, also known as the east and west gates. The west gate operates as the main point of access and is characterized by a horizontal sliding gate that is enclosed behind a fenced perimeter (Plate 8).

The Hollywood Receiving Station west gate building (Plate 9), constructed in a post-war modern architectural design, is a single-story, rectangular building with a flat roof and parapet clad in built-up material. The exterior walls feature tilt up concrete slabs clad in stucco, with exception of the west facing façade and south elevation, which are partially clad in a brick veneer with a running bond pattern. The façade also includes a brick veneer foundation that terminates into a planter box on the north end. Exterior signage on the façade includes "Department of Water and Power; City of Los Angeles; Receiving Station 11." The south end of the façade includes a single-entry door recessed behind a metal-framed storm door. The single-entry door is covered by a cantilevered, flat concrete awning that wraps onto the south elevation and is accessed by a set of concrete stairs. The south elevation includes a pair of vinyl-framed sash windows recessed behind a security grille. The north and east elevations remain out of view from the public right-of-way. Additional details include a landscaped garden space directly south of the building, as well as a horizontal sliding entrance gate directly north of the building.

The east gate of the Hollywood Receiving Station includes an additional post-war modern building; however, it remains out of view from the public right-of-way (Plate 10). Aerial imagery suggests it is a single-story, rectangular building with a flat roof and a parapet clad in built-up material. The exterior walls are constructed of tilt-up concrete slabs clad in stucco and are also partially clad in a brick masonry veneer.

The interior space of the Hollywood Receiving Station is organized by six grouped electrical structures that encompass the 340,184 square-foot facility. The electrical structures are primarily steel-framed with concrete footings. They sit on a combination of concrete slab foundations and gravel. One electrical structure divides the facility in the middle with a north to south orientation, while two electrical structures are located at the west boundary and three at the east boundary. These six electrical structures include various transformers, towers, oil tanks, pump houses, and termination and racking equipment that receive power from the Nichols Canyon Terminal Tower via the 1.8 mile underground TOL-HWD L1. The TOL-HWD LI operates as a HPPT cable. The Hollywood Receiving Station receives the power from the TOL-HWD LI and generates, transmits, and distributes the 230 kV and 313 MVA to its designated recipients. The six electrical structures ensure that the 230 kV and 313 MVA are properly processed into their correct levels of voltage prior to distribution (Plates 11 and 12).

Plate 8: West gate of the Hollywood Receiving Station; camera facing east. (Google Street View 2021).

Plate 9: West gate of the Hollywood Receiving Station; camera facing east. (Google Street View 2021).

Plate 10: East gate of the Hollywood Receiving Station with a view of the post-war modern building and utilitarian structures; camera facing west. (Google Street View 2021).

Plate 11. Terminations and racking equipment in the interior space of the Hollywood Receiving Station; camera facing north. August 2022.

Plate 12. Oil tank and pump house in the interior space of the Hollywood Receiving Station; camera facing west. August 2022.

LADWP constructed the Hollywood Receiving Station in 1954. The facility does include a post-war modern building at the west gate, a design that flourished in urban centers during the two decades that followed World War II. However, a majority of the facility is characterized by its electrical structures that encompass the facility's interior space. The electrical structures lack architectural design. They were specifically engineered to receive the 230 kV and 313 MVA of power that travel south from the Nichols Canyon Terminal Tower via the 1.8 mile underground TOL-HWD L1. The Hollywood Receiving Station receives and processes the power into the correct levels of voltage prior to its distribution. At the time of this evaluation, the Hollywood Receiving Station is slated for various modifications that include the removal and reconstruction of the extant electrical equipment and their concrete foundations. Additional modifications include removal of the existing pump house and accompanying tank.

Under NRHP Criterion A and CRHR Criterion 1, the Hollywood Receiving Station has no significant association with important historic events. The station, constructed in 1954, is associated with Los Angeles' electrical development; however, it was constructed late in the period and exists as one of several components to a larger power grid. Research did not reveal that it played a distinct or important role in the development of the LADWP's and the City's electrical system. Therefore, the Hollywood Receiving Station does not meet eligibility for the NRHP or CRHR under Criterion A/1.

Under NRHP Criterion B and CRHR Criterion 2, the Hollywood Receiving Station is not significant for any associations with the lives or persons important to history. Research did not indicate that any individuals, such as LADWP engineers, architects, or official personnel, related to the development and use of the station made demonstrably important contributions to history at a national, state, or local level. Therefore, the Hollywood Receiving Station does not meet eligibility for the NRHP or CRHR under Criterion B/2.

Under NRHP Criterion C or CRHR Criterion 3, the Hollywood Receiving Station is not significant because it is not an important example of a type, period, or method of construction. The Hollywood Receiving Station features a post-war modern building at the entrance of its west gate. Post-war modern designs flourished in urban centers during the two decades that followed World War II.

However, a majority of the Hollywood Receiving Station is characterized by its engineering conveyed by the facility's electrical structures. These electrical structures were engineered to receive and process 230 kV and 313 MVA power provided by the TOL-HWD L1. The TOL-HWD L1 is an underground cable that travels 1.8 miles south from the Nichols Canyon Terminal Tower. The Hollywood Receiving Station receives the power and processes it to the correct levels of voltage prior to distribution. However, the Hollywood Receiving Station operates as one of several industrial properties owned and operated by LADWP throughout Los Angeles County. As a result, the facility on this parcel lacks the high artistic value, as well as a distinctive design and engineering, that would merit it listing on the NRHP or CRHR. There is no master architect or builder associated with this facility; therefore, it is not significant as the work of a master. Therefore, the Hollywood Receiving Station does not meet eligibility for the NRHP or CRHR under Criterion C/3.

Under NRHP Criterion D or CRHR Criterion 4, the Hollywood Receiving Station is not significant as a source (or likely source) of important information regarding history. It does not appear to have any likelihood of yielding important information about historic construction materials or technologies. Therefore, the Hollywood Receiving Station does not meet eligibility for the NRHP or CRHR under Criterion D/4.

In summary, the Hollywood Receiving Station does not demonstrate any historical or architectural significance that meet the criteria outline by the NRHP or CRHR, nor does it demonstrate a high level of integrity to convey its historical significance. As a result, the Hollywood Receiving Station does not meet eligibility for the NRHP or CRHR under any of the required significance criteria.

See Appendix A for additional details.

CHAPTER 6
MANAGEMENT DETAILS

REGULATORY SETTING

Cultural resources in California are protected by several federal, state, and local regulations, statutes, and ordinances. Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance.

California Environmental Quality Act

CEQA and its guidelines require the evaluation of potential impacts to "historical resources" that are defined as resources listed in or eligible for listing in the CRHR. Under California Public Resources Code Section 5024.1, the CRHR was established to serve as an authoritative guide to the state's significant historical and archaeological resources. The CRHR consists of historical resources that are (a) listed automatically, (b) listed following procedures and criteria adopted by the State Historical Resources Commission, and/or (c) nominated by an application and listed after a public hearing process. The criteria for listing historical resources in the CRHR are consistent with those developed by the National Park Service (NPS) for listing in the NRHP but have been modified for state use to include a range of historical resources that better reflect the history of California.

A historical resource is significant at the local, state, or national level under one or more of the following four criteria (1 through 4):

1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the U.S.;
2. Is associated with the lives of persons important to local, California, or national history;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Historical resources must also possess integrity, the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance and retain enough of this historic character or appearance to be recognizable as a historical resource and to convey the reasons for this significance. Integrity is evaluated regarding the retention of location, design, setting, materials, workmanship, feeling, and association.

Historical resources may include built environment and archaeological resources. In addition to historic properties listed in or eligible for listing in the NRHP that are automatically considered historical resources under CEQA, the CRHR includes designated CHLs, California Points of

Historical Interest, and certain locally identified historic resources. CEQA also requires that mitigation measures to reduce or avoid impacts to historical resources be incorporated into a project, and a range of alternatives be considered that could substantially lessen significant impacts to historical resources.

Under CEQA, a project results in a significant impact to historical resources if it results in a direct or indirect substantial adverse change to the resource. A significant impact would occur if a project directly or indirectly diminishes any of the characteristics that qualify or define a historical resource. A significant impact may be resolved with mitigation measures to avoid the impact or to reduce the impact to a level of less than significant.

Assembly Bill 52

The addition of Assembly Bill 52 (AB 52) to CEQA legislation created a new resource category, tribal cultural resources, and requires that a lead agency must consult with interested California Native American tribes who request formal consultation regarding impacts to tribal cultural resources. As defined by AB 52, tribal cultural resources are either of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    - (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    - (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code (PRC) Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also creates a consultation process between lead agencies and California Native American tribes to identify and protect tribal cultural resources. In accordance with AB 52, Native American groups who wish to be consulted on projects within their traditional geographic area are required to request in writing that lead agencies notify them of upcoming projects within their geographic areas. The results of consultation are confidential.

Consultation with interested Native American groups is being managed by LADWP.

CHAPTER 7
RECOMMENDATIONS

The following recommendations are made based on the potential that unknown resources are located buried within the project area. Information collected from archival research, which examined records kept at the SCCIC, local cultural resource listings, historical maps, contemporary archaeological literature, local prehistoric land use patterns and resource availability, and the results of the field survey were consulted. All investigations and resource documentation serve to inform the recommendations provided for cultural resources in the project site.

The archival records search results found no archaeological within the project area. In addition, the survey identified no undiscovered cultural resources. The area of the BWP line project component contained younger alluvial fans; however, this area was highly disturbed. The area of the Tower 584 project component was composed of shallow rocky soils. Excavation in the area of the underground alignment, while also including some alluvial deposits, will take place entirely underneath a road and adjacent to previously placed transmission lines. Therefore, the results of the archival research and survey indicate a low probability that archaeological resources will be discovered during ground-disturbing activities for the proposed project.

ARCHAEOLOGICAL RECOMMENDATIONS

To reduce impacts to unanticipated archaeological resources, BMP-CUL-1 would be implemented to provide training on cultural resources that may be present in the project area to construction personnel and supervisory staff to establish an understanding of what to look for during ground-disturbing activities.

> **BMP-CUL-1** All field supervisors and all construction workers shall participate in training on cultural resources awareness prior to the initiation of project construction on project sites that involve ground-disturbing activities. The training shall include a description of the types of cultural resources (including tribal cultural resources and human remains) that could inadvertently be encountered during ground-disturbing activities, the sensitivity of the resources, the legal basis for protection of the resources, and the penalties for unauthorized collection of or knowingly damaging the resources. The training shall address the proper procedures in the event of an inadvertent discovery of a cultural resource, including the immediate halting of work in the area of the discovery, notification of appropriate individuals of the discovery, the establishment of appropriate protective buffer zones around the discovery, and the continued avoidance of the protected area until the resource has been evaluated by qualified individuals and an appropriate treatment plan has been developed and implemented. These procedures shall be documented in a cultural resources monitoring plan (CRMP) that shall establish, in the event of inadvertent discovery of cultural resources, monitoring procedures (including potential Native American monitors), notification procedures, key staff, and preliminary treatment measures for potential discoveries. The CRMP shall be written to ensure compliance with appropriate state and federal laws. The training presentation and CRMP shall be available

to additional supervisory or construction personnel who may join after project construction has begun.

Although not expected to occur due to the low potential in the APE, in the event of an inadvertent discovery of archaeological resources during construction activities, the proposed project would be subject to California Public Resources Code (PRC) Section 21083.2(i) regarding provisions related to the accidental discovery of archaeological resources. These provisions include immediately halting construction work in the vicinity of the find (within a 50-foot buffer), and LADWP retaining a qualified archaeologist meeting Secretary of Interior standards to evaluate the significance of and determine appropriate treatment for the resource in accordance with the provisions of CEQA Guidelines Section 15064.5 and the National Historic Preservation Act.

If the resource is determined to be potentially of Native American in origin, Mitigation Measure (MM) TCR-1 would be required to mitigate potential impacts to a less than significant level. If the resource is determined to be non-Native American in origin and is determined to be potentially significant, a treatment or avoidance plan shall be developed within 48-hours of the discovery. Work in the area may not resume until evaluation and treatment of the resource is completed or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while the evaluation and treatment of archaeological resources take place.

MM TCR-1 In the event that an archaeological resource inadvertently discovered during project construction is determined to be potentially of Native American origin based on the initial assessment of the find by a qualified archaeologist pursuant to California Public Resources Code Section 21083.2(i), the Native American Tribes that consulted on the proposed project pursuant to California Assembly Bill 52 shall be notified and be provided information about the find to allow for early input from the tribal representatives with regards to the potential significance and treatment of the resource.

If, as a result of the resource evaluation and tribal consultation process, the resource is considered to be a tribal cultural resource in accordance with California Public Resources Code Section 21074, determined to be eligible for inclusion in the California Register of Historic Resources or a local register of historical resources or determined to be significant by LADWP (the CEQA lead agency), the qualified archaeologist shall monitor all remaining ground-disturbing activities in the area of the resource, and a tribal monitor from a consulting Native American Tribe shall be invited to monitor the ground-disturbing activities. The tribal monitor shall be ancestrally affiliated with the project area and qualified by their tribe to monitor tribal cultural resources.

The input of all consulting Tribes shall be considered in the preparation of any required treatment plan for the resources prepared by the qualified archaeologist. Work in the area of the discovery may not resume until evaluation and treatment of the resource is completed and/or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while evaluation and treatment of the resource takes place.

If human remains are discovered, work in the immediate vicinity of the discovery will be suspended and the Los Angeles County Coroner will be contacted. If the remains are deemed Native American in origin, the Coroner will contact the Native American Heritage Commission and identify a Most Likely Descendant pursuant to Public Resources Code Section 5097.98 and California Code of Regulations Section 15064.5. Work may be resumed at the landowner's discretion but will only commence after consultation and treatment have been concluded. Work may continue with other parts of the proposed project while consultation and treatment are conducted. Any archaeological materials recovered should be prepared for and curated at an approved facility.

CHAPTER 8
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1992 *California's Missions.* Hubert A. Lowman. Arroyo Grande, California.

Appendix A – DPR Forms

Appendix A – DPR Forms

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary#
HRI#
Trinomial
NRHP Status Code 6Z
Other Listings
Review Code Reviewer Date

Page 1 **of** 11 ***Resource Name or #:** (Assigned by recorder) Hollywood Receiving Station

P1. Other Identifier: N/A
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles
***b. USGS 7.5' Quad** Hollywood, CA **T** 1S; **R** 14W; NW ¼ **of** NE ¼ **of Sec** 16; **B.M.** San Bernardino
c. Address 940 North Poinsettia Place **City** Los Angeles **Zip** 90046
d. UTM: (Give more than one for large and/or linear resources) Zone 11S ; 375684.38 mE/ 3772709.22 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Assessor's Parcel Number (APN): 5531019900

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Hollywood Receiving Station is a 340,184 square-foot industrial facility located at 940 North Poinsettia Place. The facility is surrounded by urban development and enclosed within a concrete wall that spans the east and west boundaries; the north and south boundaries abut neighboring commercial and residential buildings. (**Photograph 7**). The east and west boundaries operate as the points of access for the facility, also known as the east and west gates. The west gate operates as the main point of access and is characterized by a horizontal sliding gate that is enclosed behind a fenced perimeter (**Photographs 1 and 2**).

(SEE CONTINUATION SHEET)

***P3b. Resource Attributes:** (List attributes and codes) HP8 – Industrial Building; HP9 – Public Utility Building HP11 – Engineering Structure
***P4. Resources Present:** ☒Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: (view, date, accession #) **Photograph 1.** West gate of the Hollywood Receiving Station; camera facing east (Google Street View 2021).

***P6. Date Constructed/Age and Source:** ☒Historic ☐Prehistoric ☐Both
1954

***P7. Owner and Address:**
Los Angeles Department of Water and Power, Environmental Affairs, 111 North Hope Street, Room 1044, Los Angeles, California 90012

***P8. Recorded by:** (Name, affiliation, address) Evan Mackall, AECOM, 2020 L Street, Suite 300, Sacramento, CA 95811

***P9. Date Recorded:** August 3, 2022

***P10. Survey Type:** Reconnaissance

***P11. Report Citation**: Toluca-Hollywood Line 1 Upgrade Project, Cultural Resources Technical Report, Los Angeles County, California.

***Attachments:** ☐NONE ☒Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) Hollywood Receiving Station

B1. Historic Name: Hollywood Receiving Station
B2. Common Name: Hollywood Receiving Station
B3. Original Use: LADWP receiving station
B4. Present Use: LADWP receiving station
***B5. Architectural Style:** Post-War Modern
***B6. Construction History:** (Construction date, alterations, and date of alterations) The Hollywood Receiving Station was constructed in 1954 and has undergone several alterations and upgrades throughout its history for modern use and operation. This includes paved parking spaces, utility features, and storage containers. Research did not reveal when these alterations occurred.

***B7. Moved?** X **No** __**Yes** __**Unknown Date:** ________ **Original Location:**____________
***B8. Related Features:** n/a
B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme** n/a **Area** n/a
Period of Significance n/a **Property Type** n/a **Applicable Criteria** n/a
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Hollywood Receiving Station does not appear to meet the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), nor does it appear to be an historical resource for purposes of the California Environmental Quality Act (CEQA). The property does not retain integrity to its original construction and does not meet any of the significance criteria necessary for eligibility for listing in either the NRHP or CRHR. The property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** SEE CONTINUATION SHEET

B13. Remarks:

***B14. Evaluator:** Evan Mackall

***Date of Evaluation:** August 2022

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

***P3a. Description (continued):**
The Hollywood Receiving Station west gate building, constructed in a post-war modern architectural design, is a single-story, rectangular building with a flat roof and parapet clad in built-up material. The exterior walls feature tilt up concrete slabs clad in stucco, with exception of the west facing façade and south elevation, which are partially clad in a brick veneer with a running bond pattern. The façade also includes a brick veneer foundation that terminates into a planter box on the north end. Exterior signage on the façade includes "Department of Water and Power; City of Los Angeles; Receiving Station 11." The south end of the façade includes a single-entry door recessed behind a metal-framed storm door. The single-entry door is covered by a cantilevered, flat concrete awning that wraps onto the south elevation and is accessed by a set of concrete stairs. The south elevation includes a pair of vinyl-framed sash windows recessed behind a security grille. The north and east elevations remain out of view from the public right-of-way. Additional details include a landscaped garden space directly south of the building, as well as a horizontal sliding entrance gate directly north of the building (**Photographs 1 through 3**).

The east gate of the Hollywood Receiving Station includes an additional post-war modern building; however, it remains out of view from the public right-of-way. Aerial imagery suggests it is a single-story, rectangular building with a flat roof and a parapet clad in built-up material. The exterior walls are constructed of tilt-up concrete slabs clad in stucco and are also partially clad in a brick masonry veneer (**Photographs 4 and 5**).

The interior space of the Hollywood Receiving Station is organized by six grouped electrical structures that encompass the 340,184 square-foot facility. The electrical structures are primarily steel-framed with concrete footings. They sit on a combination of concrete slab foundations and gravel. One electrical structure divides the facility in the middle with a north to south orientation, while two electrical structures are located at the west boundary and three at the east boundary. These six electrical structures include various transformers, towers, oil tanks, pump houses, and termination and racking equipment that receive power from the Nichols Canyon Terminal Tower via the 1.8 mile underground Toluca-Hollywood Line 1 (TOL-HWD L1). The TOL-HWD LI operates as a High Pressure Pipe Type (HPPT) cable that transmits 230 kilovolts (kV) and 313 Mega Volt-Amps (MVA). The Hollywood Receiving Station receives the power from the TOL-HWD LI and generates, transmits, and distributes the 230 kV and 313 MVA to its designated recipients. The six electrical structures ensure that the 230 kV and the 313 MVA are properly processed into their correct levels of voltage prior to distribution (**Photographs 6, 8, and 9).**

P5a. Photographs (continued):

Photograph 2. West gate of the Hollywood Receiving Station; camera facing east (Google Street View 2021).

Photograph 3. West gate of the Hollywood Receiving Station; camera facing southeast (Google Street View 2021).

Photograph 4. East gate of the Hollywood Receiving Station; camera facing southwest (Google Street View 2021).

Photograph 5. East gate of the Hollywood Receiving Station with a view of the post-war modern building and utilitarian structures; camera facing west (Google Street View 2021).

***Resource Name or #** (Assigned by recorder) Hollywood Receiving Station

Recorded by: Evan Mackall ***Date:** August 2022 ☒ Continuation ☐ Update

Photograph 6. East gate of the Hollywood Receiving Station with a view of interior industrial utilitarian structures; camera facing west (Google Street View 2021).

Photograph 7. Outer concrete wall that encloses a majority of the Hollywood Receiving Station; camera facing southeast (Google Street View 2021).

Photograph 8. Terminations and racking equipment in the interior space of the Hollywood Receiving Station; camera facing north. August 2022.

Photograph 9. Oil tank and pump house in the interior space of the Hollywood Receiving Station; camera facing west. August 2022.

***B10. Significance (continued):**

Historic Context

The Hollywood Receiving Station is located in Hollywood, a municipal district in Los Angeles, California. LADWP constructed the station in 1954 and continues to operate it as an integral part of Los Angeles's power grid.

Hollywood and the Hollywood Hills

Hollywood, a community within Los Angeles, was established toward the beginning of the 20th century. Originally purchased by H.J. Whitley for ranching in 1887, later additions including a post office and hotel led to its incorporation as a municipality in 1903 (Los Angeles Times 1903). From here, Whitley sold one of the first residential areas, the Ocean View Tract. To further bolster these additions, he paid thousands of dollars for electricity, built a bank, and constructed a road through the Cahuega Pass. By 1903, Hollywood was incorporated as a municipality, and then later merged with Los Angeles in 1910 (Mintz and McNeil 2013).

In 1912, major motion picture companies moved into the region to escape patents controlled by Thomas Edison. This set Hollywood as the capital of the film industry, a development that helped bolster the popularity and size of this small town to a growing vitalized city (Mintz and McNeil 2013). The growth of Hollywood into what it is today coincides with the growth of the Los Angeles Basin as a whole; Los Angeles is currently the second most populous city in the nation (Wilkman and Wilkman 2006).

Los Angeles Department of Water and Power (LADWP)

In the middle of the 19th century, Los Angeles experienced a rapid population growth, magnifying already existing issues with its current water distribution system. During this time, the Los Angeles water supply was a series of unorganized polluted open ditches. As its population expanded, the City began to rectify this problem through the construction of underground water mains by 1857. Original attempts were unsuccessful as the City allowed private companies to develop leased Los Angeles River water on the City's behalf, leading to multiple scandals. This caused a shift in popular support towards municipal control (Layne 1957).

A scarcity of water eventually led to proposals made by Fred Eaton, a former Los Angeles Mayor, to use tax revenue to pay for, operate, and maintain the City water supply. As part of this City takeover of water, came proposals made by William Mulholland to create the Los Angeles Aqueduct. The Los Angeles Aqueduct brought water from the Owens Valley in the High Sierra to Los Angeles. The construction of the aqueduct, and President Theodore Roosevelt's prohibition of selling Owens Valley water outside the city, led to the annexation of most of the San Fernando Valley into the City (Kahrl 2013). To take advantage of the water supply for the dry farming area, most of the various valley communities agreed to be annexed by Los Angeles at different times from 1915 through 1923. Because of the prosperity the aqueduct brought to the San Fernando Valley, Pacoima was briefly renamed Mulholland (Robinson 1963).

Proposals and actions to increase the City's water supply were both a response to and the cause of rising population. As population grew, so did the need for electrical power creation and distribution. Initially, the City produced electrical power specifically for the construction of the Los Angeles Aqueduct. The Bureau of Los Angeles Aqueduct Power was then developed to provide hydroelectric power for the City. In 1937, the Bureau of Power and Light merged with the Bureau of Water Works forming the LADWP (Layne 1957).

In addition to a growing need for water development in Los Angeles and its surrounding communities was the expansion of the consumption of electricity. As related specifically to power, since its foundation, LADWP oversaw the construction of multiple power generating systems and electrical transmission networks not only within Los Angeles but outside facilities providing services to Los Angeles. As Los Angeles continued to grow in population and size throughout the late 1800s, this need for additional electricity became an emergency. To remedy this need, a California Engineer named John S. Eastwood began to search for an adequate power source that could power the city for years to come (Jackson 2005).

In 1902, he took these plans to the Pacific Light and Power Company, a business that was struggling to keep up with the growing energy needs of Los Angeles. This struggle became worse as light rail systems were being utilized at a greater rate, consuming almost 80 percent (%) of the energy in the region (Hanson 2013). By 1905, Eastwood proposed a complex dam system along Big Creek, a major river in the San Joaquín Valley, consisting of a large reservoir and two powerhouses (Jackson 2005). Construction of this complex, now known as the Big Creek Hydroelectric System Historic District, was built over multiple phases between 1910 and 1987. After Phase 1 was finished in 1914, Los Angeles suffered significant power failure over a competing generating plant, causing the City to sign a contract to switch over to the Big Creek Hydroelectric System. By its second phase in 1921, the Big Creek Hydroelectric System was providing significant power to support Los Angeles and multiple surrounding communities (Hanson 2013). Today, Los Angeles receives power from all over the county, state, and country, ranging from local services all the way to Arizona, Wyoming, Utah, and Oregon.

Hollywood Receiving Station

The LADWP constructed the Hollywood Receiving Station in 1954 within the urban sprawl of Hollywood (**Plate 1**). The facility includes a post-war modern building at its west gate, a design that flourished in urban centers during the two decades that followed World War II. However, modern architecture began in the late 1920s and early 1930s and extended through the post-war era in the 1970s. The overarching label of "Modern," although imprecise, can generally be characterized by buildings exhibiting simple volumes (in institutional and commercial buildings) and a lack of decorative detail. Additional characteristics include a use of materials in place of decorative details, and the use of natural colors and textures of materials to embellish a building (for example, employing brick or concrete for decorative effect). The modern era was also a time, however, when new materials and construction methods were explored. An example is curtain wall construction, which utilizes aluminum frames for window walls in place of steel, and new material combinations in the solid spandrel panels that separate them. Additional examples include thin shell construction, folded plate construction, and the hyperbolic paraboloid (Painter 2010).

A majority of the Hollywood Receiving Station is characterized by its electrical structures that encompass the facility's interior space. The electrical structures lack architectural design and were specifically engineered to receive the 230 kV and 313 MVA of power that travel south from the Nichols Canyon Terminal Tower via the 1.8 mile underground TOL-HWD L1. The Hollywood Receiving Station receives and processes the power into the correct levels of voltage prior to its distribution. At the time of this evaluation, the Hollywood Receiving Station is slated for various modifications that include the removal and reconstruction of the extant electrical equipment and their concrete foundations. Additional modifications include removal of the existing pump house and accompanying tank.

Plate 1. Aerial view of the Hollywood Receiving Station in 1960, six years after its construction; located in the middle of Los Angeles's urban sprawl (University of California, Santa Barbara 1960).

Evaluation
Under NRHP Criterion A and CRHR Criterion 1, the Hollywood Receiving Station has no significant association with important historic events. The station, constructed in 1954, is associated with Los Angeles' electrical development; however, it was constructed late in the period and exists as one of several components to a larger power grid. Research did not reveal that it played a distinct or important role in the development of the LADWP's and the City's electrical system. Therefore, the Hollywood Receiving Station does not meet eligibility for the NRHP or CRHR under Criterion A/1.

Under NRHP Criterion B and CRHR Criterion 2, the Hollywood Receiving Station is not significant for any associations with the lives or persons important to history. Research did not indicate that any individuals, such as LADWP engineers, architects, or official personnel, related to the development and use of the station made demonstrably important contributions to history at a national, state, or local level. Therefore, the Hollywood Receiving Station does not meet eligibility for the NRHP or CRHR under Criterion B/2.

Under NRHP Criterion C or CRHR Criterion 3, the Hollywood Receiving Station is not significant because it is not an important example of a type, period, or method of construction. The Hollywood Receiving Station features a post-war modern building at the entrance of its west gate. Post-war modern designs flourished in urban centers during the two decades that followed World War II. However, a majority of the Hollywood Receiving Station is characterized by its engineering conveyed by the facility's electrical structures. These electrical structures were engineered to receive and process the 230 kV and 313 MVA of power provided by the TOL-HWD L1. The TOL-HWD L1 is an underground cable that travels 1.8 miles south from the Nichols Canyon Terminal Tower. The Hollywood Receiving Station receives the power and processes it to the correct levels of voltage prior to distribution. However, the Hollywood Receiving Station operates as one of several industrial properties owned and operated by the LADWP throughout Los Angeles County. As a result, the facility on this parcel lacks the high artistic value, as well as a distinctive design and engineering, that would merit it listing on the NRHP or CRHR. There is no master architect or builder associated with this facility; therefore, it is not significant as the work of a master. Therefore, the Hollywood Receiving Station does not meet eligibility for the NRHP or CRHR under Criterion C/3.

Under NRHP Criterion D or CRHR Criterion 4, the Hollywood Receiving Station is not significant as a source (or likely source) of important information regarding history. It does not appear to have any likelihood of yielding important information about historic construction materials or technologies. Therefore, the Hollywood Receiving Station does not meet eligibility for the NRHP or CRHR under Criterion D/4.

In summary, the Hollywood Receiving Station does not demonstrate any historical or architectural significance that meet the criteria outline by the NRHP or CRHR, nor does it demonstrate a high level of integrity to convey its historical significance. As a result, the Hollywood Receiving Station does not meet eligibility for the NRHP or CRHR under any of the required significance criteria.

***B12. References (continued):**

Google Street View
2021 Imagery taken from Google Street View on August 3, 2022. Available: https://www.google.com/maps.

Hanson, Victor Davis
2013 California's Promethean Past: How a visionary entrepreneur watered and powered Los Angeles. City Journal. Retrieved 2019-10-14.

Jackson, Donald Conrad
2005 Building the Ultimate Dam: John S. Eastwood and the Control of Water in the West. University of Oklahoma Press.

Kahrl, William
2013 Mulholland's Long Shadow. *Los Angeles Times.* 3 November: A34.

Layne, J. Gregg
1957 *Water and Power for a Great City.* Los Angeles: Department of Water and Power.

Los Angeles Times
1903 Hollywood Becomes a Prohibition Town. The Historic Heart of Los Angeles, December 29, 1903, Page A-3.

Mintz, S., and S. McNeil
2013 Hollywood as History. Digital History. N.p., 2013. Web. July 24, 2018.

Painter, Diana J.
2010. *Montana Post-World War II Architectural Survey and Inventory Historic Context and Survey Report.*

University of California, Santa Barbara
1960 Frame Finder. Available: https://mil.library.ucsb.edu/ap_indexes/FrameFinder/. Accessed August 4, 2022.

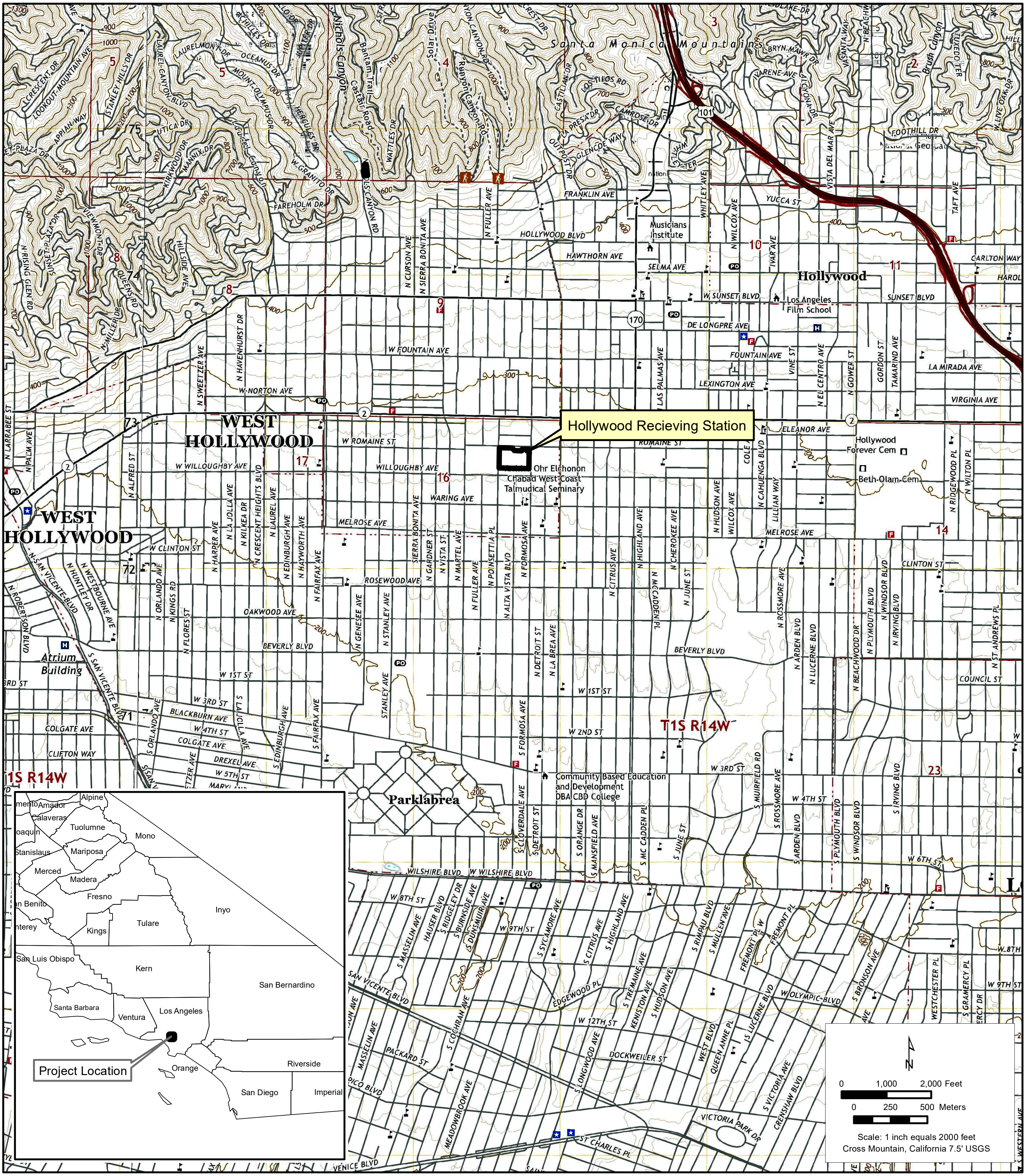
Wilkman, Nancy, and Jon Wilkman
2006 *Picturing Los Angeles.* Gibbs Smith Publishers, Salt Lake City.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 11 of 11 *Resource Name or # (Assigned by recorder) Hollywood Receiving Station

*Map Name: Hollywood, Ca *Scale: 1:24,000 *Date of Map: 2022



DPR 523J (1/95) *Required information

***Resource Name or #:** (Assigned by recorder) Nichols Canyon Terminal Tower

P1. Other Identifier: N/A

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Los Angeles

***b. USGS 7.5' Quad** Hollywood, CA **T** 1S; **R** 14W; SW ¼ **of** SW ¼ **of Sec** 4; **B.M.** San Bernardino

c. Address N/A **City** Los Angeles **Zip** 90046

d. UTM: (Give more than one for large and/or linear resources) Zone 11S ; 374668.74 mE/ 3774695.81 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Assessor's Parcel Number (APN): 5571031907; located along the east side of Nichols Canyon Road facing north, directly north of Hollywood Boulevard in Nichols Canyon, Los Angeles, California.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Nichols Canyon Terminal Tower, constructed in 1974 and owned and operated by the LADWP, is located on a 55,242 square-foot parcel (APN 5571031907) along Nichols Canyon Road. The parcel is north of Hollywood Boulevard and situated in Nichols Canyon between Los Angeles to the south and the San Fernando Valley to the north. LADWP constructed the structure on a western-facing hill slope. The facility is characterized by two sections, the north section and the south section.

(SEE CONTINUATION SHEET)

***P3b. Resource Attributes:** (List attributes and codes) HP8 – Industrial Building; HP9 – Public Utility Building HP11 – Engineering Structure

***P4. Resources Present:** ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing

P5b. Description of Photo: (view, date, accession #) **Photograph 1.** View of the transformer at the north section of the Nichols Canyon Terminal Tower; camera facing south. August 2022.

***P6. Date Constructed/Age and Source:** ☒Historic ☐Prehistoric ☐Both
1974

***P7. Owner and Address:**
Los Angeles Department of Water and Power, Environmental Affairs, 111 North Hope Street, Room 1044, Los Angeles, California 90012

***P8. Recorded by:** (Name, affiliation, address) Evan Mackall, AECOM, 2020 L Street, Suite 300, Sacramento, CA 95811

***P9. Date Recorded:** August 3, 2022

***P10. Survey Type:** Reconnaissance

***P11. Report Citation**: Toluca-Hollywood Line 1 Upgrade Project, Cultural Resources Technical Report, Los Angeles County, California.

***Attachments:** ☐NONE ☒Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐Other (List):

Primary #____________________
HRI #____________________

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder) Nichols Canyon Terminal Tower

B1. Historic Name: Nichols Canyon Terminal Tower
B2. Common Name: Nichols Canyon Terminal Tower
B3. Original Use: LADWP Terminal Tower
B4. Present Use: LADWP Terminal Tower
***B5. Architectural Style:** No style
***B6. Construction History:** (Construction date, alterations, and date of alterations) The Nichols Canyon Terminal Tower was constructed in 1974 and has undergone several alterations and upgrades throughout its history for modern use and operation. Research did not reveal specific details on these alterations.

***B7. Moved?** X **No __Yes __Unknown Date:** ________ **Original Location:**____________
***B8. Related Features:** n/a
B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme** n/a **Area** n/a
Period of Significance n/a **Property Type** n/a **Applicable Criteria** n/a
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Nichols Canyon Terminal Tower does not appear to meet the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), nor does it appear to be an historical resource for purposes of the California Environmental Quality Act (CEQA). The property does not retain integrity to its original construction and does not meet any of the significance criteria necessary for eligibility for listing in either the NRHP or CRHR. The property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:** SEE CONTINUATION SHEET

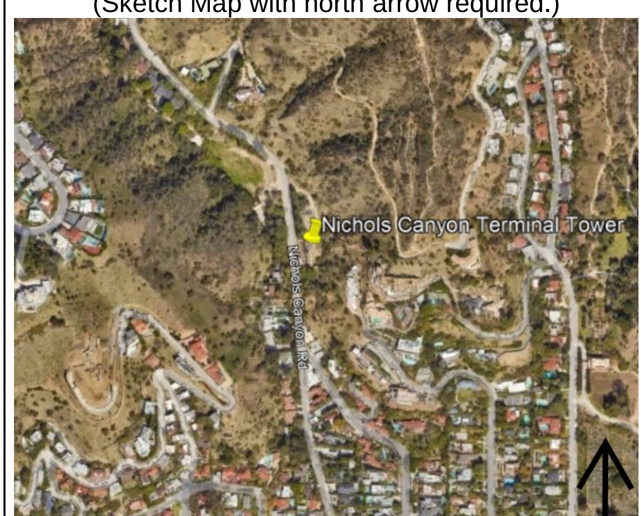
B13. Remarks:

***B14. Evaluator:** Evan Mackall

***Date of Evaluation:** August 2022

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



***P3a. Description (continued):**

The north section includes electrical transformers while the southern section includes the terminal towers and additional transformers that connect to the underground High Pressure Pipe Type (HPPT) cable. The HPPT cable, also known as the Toluca–Hollywood Line 1 (TOL-HWD L1), and installed in 1975, travels 1.8 miles south from the Nichols Canyon Terminal Tower to the Hollywood Receiving Station. The cable transports 230 kilovolt (kV) and 313 Mega Volt-Amps (MVA) of power to the receiving station.

The north section of the facility has a perimeter fence and is accessed by a metal sliding gate and concrete paved driveway along Nichols Canyon Road (**Photograph 2**). The concrete driveway curves south and terminates at an additional perimeter fence that encloses industrial electrical equipment. Equipment includes an electrical transformer, as well as a gas tank, air canisters, utility boxes, and exterior industrial signage. (**Photographs 1 and 3**). Electrical wiring from the north section of the facility extends south over a fence and attaches to the south section of the facility.

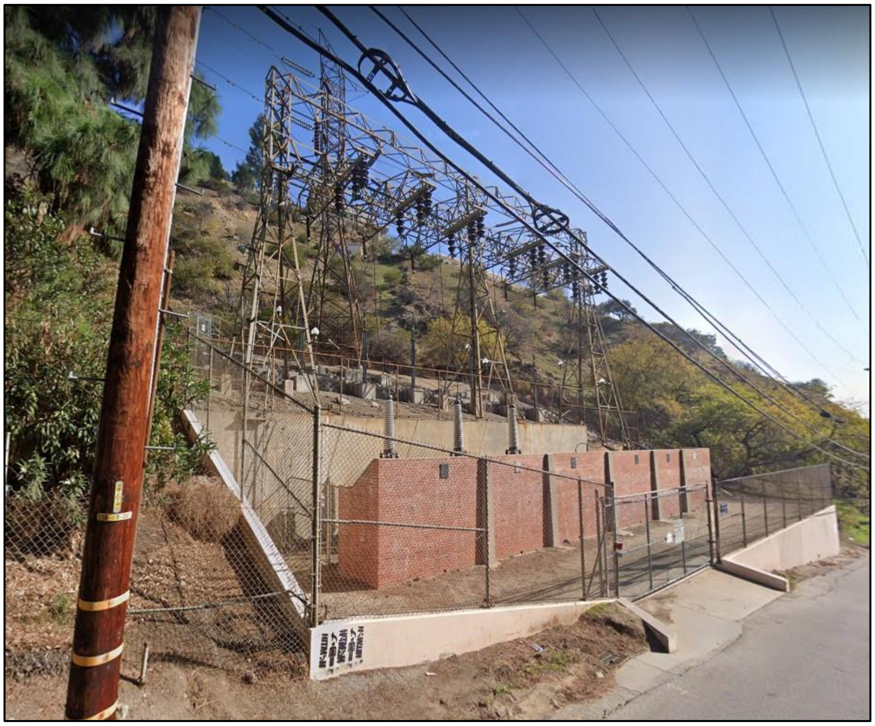
The south section of the facility is accessed by a concrete driveway and metal-framed gate that also opens onto Nichols Canyon Road. The gate includes public signage warning of high voltage and a sign indicating the property is owned by LADWP. (**Photographs 4**). The area includes two levels. The ground level, directly past the metal-framed gate, features three visible electrical transformer components that are housed behind a brick wall. The brick is constructed of a running bond pattern and features five concrete pilasters that face Nichols Canyon Road. Either side of the brick wall includes a single-entry fenced gate that allows access into the transformer space. The second level is accessed by a set of concrete stairs located on the southern end facility. (**Photographs 5 through 8**). The concrete stairs allow access to four metal-framed electrical towers enclosed in an additional fenced perimeter with a concrete retaining wall that separates the ground level from the second level. The four towers connect to the north section of the facility, as well as the below transformer components, and sit on a concrete foundation supported by additional surrounding cinder blocks. Additional details include attached exterior lighting, utility boxes, and signage.

P5a. Photographs (continued):

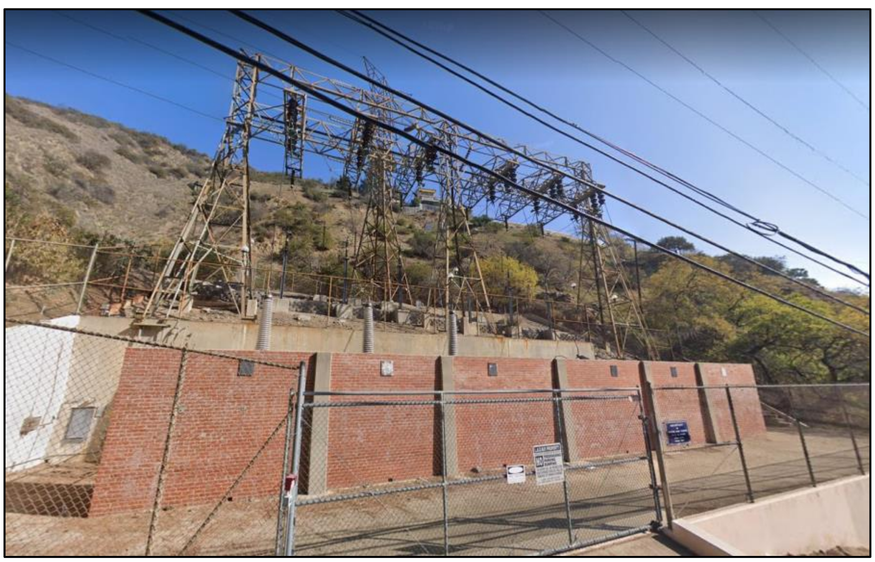
Photograph 2. Entrance to the north section of the Nichols Canyon Terminal Tower along Nichols Canyon Road; camera facing southeast (Google Street View 2021).

Photograph 3. View of the gas tank and canisters in the north section of the Nichols Canyon Terminal Tower; camera facing west. August 2022.

Photograph 4. View of the Nichols Canyon Terminal Tower facing; camera facing northeast (Google Street View 2021).

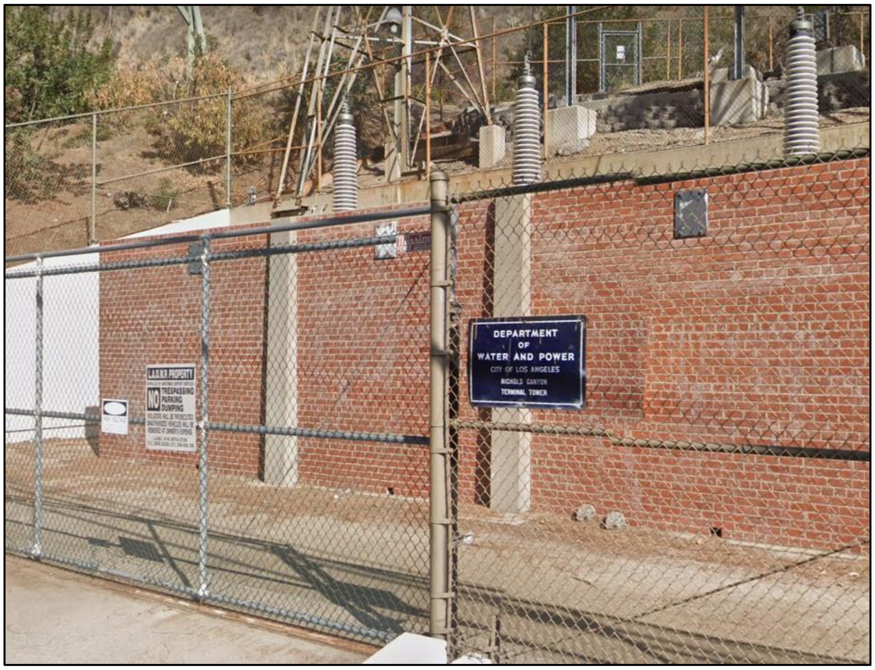


Photograph 5. View of the Nichols Canyon Terminal Tower; camera facing southeast (Google Street View 2021).



Photograph 6. View of the Nichols Canyon Terminal Tower; camera facing east (Google Street View 2021).

 ***Resource Name or #** (Assigned by recorder) Nichols Canyon Terminal Tower
Recorded by: Evan Mackall ***Date:** August 2022 ☒ Continuation ☐ Update



Photograph 7. View of the LADWP signage on the fenced perimeter of the Nichols Canyon Terminal Tower; camera facing east (Google Street View 2021).

Photograph 8. View of the Nichols Canyon Terminal Tower foundation on the western-facing slope of the hill; camera facing northeast (Google Street View 2021).

***B10. Significance (continued):**

Historic Context

The Nichols Canyon Terminal Tower is located in the Hollywood Hills, directly north of Los Angeles and south of the San Fernando Valley. LADWP constructed the terminal tower in 1974 and continues to operate it as an integral part of Los Angeles's power grid.

San Ferando Valley

Los Angeles was readily accessible in 1874 through the Southern Pacific Railroad line, and in just two short years the San Fernando Valley was connected to San Francisco. With Chinese men as the primary labor, the San Fernando Tunnel was completed in a near 16-month construction feat by 1876 (Robinson 1942; 1963). In addition, the valley experienced a real estate boom in 1887 and 1888, and its immense fertile lands lured residents and developers. The Lankershim Ranch Land and Water Company purchased the east 1,200 acres of the southern half of the Rancho Ex-Mission of San Fernando from the Los Angeles Farm and Milling Company (formerly known as the San Fernando Homestead Association mentioned above). These acres were subdivided by the company into 10- to 40-acre parcels that sold for $5 to $150 each. In the northern half of the valley, land was also purchased for subdivision, and once again the San Fernando Valley was packaged and sold on the real estate market as a fertile agriculture endeavor. However, this agronomic promise was also a reality. The wheat-producing business that was pioneered by Lankershim and Van Nuys in the early 1870s had become a production machine by the late 1800s. Flour milling was supplemental to wheat farming; in 1888, 510,000 bushels of wheat were produced and milled by the Los Angeles Farm and Milling Company (Robinson 1942).

Hollywood and the Hollywood Hills

Hollywood, a community within Los Angeles, was established toward the beginning of the 20th century. Originally purchased by H.J. Whitley for ranching in 1887, later additions including a post office and hotel led to its incorporation as a municipality in 1903 (Los Angeles Times 1903). From here, Whitley sold one of the first residential areas, the Ocean View Tract. To further bolster these additions, he paid thousands of dollars for electricity, built a bank, and constructed a road through the Cahuega Pass. By 1903, Hollywood was incorporated as a municipality, and then later merged with Los Angeles in 1910 (Mintz and McNeil 2013).

In 1912, major motion picture companies moved into the region to escape patents controlled by Thomas Edison. This set Hollywood as the capital of the film industry, a development that helped bolster the popularity and size of this small town to a growing vitalized city (Mintz and McNeil 2013). The growth of Hollywood into what it is today coincides with the growth of the Los Angeles Basin as a whole; Los Angeles is currently the second most populous city in the nation (Wilkman and Wilkman 2006).

Los Angeles Department of Water and Power (LADWP)

In the middle of the 19th century, Los Angeles experienced a rapid population growth, magnifying already existing issues with its current water distribution system. During this time, the Los Angeles water supply was a series of unorganized polluted open ditches. As its population expanded, the City began to rectify this problem through the construction of underground water mains by 1857. Original attempts were unsuccessful as the City allowed private companies to develop leased Los Angeles River water on the City's behalf, leading to multiple scandals. This caused a shift in popular support towards municipal control (Layne 1957).

A scarcity of water eventually led to proposals made by Fred Eaton, a former Los Angeles Mayor, to use tax revenue to pay for, operate, and maintain the City water supply. As part of this City takeover of water, came proposals made by William Mulholland to create the Los Angeles Aqueduct. The Los Angeles Aqueduct brought water from the Owens Valley in the High Sierra to Los Angeles. The construction of the aqueduct, and President Theodore Roosevelt's prohibition of selling Owens Valley water outside the city, led to the annexation of most of the San Fernando Valley into the City (Kahrl 2013). To take advantage of the water supply for the dry farming area, most of the various valley communities agreed to be annexed by Los Angeles at different times from 1915 through 1923. Because of the prosperity the aqueduct brought to the San Fernando Valley, Pacoima was briefly renamed Mulholland (Robinson 1963).

Proposals and actions to increase the City's water supply were both a response to and the cause of rising population. As population grew, so did the need for electrical power creation and distribution. Initially, the City produced electrical power specifically for the construction of the Los Angeles Aqueduct. The Bureau of Los Angeles Aqueduct Power was then developed to provide hydroelectric power for the City. In 1937, the Bureau of Power and Light merged with the Bureau of Water Works forming the LADWP (Layne 1957).

In addition to a growing need for water development in Los Angeles and its surrounding communities was the expansion of the consumption of electricity. As related specifically to power, since its foundation, LADWP oversaw the construction of multiple power generating systems and electrical transmission networks not only within Los Angeles but outside facilities providing services to Los Angeles. As Los Angeles continued to grow in population and size throughout the late 1800s, this need for additional electricity became an emergency. To remedy this need, a California Engineer named John S. Eastwood began to search for an adequate power source that could power the city for years to come (Jackson 2005).

In 1902, he took these plans to the Pacific Light and Power Company, a business that was struggling to keep up with the growing energy needs of Los Angeles. This struggle became worse as light rail systems were being utilized at a greater rate, consuming almost 80 percent (%) of the energy in the region (Hanson 2013). By 1905, Eastwood proposed a complex dam system along Big Creek, a major river in the San Joaquín Valley, consisting of a large reservoir and two powerhouses (Jackson 2005). Construction of this complex, now known as the Big Creek Hydroelectric System Historic District, was built over multiple phases between 1910 and 1987. After Phase 1 was finished in 1914, Los Angeles suffered significant power failure over a competing generating plant, causing the City to sign a contract to switch over to the Big Creek Hydroelectric System. By its second phase in 1921, the Big Creek Hydroelectric System was providing significant power to support Los Angeles and multiple surrounding communities (Hanson 2013). Today, Los Angeles receives power from all over the county, state, and country, ranging from local services all the way to Arizona, Wyoming, Utah, and Oregon.

Nichols Canyon Terminal Tower
In 1974, the LADWP constructed the Nichols Canyon Terminal Tower as an additional component to the City's electrical power grid (**Plate 1**). The LADWP constructed the facility as a means to transport 230 kV and 313 MVA of power via the TOL-HWD L1. The TOL-HWD L1 travels underground for 1.8 miles and terminates south at the Hollywood Receiving Station. At the time of this evaluation, the Nichols Canyon Terminal Tower is slated for various modifications that include replacement of the existing concrete pad and support structure of the existing TOL-HWD L1 rack removal and replacement of the aboveground TOL-HWD L1 rack/equipment, and subsurface structural supports, as well as demolition of the existing pump house and accompanying tank.

Plate 1. The Nichols Canyon Terminal Tower located directly north of Hollywood Boulevard in 1976, two years after its construction (University of California, Santa Barbara 1976).

Evaluation

Under NRHP Criterion A and CRHR Criterion 1, the Nichols Canyon Terminal Tower has no significant association with important historic events. The terminal tower, constructed in 1974, is associated with the development Los Angeles's electrical power grid; however, the terminal tower was constructed late in the developmental period and exists as one of several components to a larger system. Research did not reveal that it played a distinct or important role in the development of the LADWP's and the City's electrical system. Therefore, the Nichols Canyon Terminal Tower does not meet eligibility for the NRHP or CRHR under Criterion A/1.

Under NRHP Criterion B and CRHR Criterion 2, the Nichols Canyon Terminal Tower is not significant for any associations with the lives or persons important to history. Research did not indicate that any individuals, such as LADWP engineers, architects, or official personnel, related to the development and use of the terminal tower made demonstrably important contributions to history at a national, state, or local level. Therefore, the Nichols Canyon Terminal Tower does not meet eligibility for the NRHP or CRHR under Criterion B/2.

Under NRHP Criterion C or CRHR Criterion 3, the Nichols Canyon Terminal Tower is not significant because it is not an important example of a type, period, or method of construction. The Nichols Canyon Terminal Tower does demonstrate evidence of distinctive industrial engineering; however, it does not demonstrate an obvious architectural design. The Nichols Canyon Terminal Tower includes two groupings of electrical equipment on the north and south sections of the facility. Both sections operate together in order to transmit power to the underground TOL-HWD L1 that travels south to the Hollywood Receiving Station. The facility operates as one of several industrial properties owned and operated by the LADWP throughout Los Angeles County. As a result, the structure on this parcel lacks the high artistic value, as well as a distinctive design and engineering, that would merit it listing on the NRHP or CRHR. There is no master architect or builder associated with this building; therefore, it is not significant as the work of a master. Therefore, the Nichols Canyon Terminal Tower does not meet eligibility for the NRHP or CRHR under Criterion C/3.

Under NRHP Criterion D or CRHR Criterion 4, the Nichols Canyon Terminal Tower is not significant as a source (or likely source) of important information regarding history. It does not appear to have any likelihood of yielding important information about historic construction materials or technologies. Therefore, the Nichols Canyon Terminal Tower does not meet eligibility for the NRHP or CRHR under Criterion D/4.

In summary, the Nichols Canyon Terminal Tower does not demonstrate any historical or architectural significance that meets the NRHP or CRHR criteria, nor does it demonstrate a high level of integrity to convey its historical significance. As a result, the Nichols Canyon Terminal Tower does not meet eligibility for the NRHP or CRHR under any of the significance criterion.

***B12. References (continued):**

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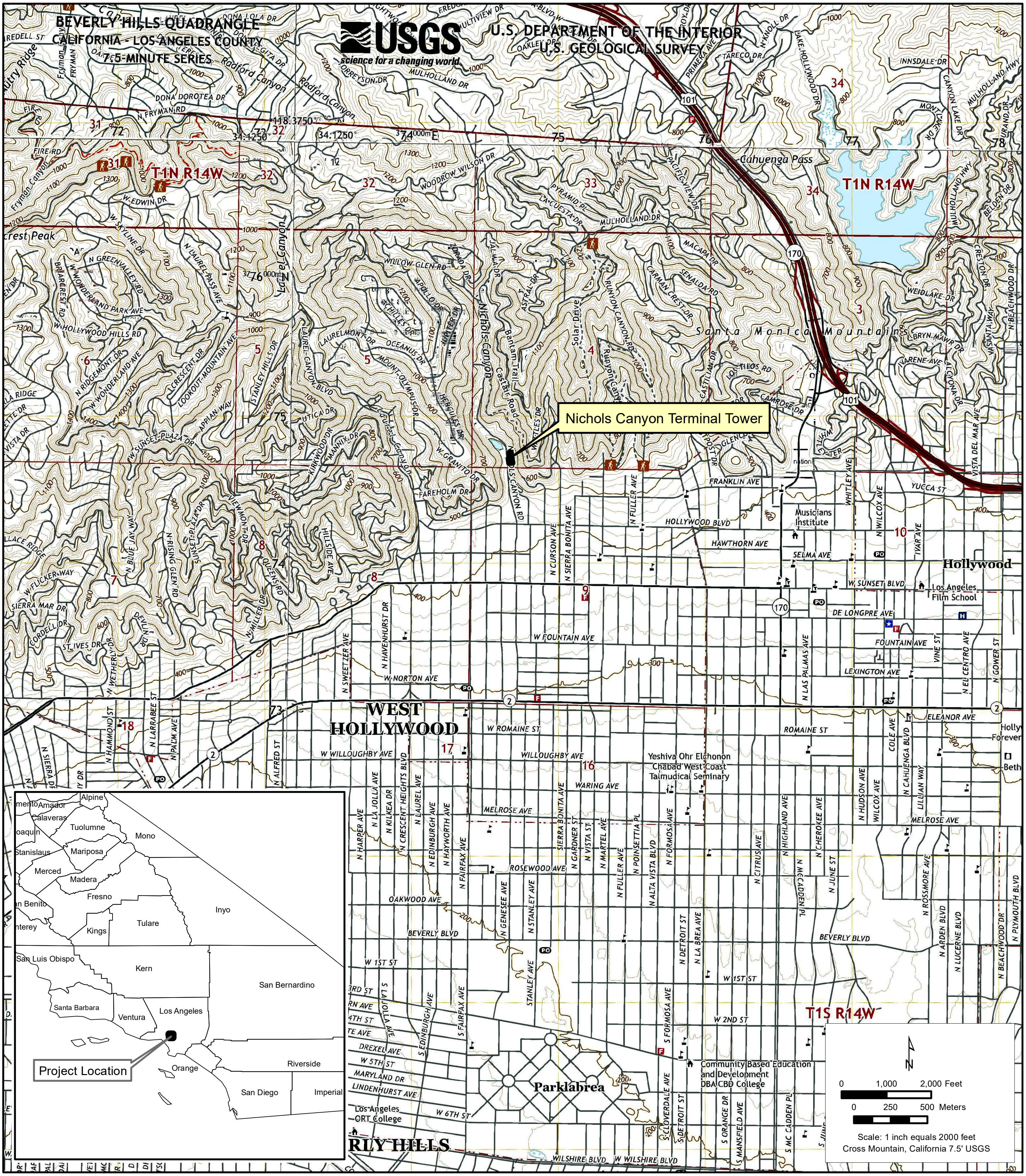
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

Page 11 **of** 11
***Resource Name or #** (Assigned by recorder) Nichols Canyon Terminal Tower
***Map Name:** Hollywood, Ca
***Scale:** 1:24,000
***Date of Map:** 2022



DPR 523J (1/95)

*Required information

Appendix D
Energy Calculations

Construction Fuels Consumption - Off-Road Equipment and Summary

Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
Demolition	Demolition	6/12/2023	6/12/2024	6	315
Site Preparation	Site Preparation	6/12/2023	6/14/2025	6	630
Vault Shaft Excavations (A)	Grading	6/12/2023	8/19/2023	6	60
Tower 584 Foundation	Building Construction	7/3/2023	9/2/2023	6	54
Vault Installations & Completions (A)	Building Construction	8/21/2023	10/14/2023	6	48
Tower 584 Structure	Building Construction	9/4/2023	9/9/2023	6	6
Paving	Paving	6/13/2024	6/14/2025	6	315
Install New XLPE Cable	Trenching	11/11/2024	8/16/2025	6	240
Architectural Coating	Architectural Coating	4/7/2025	6/14/2025	6	60
Vault Shaft Excavations (B)	Grading	6/16/2025	7/19/2025	6	30
Vault Installations & Completions (B)	Building Construction	7/21/2025	8/16/2025	6	24
Nichols Canyon Road Segment	Trenching	10/6/2025	3/28/2026	6	150
Terminal Tower/Receiving Station Upgrades	Building Construction	10/6/2025	3/28/2026	6	150

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	BSFC (gal/hp-hr)	Days	Diesel Fuel (Gallons)
Demolition	Concrete/Industrial Saws	2	2	81	0.73	0.0574	315	4,276.0
Demolition	Excavators	1	4	158	0.38	0.0574	315	4,341.8
Demolition	Tractors/Loaders/Backhoes	2	6	97	0.37	0.0574	315	7,786.2
Site Preparation	Pumps	2	6	84	0.74	0.0574	630	26,970.6
Site Preparation	Tractors/Loaders/Backhoes	4	6	97	0.37	0.0516	630	28,014.9
Vault Shaft Excavations (A)	Excavators	1	4	158	0.38	0.0574	60	827.0
Vault Shaft Excavations (A)	Tractors/Loaders/Backhoes	2	7	97	0.37	0.0516	60	1,556.4
Tower 584 Foundation	Bore/Drill Rigs	1	4	221	0.50	0.0574	54	1,369.9
Tower 584 Foundation	Cranes	1	4	231	0.29	0.0574	54	830.5
Tower 584 Foundation	Excavators	1	6	158	0.38	0.0574	54	1,116.5
Tower 584 Foundation	Pumps	1	6	84	0.74	0.0516	54	1,039.7
Tower 584 Foundation	Rollers	1	4	80	0.38	0.0574	54	376.9
Tower 584 Foundation	Tractors/Loaders/Backhoes	1	6	97	0.37	0.0516	54	600.3
Vault Installations & Completions (A)	Cranes	1	4	231	0.29	0.0516	48	664.0
Vault Installations & Completions (A)	Pumps	2	6	84	0.74	0.0516	48	1,848.4
Vault Installations & Completions (A)	Tractors/Loaders/Backhoes	1	6	97	0.37	0.0574	48	593.2
Tower 584 Structure	Cranes	1	4	231	0.29	0.0574	6	92.3
Tower 584 Structure	Excavators	1	4	158	0.38	0.0574	6	82.7
Tower 584 Structure	Tractors/Loaders/Backhoes	1	8	97	0.37	0.0516	6	88.9
Paving	Cement and Mortar Mixers	2	6	20	0.56	0.0574	315	2,429.8
Paving	Pavers	1	7	130	0.42	0.0574	315	6,909.7
Paving	Rollers	2	7	80	0.38	0.0516	315	6,921.1
Architectural Coating	Air Compressors	2	6	78	0.48	0.0516	60	1,391.7
Vault Shaft Excavations (B)	Excavators	1	4	158	0.38	0.0574	30	413.5
Vault Shaft Excavations (B)	Tractors/Loaders/Backhoes	2	7	97	0.37	0.0574	30	865.1
Vault Installations & Completions (B)	Cranes	1	4	231	0.29	0.0516	24	332.0
Vault Installations & Completions (B)	Pumps	2	6	84	0.74	0.0574	24	1,027.5
Vault Installations & Completions (B)	Tractors/Loaders/Backhoes	1	6	97	0.37	0.0574	24	296.6
Nichols Canyon Road Segment	Excavators	2	6	158	0.38	0.0516	150	5,579.3
Nichols Canyon Road Segment	Other Material Handling Equipment	1	6	168	0.40	0.0574	150	3,471.1
Nichols Canyon Road Segment	Rollers	1	4	80	0.38	0.0516	150	941.6
Nichols Canyon Road Segment	Surfacing Equipment	1	4	263	0.30	0.0574	150	2,717.0
Nichols Canyon Road Segment	Tractors/Loaders/Backhoes	1	6	97	0.37	0.0574	150	1,853.8
Terminal Tower/Receiving Station Upgrades	Cranes	1	4	231	0.29	0.0516	150	2,075.0
Terminal Tower/Receiving Station Upgrades	Excavators	2	7	158	0.38	0.0516	150	6,509.1
Terminal Tower/Receiving Station Upgrades	Pumps	1	7	84	0.74	0.0574	150	3,745.9
Terminal Tower/Receiving Station Upgrades	Surfacing Equipment	1	4	263	0.30	0.0516	150	2,443.9
Terminal Tower/Receiving Station Upgrades	Tractors/Loaders/Backhoes	2	7	97	0.37	0.0574	150	4,325.6

Total Off-Road Diesel Consumption 136,725.5

		Fuel (Gallons)
Diesel	Hauling	85,149.9
Diesel	Vendor	29,085.2
Gasoline	Worker	63,721.4
Diesel	Total	250,960.6
	Avg-Gas	21,240.5
	Avg-D	83,653.5

Construction Fuels Consumption - Vehicles

				Metric Tons per Year (MT/year)					
				Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
		2023	Total	0	713.785	713.785	0.0863	0.0445	729.2028
		2024	Total	0	1,091.80	1,091.80	0.1153	0.0789	1,118.19
		2025	Total	0	911.7931	911.7931	0.1125	0.0599	932.4646
		2026	Total	0	264.9945	264.9945	0.0477	0.0115	269.5996
	Phase	**Year**	**Source**						
	1	2023	Off-Road	0	78.8264	78.8264	0.0191	0	79.3034
	1	2024	Off-Road	0	63.8999	63.8999	0.0154	0	64.2859
VS-Ex(A)	2	2023	Off-Road	0	21.1686	21.1686	6.85E-03	0	21.3397
VS-Inst(A)	3	2023	Off-Road	0	31.3554	31.3554	4.49E-03	0	31.4677
Site Prep	4	2023	Off-Road	0	145.1654	145.1654	0.0265	0	145.8271
			Hauling	0	202.9777	202.9777	1.12E-02	0.0322	212.8627
			Vendor	0	63.2741	63.2741	2.12E-03	9.11E-03	66.0406
			Worker	0	121.4163	121.4163	3.23E-03	3.16E-03	122.4389
	4	2024	Off-Road	0	262.0465	262.0465	0.0476	0	263.2354
			Hauling	0	361.1083	361.1083	0.0203	0.0574	378.7124
			Vendor	0	112.4712	112.4712	3.83E-03	0.0162	117.3952
			Worker	0	212.9124	212.9124	5.28E-03	5.30E-03	214.6241
	4	2025	Off-Road	0	118.561	118.561	0.0213	0	119.0938
			Hauling	0	160.3958	160.3958	9.31E-03	0.0255	168.2251
			Vendor	0	49.9477	49.9477	1.74E-03	7.20E-03	52.1369
			Worker	0	93.0134	93.0134	2.15E-03	2.24E-03	93.7343
Tower584F	5	2023	Off-Road	0	47.3396	47.3396	0.0121	0	47.6429
Tower584S	6	2023	Off-Road	0	2.2617	2.2617	7.30E-04	0	2.28
RoadRestore	7	2024	Off-Road	0	79.3668	79.3668	0.0228	0	79.9377
		2025	Off-Road	0	65.1261	65.1261	0.0187	0	65.5945
RoadStriping	8	2025	Off-Road	0	15.3195	15.3195	8.40E-04	0	15.3404
VS-Exc(B)	9	2025	Off-Road	0	10.5973	10.5973	3.43E-03	0	10.683
			Hauling	0	33.8865	33.8865	1.97E-03	5.39E-03	35.5405
			Vendor	0	10.5523	10.5523	3.70E-04	1.52E-03	11.0148
			Worker	0	19.6507	19.6507	4.60E-04	4.70E-04	19.803
VS-Inst(B)	10	2025	Off-Road	0	15.6817	15.6817	2.19E-03	0	15.7365
			Hauling	0	27.1092	27.1092	1.57E-03	4.31E-03	28.4324
			Vendor	0	8.4419	8.4419	2.90E-04	1.22E-03	8.8119

Construction Fuels Consumption - Vehicles

			Worker	0	15.7206	15.7206	3.60E-04	3.80E-04	15.8424
NCR	11	2025	Off-Road	0	62.9717	62.9717	0.0204	0	63.4808
			Hauling	0	21.179	21.179	1.23E-03	3.37E-03	22.2128
			Vendor	0	13.1904	13.1904	4.60E-04	1.90E-03	13.7685
			Worker	0	24.5634	24.5634	5.70E-04	5.90E-04	24.7538
NCR	11	2026	Off-Road	0	62.9717	62.9717	0.0204	0	63.4808
			Hauling	0	20.7726	20.7726	1.24E-03	3.30E-03	21.7878
			Vendor	0	12.9458	12.9458	4.60E-04	1.87E-03	13.5137
			Worker	0	23.8168	23.8168	5.20E-04	5.60E-04	23.9957
TT&RS	12	2025	Off-Road	0	86.9526	86.9526	2.29E-02	0	87.5245
			Hauling	0	21.179	21.179	1.23E-03	3.37E-03	22.2128
			Vendor	0	13.1904	13.1904	4.60E-04	1.90E-03	13.7685
			Worker	0	24.5634	24.5634	5.70E-04	5.90E-04	24.7538
TT&RS	12	2026	Off-Road	0	86.9526	86.9526	2.29E-02	0	87.5245
			Hauling	0	20.7726	20.7726	1.24E-03	3.30E-03	21.7878
			Vendor	0	12.9458	12.9458	4.60E-04	1.87E-03	13.5137
			Worker	0	23.8168	23.8168	5.20E-04	5.60E-04	23.9957
						Fuel (Gallons)			1,263.8
					Diesel	85,149.9			911.8
					Diesel	29,085.2			310.0
					Gasoline	63,721.4			563.9
									3,049.5
									1016.486133

Appendix E
Greenhouse Gas Emissions Impacts Assessment

taha
environmental planners

Technical Memorandum

TO: Nathaniel Counts
AECOM

FROM: Terry A. Hayes Associates Inc.

DATE: October 10, 2022

RE: Toluca-Hollywood Line 1 Upgrade Project
Greenhouse Gas Emissions Impacts Assessment

Introduction

Terry A. Hayes Associates Inc. (TAHA) completed a Greenhouse Gas (GHG) Emissions Impacts Assessment for the Toluca- Hollywood Transmission Line 1 Replacement Project (proposed project) in accordance with the requirements of the California Environmental Quality Act (CEQA) Statute and Guidelines. This Assessment is organized by the following sections:

1. Introduction
2. Project Description
3. Background on GHG Emissions
4. Regulatory Framework
5. Existing Setting
6. Significance Thresholds
7. Methodology
8. Impact Assessment
9. References

Terry A. Hayes Associates Inc.
3535 Hayden Avenue, Suite 350
Culver City, California 90232
310.839.4200 fax 310.839.4201

Project Description

The City of Los Angeles Department of Water and Power (LADWP) proposes to upgrade an approximately 1.8-mile underground portion of the existing Toluca-Hollywood 230 kilovolt (kV) Line 1 (TOL-HWD L1) cable, which runs from the Nichols Canyon Terminal Tower to the Hollywood Receiving Station.

All work would be located within the road right-of-way (ROW), the confines of LADWP property, or within an easement. The proposed project would include the following work:

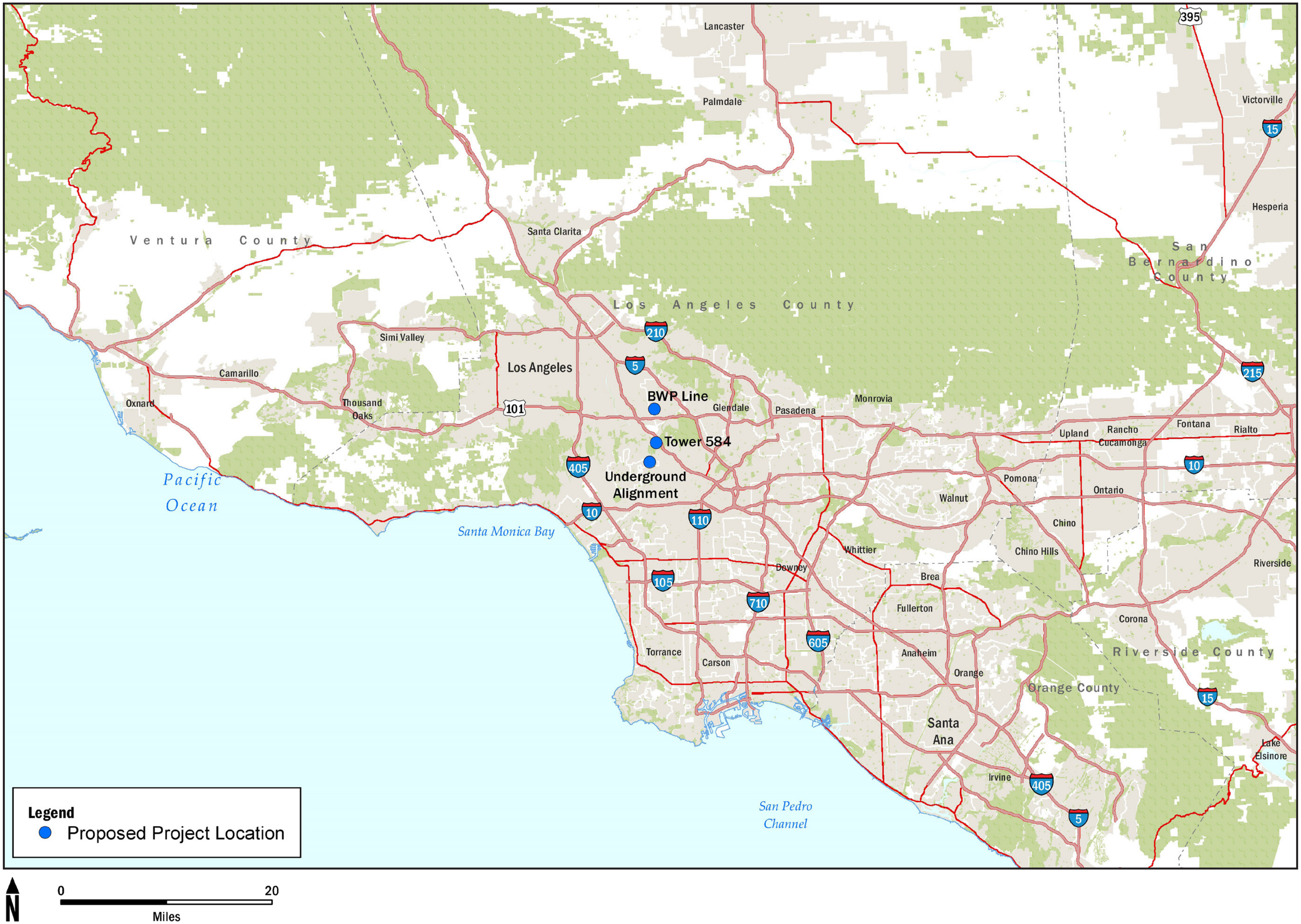
- Trenching and installing a new underground cable adjacent to the existing underground TOL-HWD L1 alignment from Hollywood Boulevard southeast to the Hollywood Receiving Station.
- Trenching and removing the existing underground TOL-HWD L1 pipe and cable and installing a new underground pipe and cable inside the same trench alignment within Nichols Canyon Road, north of Hollywood Boulevard to the Nichols Canyon Terminal Tower.
- Splicing the new cable in Nichols Canyon Road together with the new cable south of Hollywood Boulevard and transferring the circuit to the new cable. The existing pipe south of Hollywood Boulevard would be abandoned in place.
- Raising an existing transmission tower along the existing TOL-HWD L1 and lowering a portion of an existing Burbank Water and Power (BWP) distribution line that crosses under the TOL-HWD L1.
- Making modifications to the Nichols Canyon Terminal Tower and the Hollywood Receiving Station to accommodate the system upgrade.

Figure 1 shows the regional vicinity of the proposed project area. **Figure 2** shows the Toluca-Hollywood project area.

CONSTRUCTION SCHEDULE

Construction for the proposed project would span approximately three years and is preliminarily scheduled to begin in mid- 2023 with an in-service date of Spring 2026. Within the approximate three-year span, construction of the underground alignment is anticipated to occur in two parts: (1) an approximately two-year period for the trench/conduit and vault installation (south of Hollywood Boulevard) and the Tower 584 raise, anticipated between mid-2023 and mid-2025; and (2) an approximate 6-month period (with a 5-month transmission line outage) for the Nichols Canyon Road pipe replacement and the modifications at the terminal tower and receiving station, along with final connections, commissioning, and testing anticipated between late 2025 and early 2026.

It should be noted the BWP line lowering would occur in advance of the approximate 3-year construction period. The BWP line lowering would be a short-duration activity of approximately 30 days. The City of Los Angeles Rush Hour Ordinance limits in-street construction on weekdays to the hours of 9:00 a.m. through 3:30 p.m. Construction hours would be limited to Monday through Friday from 9:00 a.m. to 3:30 p.m., and Saturday from 8:00 a.m. to 6:00 p.m.



Source: AECOM, 2022.

TAHA 2021-096

Toluca-Hollywood Line 1 Upgrade Project
Greenhouse Gas Emissions Impacts Assessment

AECOM

FIGURE 1

REGIONAL LOCATION

Source: AECOM, 2022.

FIGURE 2

PROJECT LOCATION

OVERVIEW OF CONSTRUCTION ACTIVITIES

The following is a brief summary of construction activities. Refer to the Project Description of the Initial Study/Mitigated Negative Declaration for additional construction details. Consistent with information provided by LADWP and included as an appendix to this GHG Emissions Impacts Assessment, construction activities have been grouped into the following components for the purposes of estimating pollutant emissions:

- **BWP Distribution Line Lowering:** BWP would lower the distribution line (i.e., by moving the distribution line and other wires to a lower position on their poles and cutting off the pole tops). This activity would primarily involve hand tools along with tool trucks, bucket trucks, and lifts.
- **Maintenance Vault Excavation:** The vault holes would be excavated to accommodate the precast maintenance vaults along the proposed transmission line alignment. This activity would primarily be completed using backhoes, excavators and dump trucks.
- **Maintenance Vault Installation**: The precast maintenance vaults would be installed within the roadway, between approximately 850 and 1,100 feet apart, along the underground transmission line alignment. This activity would primarily be completed using cranes and concrete trucks.
- **Trenching for Duct Banks**: The underground transmission line would be installed using open-cut trenching techniques. The typical trench would be approximately three feet wide and six feet deep. When segments of the trench are restored, more trenching would occur further down the street until the conduit system is installed for the entire alignment. This activity would primarily be completed using backhoes, dump trucks, and concrete trucks.
- **Cable Pulling, Splicing, and Termination**: Once the conduit is in place, cable segments between two maintenance vaults would be pulled into the ducts. Cable pulling would be completed using equipment attached to winch trucks.
- **Roadway Restoration**: Roadways would be restored using asphalt pavers and compaction rollers.
- **Tower 584 Raising:** The tower located near the intersection of Mulholland Drive and Macapa Drive would be raised in five-foot segments (to a maximum of 15 feet) using a proprietary process that employs hydraulic jacks to raise transmission line towers. In addition to raising the tower, foundation work would also be done at the tower. Construction at Tower 584 would typically include the use of hydraulic lift equipment, a boom lift truck, a crane, drilling rig, excavator, and concrete trucks.
- **Nichols Canyon Road Pipe Replacement:** North of Hollywood Boulevard along Nichols Canyon Road the existing underground alignment would be used for the proposed XLPE cable due to space constraints from a number of existing underground utilities. This would involve draining and cleaning the existing pipe, trenching and removing the existing pipe and cable, and installing a new underground pipe and cable within the same trench/alignment. This activity would be primarily completed using backhoes, excavators, tank trucks, equipment attached to winch trucks, and road repair equipment.

- **Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station:** Modifications within the Nichols Canyon Terminal Tower and Hollywood Receiving Station properties (i.e., replacement of concrete pad, subsurface support structure, and aboveground rack) would be required to connect the underground portion of the cable to associated above ground equipment. The existing pump houses and accompanying tanks within the terminal tower and receiving station would be demolished and removed, as they would no longer be supporting an oil-filled cable. Additionally, within the Hollywood Receiving Station property, the existing pipe and cable would be abandoned and trenching for a new pipe/cable alignment (approximately 350 feet in length) would be performed. These activities would be primarily competed using backhoes, excavators, cranes, dump trucks, concrete trucks, tank trucks, equipment attached to winch trucks, and road repair equipment.

PROJECT OPERATIONS

Annual inspections of the integrity of the transmission line would be performed and would include the inspection of all of the structures at the stations and maintenance vaults for corrosion and misalignment. The maintenance activities listed below may require the temporary closure of a single roadway lane for the duration of the activity. No other operational activities resulting from the proposed project would occur. Activities associated with long-term operations and maintenance would be minimal.

Background on GHG Emissions

The term “GHG emissions” refers to a class of gaseous compounds that are generally understood to affect global climate conditions, including playing a critical role in determining and regulating temperatures near the Earth’s surface. The “greenhouse effect” analogizes the Earth and its atmosphere to a greenhouse with glass panes that let heat from sunlight in and reduce the amount of heat that escapes. GHGs—the most environmentally prevalent of which that are subject to regulations include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O)—maintain the average surface temperature of the Earth close to 60-degree Fahrenheit (°F). Without the natural greenhouse effect, the Earth's surface would be about 61°F cooler.[1] In addition to CO_2, CH_4, and N_2O, identified GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), black carbon (black carbon is the most strongly light-absorbing component of particulate matter emitted from burning fuels such as coal, diesel, and biomass), and water vapor.

More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth’s atmosphere, but retain some of the low frequency infrared energy, which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Not all GHGs possess the same ability to induce climate change. CO_2 is the most abundant pollutant that contributes to climate change through fossil fuel combustion and other anthropogenic sources. Other GHGs are less abundant but have higher global warming potential (GWP) than CO_2. GWP is based on a number of factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO_2, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO_2. The larger the GWP, the more that a given gas warms

[1]California Environmental Protection Agency Climate Action Team, *Climate Action Report to Governor Schwarzenegger and the California Legislator*, March 2006.

the Earth compared to CO_2 over that time period. To account for this higher potential, emissions of other GHGs are commonly quantified in the units of equivalent mass of carbon dioxide (CO_2e). **Table 1** summarizes the atmospheric lifetimes and GWPs for GHGs that are commonly subject to emissions monitoring and regulation.

TABLE 1: GLOBAL WARMING POTENTIAL FOR VARIOUS GREENHOUSE GASES			
Pollutant	**Lifetime (Years)**	**Global Warming Potential (20-Year)**	**Global Warming Potential (100-Year)**
Carbon Dioxide (CO_2)	--	1	1
Methane (CH_4)	12	21	25
Nitrous Oxide (N_2O)	114	310	298
Nitrogen Trifluoride	740	Unknown	17,200
Sulfur Hexafluoride (SF_6)	3,200	23,900	22,800
Perfluorocarbons (PFCs)	2,600-50,000	6,500-9,200	7,390-12,200
Hydrofluorocarbons (HFCs)	1-270	140-11,700	124-14,800
SOURCE: CARB, *California's 2017 Climate Change Scoping Plan*, 2017.			

Regulatory Framework

In response to growing scientific and political concern with global climate change, several plans, regulations, and programs that include policies, requirements, and guidelines regarding GHG emissions have been adopted and promulgated at the federal, state, regional, and local levels. The following provides a summary of the most pertinent GHG regulations and policies in place to the proposed project; this list is not comprehensive or exhaustive of all such regulatory and judicial actions involving GHG emissions.

FEDERAL

Federal Clean Air Act (CCA). The United States Environmental Protection Agency (USEPA) is responsible for implementing federal policy to address GHG emissions. The United States Supreme Court ruled in *Massachusetts vs. Environmental Protection Agency*, 127 S. Ct. 1438 (2007) that CO_2 and other GHGs are pollutants under the CAA, which the USEPA must regulate if it determines they pose an endangerment to public health or welfare. The Supreme Court did not mandate that the USEPA enact regulations to reduce GHG emissions. Instead, the Court found that the USEPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

On April 17, 2009, the USEPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171. The USEPA stated that high atmospheric levels of GHGs "are the unambiguous result of human emissions and are very likely the cause of the observed increase in average temperatures and other climatic changes." The USEPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act."

The findings were signed by the USEPA Administrator on December 7, 2009. The USEPA Administrator made two distinct findings regarding GHGs under Section 202(a) of the CAA. The USEPA adopted a Final Endangerment Finding for the six defined GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6). The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the CAA.[2] USEPA also adopted a Cause or Contribute Finding in which the USEPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare.[3] These findings do not themselves impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.[4] The final findings were published in the Federal Register on December 15, 2009.

Energy Independence and Security Act (EISA). The EISA of 2007 facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances; and,
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.

Heavy-Duty Vehicle Program. This 2011 program established the first fuel efficiency requirements for medium- and heavy-duty vehicles beginning with model year 2014.

STATE

Executive Order (E.O.) S-3-05. E.O. S-3-05 set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32. The California Global Warming Solutions Act of 2006, also known as Assembly Bill 32, focuses on reducing GHG emissions in California and requires the California Air Resources Board (CARB) to adopt rules and regulations that would achieve GHG emissions equivalent to Statewide levels in 1990 by 2020.

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[2]USEPA, *Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act*, https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean, accessed April 13, 2022.

[3]*Ibid*.

[4] *Ibid.*

The 2020 target reductions were estimated to be 174 million metric tons of CO_2e. In November 2017, CARB adopted the final 2017 Scoping Plan: The Strategy for Achieving California's 2030 GHG target (2017 Scoping Plan). The 2017 Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals.

Senate Bill 375 (SB 375). Provides a means for achieving Assembly Bill 32 goals through the reduction in emissions by cars and light trucks. SB 375 requires Regional Transportation Plans (RTPs) prepared by Metropolitan Planning Organizations (MPOs) to include Sustainable Communities Strategies (SCSs).

Senate Bill 743 (SB 743). Encourages land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT), which contribute to GHG emissions, as required by Assembly Bill 32.

Executive Order (E.O.) B-30-15. This policy set a goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. The E.O. establishes GHG emissions reduction targets to reduce emissions to 80 percent below 1990 levels by 2050 and sets an interim target of emissions reductions for 2030 as being necessary to guide regulatory policy and investments in California and put California on the most cost-effective path for long-term emissions reductions.

Senate Bill 32 (SB 32). This bill required a commitment to reducing statewide GHG emissions by 2020 to 1990 levels and by 2030 to 40 percent less than 1990 levels.

REGIONAL

Southern California Association of Governments (SCAG) Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS). SCAG is the MPO for the six-county region that includes Los Angeles, Orange, Riverside, Ventura, San Bernardino and Imperial counties. The RTP/SCS includes commitments to reduce emissions from transportation sources to comply with SB 375. Goals and policies included in the RTP/SCS to reduce air pollution consist of adding density in proximity to transit stations, mixed-use development and encouraging active transportation (i.e., non-motorized transportation such as bicycling).

LOCAL

L.A.'s Green New Deal (Sustainable City pLAn 2019). In April 2019, Mayor Eric Garcetti released L.A.'s Green New Deal (Sustainable City pLAn 2019). Rather than an adopted plan, the Green New Deal is a mayoral initiative that consists of a program of actions designed to create sustainability-based performance targets through 2050 that advance economic, environmental, and equity objectives. L.A.'s Green New Deal (Sustainable City pLAn 2019) is the first four-year update to the City's first Sustainable City pLAn that was released in 2015. It augments, expands, and elaborates in even more detail L.A.'s vision for a sustainable future and it addresses climate change with accelerated targets and new aggressive goals. While not a plan adopted solely to reduce GHG emissions, climate mitigation is one of eight explicit benefits within L.A.'s Green New Deal that help define its strategies and goals.

GreenLA Climate Action Plan. The City of Los Angeles has issued guidance promoting sustainable development to reduce GHG emissions citywide in the form of a Climate Action Plan. The objective of GreenLA is to reduce GHG emissions 35 percent below 1990 levels by 2030.

ClimateLA. In order to provide detailed information on action items discussed in GreenLA, the City published an implementation document titled ClimateLA. ClimateLA presents the existing GHG inventory for the City, describes enforceable GHG reduction requirements, provides mechanisms to monitor and evaluate progress, and includes mechanisms that allow the plan to be revised in order to meet targets. By 2030, the plan aims to reduce GHG emissions by 35 percent from 1990 levels which were estimated to be approximately 54.1 million metric tons.

Existing Buildings Energy and Water Efficiency Ordinance. This ordinance is designed to facilitate the comparison of buildings' energy and water consumption, and reduce building operating costs, leading to reduced GHG emissions.

2017 LADWP Power Strategic Long-Term Resource Plan (SLTRP). The SLTRP is a 20-year roadmap that guides the LADWP power system in its efforts to supply reliable electricity in an environmentally responsible and cost-effective manner. One of the main focuses of the SLTRP is to reduce GHG emissions, while maintaining cost competitive rates and reliable electric service. The SLTRP examines multiple strategies to reduce GHG emissions, including early coal replacement, accelerated RPS, energy efficiency, local solar, energy storage, and transportation electrification. The 2017 SLTRP provides a path towards this goal with a combination of GHG reduction strategies, including early coal replacement two years ahead of schedule by 2025, accelerating RPS to 50 percent by 2025, 55 percent by 2030, and 65 percent by 2036, doubling of energy efficiency from 2017 through 2027, repowering coastal in-basin generating units with new, highly efficient potential clean energy projects by 2029 to provide grid reliability and critical ramping capability, accelerating electric transportation to absorb GHG emissions from the transportation sector, and investing in the Power System Reliability Program to maintain a robust and reliable Power System.

Existing Setting

Emissions of GHGs to the atmosphere are the result of both natural and human-influenced activities. Volcanic activity, forest fires, decomposition, industrial processes, landfills, consumption of fossil fuels for power generation, transportation, heating, and cooling are the primary sources of GHG emissions. Without human activity, the Earth would maintain an approximate, but varied, balance between the emission of GHGs into the atmosphere and the storage of GHG in oceans and terrestrial ecosystems. Increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.) has contributed to a rapid increase in atmospheric levels of GHGs over the last 150 years.

STATEWIDE GHG EMISSIONS INVENTORY

Table 2 shows statewide GHG emissions from 2009 to 2019 that are tracked by the CARB. The transportation sector represents California's largest source of GHG emissions and contributed 39 percent of total annual emissions. Since 2013, emissions from the transportation sector have increased; however, the long-term direction of transportation related GHG emissions is declining, with a 11 percent drop over the past decade. Of note, between October 23, 2015, and February 18, 2016, an exceptional natural gas leak event occurred at the Aliso Canyon natural gas storage facility that resulted in unexpected GHG emissions of considerable magnitude. The exceptional incident released approximately 109,000 metric tons of CH_4, which equated to approximately 1.96 million metric tons of carbon dioxide equivalents ($MMTCO_2e$) of unanticipated emissions in 2015 and an additional 0.52 $MMTCO_2e$ in 2016. According to CARB, these emissions will be mitigated in the future through projects funded by the Southern California Gas Company based on legal settlement and are presented alongside but tracked separately from routine inventory emissions.[5,6]

TABLE 2: CALIFORNIA GREENHOUSE GAS EMISSIONS INVENTORY

	Annual CO_2e Emissions (Million Metric Tons)										
Sector	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Transportation	168.0	165.1	161.8	161.4	161.2	162.6	166.2	169.8	171.0	169.5	166
Industrial	87.2	91.0	89.3	88.9	91.6	92.4	90.1	88.9	88.7	89.2	88
Electric Power	101.3	90.3	89.2	98.2	91.4	88.9	84.8	68.6	62.1	63.1	59
Commercial and Residential	44.5	45.9	46.0	43.5	44.2	38.2	38.8	40.6	41.3	41.4	44
Agriculture	32.9	33.7	34.4	35.5	33.8	34.8	33.4	33.2	32.3	32.6	32
High GWP Emissions	12.3	13.5	14.5	15.5	16.8	17.7	18.6	19.3	20.0	20.5	21
Recycling and Waste	8.5	8.7	8.7	8.7	8.7	8.8	8.8	8.9	9.0	9.1	9
Total	**454.7**	**448.2**	**443.9**	**451.7**	**447.7**	**443.4**	**440.7**	**429.3**	**424.4**	**425.4**	**418**

SOURCE: CARB, *California Greenhouse Gas Emission Inventory – 2021 Edition.* Data available at: https://ww3.arb.ca.gov/cc/inventory/data/data.htm.

LADWP POWER RESOURCE MIX

In 2016, LADWP achieved California's SB 32 target to reduce GHG emissions to 40 percent below 1990 levels by 2030, which was 14 years ahead of the deadline.[7] By the end of 2018, LADWP systemwide emissions were reduced to 49 percent below 1990 levels, and the 2017 SLTRP forecasts that LADWP GHG emissions will be reduced to 79 percent below 1990 levels by 2037, nearly achieving the 2050 E.O. B-30-15 target.

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[5]CARB, *California Greenhouse Gas Inventory for 2000-2015 – Trends of Emissions and Other Indicators*, June 2017.
[6]CARB, *Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident*, October 2016.
[7]LADWP, *Briefing Book 2019-20*, March 2020. Available at https://www.ladwpnews.com/2019-20-briefing-book/.

Significance Thresholds

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

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

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

Section 15064.4 of the CEQA Guidelines states that a lead agency should make a good-faith effort to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The lead agency has the discretion to elect whether to quantify GHG emissions resulting from a project or rely on a qualitative analysis or performance-based standards. If a quantitative approach is chosen, the CEQA Guidelines promulgate that the lead agency should consider the following factors when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and,
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The CEQA Guidelines encourage lead agencies to develop and publish thresholds of significance that the agency uses to standardize the determination of the significance of potential environmental effects of proposed projects. When adopting or using particular thresholds, the amended Guidelines allows lead agencies to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that use of the thresholds are supported by substantial evidence, and/or to develop their own significance threshold.

Neither the City of Los Angeles/LADWP nor the South Coast Air Quality Management District (SCAQMD) has officially adopted a quantitative threshold screening value for determining the significance of GHG emissions that will be generated by projects under CEQA. However, the SCAQMD published a *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* in October 2008, which contained several recommendations developed by SCAQMD staff for quantitatively assessing GHG emissions subject to CEQA.[8]

[8]SCAQMD, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008.

Over the course of two and a half years between 2008 and 2010, the SCAQMD convened a GHG CEQA Significance Threshold Stakeholder Working Group that met 15 times beginning in April of 2008 to examine alternatives for establishing quantitative GHG thresholds. Ultimately, the SCAQMD staff proposed a tiered approach to analyzing the potential significance of GHG emissions from CEQA projects that was developed through collaboration with the Stakeholder Working Group:

- **Tier 1** – Evaluate whether or not the project qualifies for any applicable exemption under CEQA.
- **Tier 2** – Determine whether the project is consistent with a GHG reduction plan (that may be part of a local general plan, for example). The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines §§15064(h)(3), 15125(d), or 15152(a). The GHG reduction plan must, at a minimum, comply with AB 32 GHG reduction goals; include emissions estimates agreed upon by either CARB or the SCAQMD, have been analyzed under CEQA, and have a certified Final CEQA document.
- **Tier 3** – Numerical Attempt to identify small projects that would not likely contribute to significant cumulative GHG impacts. SCAQMD recommended a bifurcated screening level approach to address industrial projects and residential/commercial projects (which are largely indirect sources). SCAQMD staff officially adopted a 10,000 $MTCO_2e$/year threshold for industrial projects for which the district is the lead agency in December 2008.[9] For non-industrial projects, the SCAQMD staff recommended either a singular bright line threshold of 3,000 $MTCO_2e$, or separate thresholds for residential projects (3,500 $MTCO_2e$), commercial projects (1,400 $MTCO_2e$), and mixed use projects (3,000 $MTCO_2e$). These values were derived based on capturing approximately 90 percent of GHG emissions within the SCAQMD jurisdiction above the threshold so that mitigation measures to reduce emissions could be identified and enforced.
- **Tier 4** – Performance Standards such as percent emission reduction targets or sector-based standards.
- **Tier 5** – Pursue mitigation through CEQA Offsets (i.e., off-site GHG reduction credits).

The mitigation measures evaluated by SCAQMD staff were applicable to long-term, operational emissions. As the proposed project would generate GHG emissions predominantly during temporary construction activities and changes to long-term regional GHG emissions would be negligible, the GHG emissions analysis was prepared to address the most conservative staff-recommended threshold of 1,400 $MTCO_2e$ per year. Although this threshold was never officially adopted, it was the preferred screening approach recommended by scientific experts and was developed consistently with the California Air Pollution Control Officers' Association (CAPCOA) promulgated approach in their White Paper on *CEQA & Climate Change*.[10] Therefore, the use of this expert-recommended screening threshold is backed by substantial evidence.

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[9] SCAQMD, *Minutes for the GHG CEQA Significance Working Group Meeting #15*, September 2010.

[10] CAPCOA, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, January 2008.

Methodology

To satisfy the requirements of the CEQA Statute and Guidelines, GHG emissions that would be generated during construction were quantified using the best available modeling tools that represent the industry standard. The SCAQMD recommends the use of the California Emissions Estimator Model (CalEEMod, Version 2020.4.0) as a tool for quantifying GHG emissions that will be generated by constructing and operating development projects under CEQA. CalEEMod contains an interface for entering project information related to land use type, construction schedule, construction equipment and personnel inventories, operational elements, and mitigation measures. Sources of GHG emissions involved in implementation of the proposed project would predominantly occur during construction activities, as no new permanent sources of emissions would be introduced to the project area and maintenance of the trunk line facilities would remain similar to existing conditions. Therefore, the quantitative GHG emissions analysis focused only on sources that would be involved in construction activities.

The GHG emissions assessment was undertaken in a programmatic manner to estimate the total emissions that would be generated over the three-year construction period and relied upon information provided by LADWP. This information included estimated durations of the activities involved in construction of the proposed project, anticipated inventories of off-road equipment to be used in the various activities, the amount of haul trucks and concrete and material delivery trucks needed to complete the various phases of construction, and the typical construction crew size. The analysis was based on conservative estimates of the average level of equipment and vehicle activities that would be deployed on a typical day throughout construction of the proposed project. The general schedule for implementation of proposed project components as inputted to the CalEEMod analysis is summarized in **Table 3**.

TABLE 3: PROPOSED PROJECT CONSTRUCTION SCHEDULE

Component/Activity	Approx. Start	Approx. End	Working Days	Days/Week
Roadway Surface Stripping	June 2023	June 2024	315	6
Maintenance Vault Excavation	June 2023	August 2023	60	6
Maintenance Vault Installation	August 2023	December 2023	48	6
Transmission Line Trenching	June 2023	June 2025	630	6
Tower 584 Foundation	July 2023	September 2023	54	6
Tower 584 Erection	September 2023	September 2023	6	6
Maintenance Vault Excavation	June 2025	July 2025	30	6
Maintenance Vault Installation	July 2025	August 2025	24	6
Roadway Restoration	June 2024	June 2025	315	6
Roadway Restriping	April 2025	June 2025	60	6
Nichols Canyon Road Segment	October 2025	March 2026	150	6
Terminal Tower & Receiving Station	October 2025	March 2026	150	6

SOURCE: TAHA, 2022.

The analysis was conservative relative to anticipated activity in practicality because construction activities to complete each of the components listed in **Table 3** would not occur continuously throughout the total amount of days assigned to the particular component. Daily activities would fluctuate and at times be intermittent; however, it is not feasible to predict these fluctuations on a day-to-day or week-to-week basis. The working days listed for each component is more than comprehensive to characterize the amount of equipment and vehicle activity that would be needed to complete construction of the proposed project.

Sources of GHG emissions involved in construction of the proposed project would primarily include exhaust from on-road vehicle operation and off-road equipment use. Through collaboration with the project team and LADWP, inventories of personnel, vehicles, and off-road equipment needed to complete each phase of construction for each project component were compiled and input to CalEEMod to characterize total GHG emissions that would occur to complete each activity. It was conservatively assumed that the daily vehicle inventory would include 80 light duty automobiles and trucks associated with the construction crews, 20 haul trucks for disposing of demolition debris and excavated soil, and 20 vendor delivery trucks supplying concrete and other materials to complete the project (for a total of 40 heavy-duty trucks in use daily on average as a reasonably conservative estimate). Detailed input data for the daily activity inventories can be found in the CalEEMod output files in the **Appendix**.

Impact Assessment

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

The proposed project would generate GHG emissions nearly exclusively from construction activities, because—in relation to existing operations—operation of the TOL-HWD Transmission Line 1 following the completion of construction would not introduce any new permanent sources of GHG emissions to the project area. The installation of new infrastructure components may ultimately reduce the necessary frequency of maintenance and service visits to proposed project components in the long run, however, it was assumed that existing maintenance activities would remain similar following completion of the proposed project. In accordance with the CEQA Guidelines, GHG emissions were estimated for all sources involved in construction of the proposed project and compared to the most appropriate quantitative threshold.

Table 4 presents the estimated GHG emissions that would be generated by construction of the proposed project based on the implementation schedule presented in **Table 3**, and displays average annual emissions calculated over the two-and-a-half years that construction activities involving heavy-duty equipment would consistently be occurring. Emissions modeling estimated that construction of the proposed project would produce approximately 3,050 $MTCO_2e$ of GHG emissions in total over the three-year implementation timeline, which equates to approximately 1,017 $MTCO_2e$ annually on average during active construction. The annual average GHG emissions would be substantially below the lowest SCAQMD recommended screening threshold, and emissions would not persist beyond the completion of construction activities. Therefore, implementation of the proposed project will result in a less-than-significant impact related to the magnitude of GHG emissions produced.

TABLE 4: PROPOSED PROJECT CONSTRUCTION ACTIVITIES GREENHOUSE GAS EMISSIONS	
Source	**Greenhouse Gas Emissions ($MTCO_2e$)**
Off-Road Equipment	1,264
Disposal Hauling Trucks	912
Material Delivery Trucks	310
Construction Crew Vehicles	564
Total	**3,050**
Annual Average Rate	***1,017***
Lowest Recommended SCAQMD Threshold	1,400
SOURCE: TAHA, 2022.	

Mitigation Measures

No mitigation measures are required.

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

There is no potential for the proposed project to conflict with GHG reduction plans. The new cable would maintain the reliability of the system while providing the capacity to accommodate imported renewable energy coming from outside the Los Angeles Basin. Implementation of the proposed project would not introduce any permanent, long-term sources of GHG emissions to the City of Los Angeles and would not interfere with the GHG emissions reduction plans such as *California's 2017 Climate Change Scoping Plan* and the SCAG *Connect SoCal 2020–2045 RTP*. The primary objective is to replace aging cable infrastructure of the underground portion of the Toluca-Hollywood 230 kilovolt Line 1 line in approximately the same location as the existing cable by installing a new cable. The new cable would maintain the reliability and resilience of the system as the new cable would allow for and have the capacity to accommodate imported renewable energy coming from outside the basin.

As previously discussed, proposed project GHG emissions would be well below the SCAQMD recommended screening threshold for small CEQA projects. GHG emissions are regionally cumulative in nature, and it is highly unlikely construction of any individual project would generate GHG emissions of sufficient quantity to conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Standard construction procedures would be undertaken in accordance with SCAQMD and CARB regulations applicable to heavy duty construction equipment and diesel haul trucks. Adhering to requirements pertinent to construction equipment maintenance and inspections and emissions standards, as well as diesel fleet requirements, including idling time restrictions and maintenance, would ensure that the proposed project would not conflict with GHG emissions reductions efforts.

Mitigation Measures

No mitigation measures are required.

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Appendix

- CalEEMod Output Files: Proposed Project Construction Annual Report.

LADWP Toluca-Hollywood Transmission Line Replacement - Annual (Total)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	31.92	1000sqft	0.73	31,920.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2025
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	691.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Emissions model is for construction activities only. Operational activities are anticipated to be similar to existing conditions.

Land Use - In-road corridor is approximately 1.75 miles long with approximately 3 foot wide trenching disturbance = 27,720 sq. ft.
Vault areas (8) approximately 15 feet wide by 35 feet long = 4,200 sq. ft. disturbance area.

Construction Phase - The total days for each phase would occur sporadically throughout the two-year construction period.

Off-road Equipment - Repainting disturbed parking spaces, bike lanes, crosswalks, etc.

Off-road Equipment - Roadway asphalt removal off-road equipment inventory.

Off-road Equipment - Pulley truck & loader.

Off-road Equipment - Project inventory provided by LADWP.

Off-road Equipment - Roadway restoration equipment inventory.

Off-road Equipment - Transmission line trench excavation off-road equipment inventory.

Off-road Equipment - Project inventory provided by LADWP.

Off-road Equipment - Tower 584 Foundation off-road equipment inventory.
Foundation excavation, placing rebar, forms, etc.

Off-road Equipment - Concrete placement, form removal.

Off-road Equipment - Vault installation & completion off-road equipment inventory.

Off-road Equipment - Vault installation and completion off-road equipment inventory.

Off-road Equipment - Vault shaft excavation off-road equipment inventory.

Off-road Equipment - Vault shaft excavation inventory.

Trips and VMT - Project Construction Trips, maximum daily activity.
Average workers per day = 80.
Avg haul trucks per day = 20.
Avg concrete/material delivery trucks = 20.

Demolition - Approximately 850 CY of Demo A/C Debris @ 1.2 tons/CY = 1,020 tons of debris.

Grading - Total linear cubic yards excavated along transmission line trench = ~8,150 CY.
Approx. excavation per vault: 12'W x 35'L x 15'D = 6,300 cu. ft. = ~1,867 CY. Rounded up to 1,875. Assume 1,375 CY per vault will be refilled.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	NumDays	100.00	24.00
tblConstructionPhase	NumDays	100.00	150.00
tblConstructionPhase	NumDays	100.00	54.00
tblConstructionPhase	NumDays	100.00	48.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	10.00	315.00
tblConstructionPhase	NumDays	2.00	60.00
tblConstructionPhase	NumDays	2.00	30.00
tblConstructionPhase	NumDays	5.00	315.00
tblConstructionPhase	NumDays	1.00	630.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	MaterialExported	0.00	8,150.00
tblGrading	MaterialExported	0.00	3,000.00
tblGrading	MaterialExported	0.00	1,000.00
tblOffRoadEquipment	HorsePower	9.00	20.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00

tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	HaulingTripNumber	101.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	960.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	25,200.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,200.00
tblTripsAndVMT	VendorTripNumber	5.00	40.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	5.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripNumber	5.00	0.00
tblTripsAndVMT	VendorTripNumber	5.00	0.00
tblTripsAndVMT	VendorTripNumber	5.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	40.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	160.00
tblTripsAndVMT	WorkerTripNumber	15.00	80.00
tblTripsAndVMT	WorkerTripNumber	13.00	80.00
tblTripsAndVMT	WorkerTripNumber	15.00	160.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	160.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2342	2.3021	2.9496	7.7500e-003	0.2410	0.0845	0.3255	0.0643	0.0803	0.1446	0.0000	713.7854	713.7854	0.0863	0.0445	729.2032
2024	0.3211	3.2275	4.0807	0.0118	0.4282	0.1031	0.5313	0.1150	0.0979	0.2130	0.0000	1,091.8051	1,091.8051	0.1153	0.0789	1,118.1906
2025	0.2681	2.5569	3.4665	9.8700e-003	0.3526	0.0784	0.4310	0.0951	0.0741	0.1692	0.0000	911.7935	911.7935	0.1125	0.0599	932.4651
2026	0.0823	0.7284	1.1767	2.9100e-003	0.0881	0.0259	0.1140	0.0237	0.0241	0.0479	0.0000	264.9946	264.9946	0.0477	0.0115	269.5998
Maximum	**0.3211**	**3.2275**	**4.0807**	**0.0118**	**0.4282**	**0.1031**	**0.5313**	**0.1150**	**0.0979**	**0.2130**	**0.0000**	**1,091.8051**	**1,091.8051**	**0.1153**	**0.0789**	**1,118.1906**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2342	2.3021	2.9496	7.7500e-003	0.2369	0.0845	0.3214	0.0637	0.0803	0.1440	0.0000	713.7850	713.7850	0.0863	0.0445	729.2028
2024	0.3211	3.2275	4.0807	0.0118	0.4250	0.1031	0.5281	0.1145	0.0979	0.2125	0.0000	1,091.8047	1,091.8047	0.1153	0.0789	1,118.1902
2025	0.2681	2.5569	3.4665	9.8700e-003	0.3523	0.0784	0.4307	0.0951	0.0741	0.1692	0.0000	911.7931	911.7931	0.1125	0.0599	932.4646
2026	0.0823	0.7284	1.1767	2.9100e-003	0.0881	0.0259	0.1140	0.0237	0.0241	0.0479	0.0000	264.9945	264.9945	0.0477	0.0115	269.5996
Maximum	**0.3211**	**3.2275**	**4.0807**	**0.0118**	**0.4250**	**0.1031**	**0.5281**	**0.1145**	**0.0979**	**0.2125**	**0.0000**	**1,091.8047**	**1,091.8047**	**0.1153**	**0.0789**	**1,118.1902**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.69**	**0.00**	**0.55**	**0.39**	**0.00**	**0.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**6-12-2023**	**9-11-2023**	1.3176	1.3176
2	**9-12-2023**	**12-11-2023**	0.9937	0.9937
3	**12-12-2023**	**3-11-2024**	0.8549	0.8549
4	**3-12-2024**	**6-11-2024**	0.8447	0.8447
5	**6-12-2024**	**9-11-2024**	0.9028	0.9028
6	**9-12-2024**	**12-11-2024**	0.9050	0.9050
7	**12-12-2024**	**3-11-2025**	0.8663	0.8663
8	**3-12-2025**	**6-11-2025**	0.9439	0.9439

9	**6-12-2025**	**9-11-2025**	0.3576	0.3576
10	**9-12-2025**	**12-11-2025**	0.6236	0.6236
11	**12-12-2025**	**3-11-2026**	0.8347	0.8347
12	**3-12-2026**	**6-11-2026**	0.1575	0.1575
		Highest	1.3176	1.3176

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.5400e-003	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.5066	3.5066	1.7000e-004	2.0000e-005	3.5169
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.5400e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.5074**	**3.5074**	**1.7000e-004**	**2.0000e-005**	**3.5177**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.5400e-003	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.5066	3.5066	1.7000e-004	2.0000e-005	3.5169
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.5400e-003**	**0.0000**	**4.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**3.5074**	**3.5074**	**1.7000e-004**	**2.0000e-005**	**3.5177**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/12/2023	6/12/2024	6	315	Roadway Stripping
2	Site Preparation	Site Preparation	6/12/2023	6/14/2025	6	630	Ductbank Trench Excavation
3	Vault Shaft Excavations (A)	Grading	6/12/2023	8/19/2023	6	60	Vault Excavations (A)

4	Tower 584 Foundation	Building Construction	7/3/2023	9/2/2023	6	54	Foundation work
5	Vault Installations & Completions (A)	Building Construction	8/21/2023	10/14/2023	6	48	Vault Installations (A)
6	Tower 584 Structure	Building Construction	9/4/2023	9/9/2023	6	6	Complete Tower 584
7	Paving	Paving	6/13/2024	6/14/2025	6	315	Roadway Restoration
8	Architectural Coating	Architectural Coating	4/7/2025	6/14/2025	6	60	Restriping Roadway
9	Vault Shaft Excavations (B)	Grading	6/16/2025	7/19/2025	6	30	Vault Excavations (B)
10	Vault Installations & Completions (B)	Building Construction	7/21/2025	8/16/2025	6	24	Vault Installations (B)
11	Nichols Canyon Road Segment	Trenching	10/6/2025	3/28/2026	6	150	Install new pipe/cable in existing alignment along Nichols Canyon Road.
12	Terminal Tower/Receiving Station Upgrades	Building Construction	10/6/2025	3/28/2026	6	150	Mods to Nichols Canyon Rd Terminal Tower & H-wood receiving station.

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.73

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,915 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	2.00	81	0.73
Demolition	Excavators	1	4.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Pumps	2	6.00	84	0.74
Site Preparation	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Vault Shaft Excavations (A)	Excavators	1	4.00	158	0.38
Vault Shaft Excavations (A)	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Tower 584 Foundation	Bore/Drill Rigs	1	4.00	221	0.50
Tower 584 Foundation	Cranes	1	4.00	231	0.29

Tower 584 Foundation	Excavators	1	6.00	158	0.38
Tower 584 Foundation	Pumps	1	6.00	84	0.74
Tower 584 Foundation	Rollers	1	4.00	80	0.38
Tower 584 Foundation	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Vault Installations & Completions (A)	Cranes	1	4.00	231	0.29
Vault Installations & Completions (A)	Pumps	2	6.00	84	0.74
Vault Installations & Completions (A)	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Tower 584 Structure	Cranes	1	4.00	231	0.29
Tower 584 Structure	Excavators	1	4.00	158	0.38
Tower 584 Structure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	20	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	2	7.00	80	0.38
Architectural Coating	Air Compressors	2	6.00	78	0.48
Vault Shaft Excavations (B)	Excavators	1	4.00	158	0.38
Vault Shaft Excavations (B)	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Vault Installations & Completions (B)	Cranes	1	4.00	231	0.29
Vault Installations & Completions (B)	Pumps	2	6.00	84	0.74
Vault Installations & Completions (B)	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Nichols Canyon Road Segment	Excavators	2	6.00	158	0.38
Nichols Canyon Road Segment	Other Material Handling Equipment	1	6.00	168	0.40
Nichols Canyon Road Segment	Rollers	1	4.00	80	0.38
Nichols Canyon Road Segment	Surfacing Equipment	1	4.00	263	0.30
Nichols Canyon Road Segment	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Terminal Tower/Receiving Station Upgrades	Cranes	1	4.00	231	0.29
Terminal Tower/Receiving Station Upgrades	Excavators	2	7.00	158	0.38
Terminal Tower/Receiving Station Upgrades	Pumps	1	7.00	84	0.74
Terminal Tower/Receiving Station Upgrades	Surfacing Equipment	1	4.00	263	0.30

Terminal Tower/Receiving Station Upgrades	Tractors/Loaders/Backhoes	2	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	6	160.00	40.00	25,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Shaft Excavations (A)	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tower 584 Foundation	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Installations & Completions (A)	4	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tower 584 Structure	3	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Shaft Excavations (B)	3	160.00	40.00	1,200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Vault Installations & Completions (B)	4	160.00	40.00	960.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Nichols Canyon Road Segment	6	80.00	20.00	1,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Terminal Tower/Receiving Stati	7	80.00	20.00	1,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.0300e-003	0.0000	6.0300e-003	9.1000e-004	0.0000	9.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0425	0.3802	0.5920	9.0000e-004		0.0188	0.0188		0.0177	0.0177	0.0000	78.8265	78.8265	0.0191	0.0000	79.3035
Total	**0.0425**	**0.3802**	**0.5920**	**9.0000e-004**	**6.0300e-003**	**0.0188**	**0.0248**	**9.1000e-004**	**0.0177**	**0.0186**	**0.0000**	**78.8265**	**78.8265**	**0.0191**	**0.0000**	**79.3035**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3500e-003	0.0000	2.3500e-003	3.6000e-004	0.0000	3.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0425	0.3802	0.5920	9.0000e-004		0.0188	0.0188		0.0177	0.0177	0.0000	78.8264	78.8264	0.0191	0.0000	79.3034
Total	**0.0425**	**0.3802**	**0.5920**	**9.0000e-004**	**2.3500e-003**	**0.0188**	**0.0211**	**3.6000e-004**	**0.0177**	**0.0181**	**0.0000**	**78.8264**	**78.8264**	**0.0191**	**0.0000**	**79.3034**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.8900e-003	0.0000	4.8900e-003	7.4000e-004	0.0000	7.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.2877	0.4802	7.3000e-004		0.0134	0.0134		0.0126	0.0126	0.0000	63.8999	63.8999	0.0154	0.0000	64.2859
Total	**0.0326**	**0.2877**	**0.4802**	**7.3000e-004**	**4.8900e-003**	**0.0134**	**0.0183**	**7.4000e-004**	**0.0126**	**0.0133**	**0.0000**	**63.8999**	**63.8999**	**0.0154**	**0.0000**	**64.2859**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9100e-003	0.0000	1.9100e-003	2.9000e-004	0.0000	2.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0326	0.2877	0.4802	7.3000e-004		0.0134	0.0134		0.0126	0.0126	0.0000	63.8999	63.8999	0.0154	0.0000	64.2858
Total	**0.0326**	**0.2877**	**0.4802**	**7.3000e-004**	**1.9100e-003**	**0.0134**	**0.0153**	**2.9000e-004**	**0.0126**	**0.0129**	**0.0000**	**63.8999**	**63.8999**	**0.0154**	**0.0000**	**64.2858**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.6000e-004	0.0000	4.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0823	0.7601	1.0685	1.6700e-003		0.0374	0.0374		0.0358	0.0358	0.0000	145.1654	145.1654	0.0265	0.0000	145.8271
Total	**0.0823**	**0.7601**	**1.0685**	**1.6700e-003**	**4.6000e-004**	**0.0374**	**0.0378**	**7.0000e-005**	**0.0358**	**0.0359**	**0.0000**	**145.1654**	**145.1654**	**0.0265**	**0.0000**	**145.8271**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.3400e-003	0.4785	0.1219	2.0400e-003	0.0599	2.8700e-003	0.0627	0.0165	2.7400e-003	0.0192	0.0000	202.9777	202.9777	0.0112	0.0322	212.8627
Vendor	3.9300e-003	0.1402	0.0525	6.5000e-004	0.0219	6.7000e-004	0.0226	6.3300e-003	6.4000e-004	6.9700e-003	0.0000	63.2741	63.2741	2.1200e-003	9.1100e-003	66.0406
Worker	0.0442	0.0351	0.4743	1.3200e-003	0.1525	9.4000e-004	0.1535	0.0405	8.6000e-004	0.0414	0.0000	121.4163	121.4163	3.2300e-003	3.1600e-003	122.4389
Total	**0.0554**	**0.6538**	**0.6486**	**4.0100e-003**	**0.2343**	**4.4800e-003**	**0.2388**	**0.0633**	**4.2400e-003**	**0.0675**	**0.0000**	**387.6682**	**387.6682**	**0.0165**	**0.0445**	**401.3423**

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8000e-004	0.0000	1.8000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0823	0.7601	1.0685	1.6700e-003		0.0374	0.0374		0.0358	0.0358	0.0000	145.1652	145.1652	0.0265	0.0000	145.8270
Total	**0.0823**	**0.7601**	**1.0685**	**1.6700e-003**	**1.8000e-004**	**0.0374**	**0.0376**	**3.0000e-005**	**0.0358**	**0.0358**	**0.0000**	**145.1652**	**145.1652**	**0.0265**	**0.0000**	**145.8270**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.3400e-003	0.4785	0.1219	2.0400e-003	0.0599	2.8700e-003	0.0627	0.0165	2.7400e-003	0.0192	0.0000	202.9777	202.9777	0.0112	0.0322	212.8627
Vendor	3.9300e-003	0.1402	0.0525	6.5000e-004	0.0219	6.7000e-004	0.0226	6.3300e-003	6.4000e-004	6.9700e-003	0.0000	63.2741	63.2741	2.1200e-003	9.1100e-003	66.0406
Worker	0.0442	0.0351	0.4743	1.3200e-003	0.1525	9.4000e-004	0.1535	0.0405	8.6000e-004	0.0414	0.0000	121.4163	121.4163	3.2300e-003	3.1600e-003	122.4389
Total	**0.0554**	**0.6538**	**0.6486**	**4.0100e-003**	**0.2343**	**4.4800e-003**	**0.2388**	**0.0633**	**4.2400e-003**	**0.0675**	**0.0000**	**387.6682**	**387.6682**	**0.0165**	**0.0445**	**401.3423**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.6000e-004	0.0000	4.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1398	1.2894	1.9290	3.0200e-003		0.0589	0.0589		0.0564	0.0564	0.0000	262.0465	262.0465	0.0476	0.0000	263.2354
Total	**0.1398**	**1.2894**	**1.9290**	**3.0200e-003**	**4.6000e-004**	**0.0589**	**0.0594**	**7.0000e-005**	**0.0564**	**0.0565**	**0.0000**	**262.0465**	**262.0465**	**0.0476**	**0.0000**	**263.2354**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0132	0.8658	0.2238	3.6200e-003	0.1081	5.2200e-003	0.1133	0.0297	4.9900e-003	0.0347	0.0000	361.1083	361.1083	0.0203	0.0574	378.7124
Vendor	6.8700e-003	0.2536	0.0927	1.1500e-003	0.0396	1.2200e-003	0.0408	0.0114	1.1700e-003	0.0126	0.0000	112.4712	112.4712	3.8300e-003	0.0162	117.3952
Worker	0.0744	0.0565	0.7959	2.3200e-003	0.2753	1.6200e-003	0.2769	0.0731	1.4900e-003	0.0746	0.0000	212.9124	212.9124	5.2800e-003	5.3000e-003	214.6241
Total	**0.0944**	**1.1759**	**1.1124**	**7.0900e-003**	**0.4229**	**8.0600e-003**	**0.4310**	**0.1142**	**7.6500e-003**	**0.1219**	**0.0000**	**686.4919**	**686.4919**	**0.0295**	**0.0789**	**710.7316**

3.3 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8000e-004	0.0000	1.8000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1398	1.2894	1.9290	3.0200e-003		0.0589	0.0589		0.0564	0.0564	0.0000	262.0462	262.0462	0.0476	0.0000	263.2351
Total	**0.1398**	**1.2894**	**1.9290**	**3.0200e-003**	**1.8000e-004**	**0.0589**	**0.0591**	**3.0000e-005**	**0.0564**	**0.0565**	**0.0000**	**262.0462**	**262.0462**	**0.0476**	**0.0000**	**263.2351**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0132	0.8658	0.2238	3.6200e-003	0.1081	5.2200e-003	0.1133	0.0297	4.9900e-003	0.0347	0.0000	361.1083	361.1083	0.0203	0.0574	378.7124
Vendor	6.8700e-003	0.2536	0.0927	1.1500e-003	0.0396	1.2200e-003	0.0408	0.0114	1.1700e-003	0.0126	0.0000	112.4712	112.4712	3.8300e-003	0.0162	117.3952
Worker	0.0744	0.0565	0.7959	2.3200e-003	0.2753	1.6200e-003	0.2769	0.0731	1.4900e-003	0.0746	0.0000	212.9124	212.9124	5.2800e-003	5.3000e-003	214.6241
Total	**0.0944**	**1.1759**	**1.1124**	**7.0900e-003**	**0.4229**	**8.0600e-003**	**0.4310**	**0.1142**	**7.6500e-003**	**0.1219**	**0.0000**	**686.4919**	**686.4919**	**0.0295**	**0.0789**	**710.7316**

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.6000e-004	0.0000	4.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0586	0.5428	0.8706	1.3700e-003		0.0223	0.0223		0.0213	0.0213	0.0000	118.5610	118.5610	0.0213	0.0000	119.0938
Total	**0.0586**	**0.5428**	**0.8706**	**1.3700e-003**	**4.6000e-004**	**0.0223**	**0.0227**	**7.0000e-005**	**0.0213**	**0.0214**	**0.0000**	**118.5610**	**118.5610**	**0.0213**	**0.0000**	**119.0938**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9000e-003	0.3891	0.1026	1.6000e-003	0.0489	2.3600e-003	0.0512	0.0134	2.2600e-003	0.0157	0.0000	160.3958	160.3958	9.3100e-003	0.0255	168.2251
Vendor	3.0200e-003	0.1141	0.0412	5.1000e-004	0.0179	5.5000e-004	0.0185	5.1700e-003	5.3000e-004	5.7000e-003	0.0000	49.9477	49.9477	1.7400e-003	7.2000e-003	52.1369
Worker	0.0315	0.0229	0.3349	1.0100e-003	0.1245	7.0000e-004	0.1252	0.0331	6.4000e-004	0.0337	0.0000	93.0134	93.0134	2.1500e-003	2.2400e-003	93.7343
Total	**0.0404**	**0.5261**	**0.4787**	**3.1200e-003**	**0.1913**	**3.6100e-003**	**0.1949**	**0.0517**	**3.4300e-003**	**0.0551**	**0.0000**	**303.3570**	**303.3570**	**0.0132**	**0.0349**	**314.0962**

3.3 Site Preparation - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8000e-004	0.0000	1.8000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0586	0.5428	0.8706	1.3700e-003		0.0223	0.0223		0.0213	0.0213	0.0000	118.5608	118.5608	0.0213	0.0000	119.0936
Total	**0.0586**	**0.5428**	**0.8706**	**1.3700e-003**	**1.8000e-004**	**0.0223**	**0.0224**	**3.0000e-005**	**0.0213**	**0.0214**	**0.0000**	**118.5608**	**118.5608**	**0.0213**	**0.0000**	**119.0936**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9000e-003	0.3891	0.1026	1.6000e-003	0.0489	2.3600e-003	0.0512	0.0134	2.2600e-003	0.0157	0.0000	160.3958	160.3958	9.3100e-003	0.0255	168.2251
Vendor	3.0200e-003	0.1141	0.0412	5.1000e-004	0.0179	5.5000e-004	0.0185	5.1700e-003	5.3000e-004	5.7000e-003	0.0000	49.9477	49.9477	1.7400e-003	7.2000e-003	52.1369
Worker	0.0315	0.0229	0.3349	1.0100e-003	0.1245	7.0000e-004	0.1252	0.0331	6.4000e-004	0.0337	0.0000	93.0134	93.0134	2.1500e-003	2.2400e-003	93.7343
Total	**0.0404**	**0.5261**	**0.4787**	**3.1200e-003**	**0.1913**	**3.6100e-003**	**0.1949**	**0.0517**	**3.4300e-003**	**0.0551**	**0.0000**	**303.3570**	**303.3570**	**0.0132**	**0.0349**	**314.0962**

3.4 Vault Shaft Excavations (A) - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7000e-004	0.0000	1.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1039	0.1660	2.4000e-004		5.1200e-003	5.1200e-003		4.7100e-003	4.7100e-003	0.0000	21.1686	21.1686	6.8500e-003	0.0000	21.3397
Total	**0.0108**	**0.1039**	**0.1660**	**2.4000e-004**	**1.7000e-004**	**5.1200e-003**	**5.2900e-003**	**3.0000e-005**	**4.7100e-003**	**4.7400e-003**	**0.0000**	**21.1686**	**21.1686**	**6.8500e-003**	**0.0000**	**21.3397**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Vault Shaft Excavations (A) - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0000e-005	0.0000	7.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1039	0.1660	2.4000e-004		5.1200e-003	5.1200e-003		4.7100e-003	4.7100e-003	0.0000	21.1685	21.1685	6.8500e-003	0.0000	21.3397
Total	**0.0108**	**0.1039**	**0.1660**	**2.4000e-004**	**7.0000e-005**	**5.1200e-003**	**5.1900e-003**	**1.0000e-005**	**4.7100e-003**	**4.7200e-003**	**0.0000**	**21.1685**	**21.1685**	**6.8500e-003**	**0.0000**	**21.3397**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Tower 584 Foundation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0233	0.2190	0.2638	5.4000e-004		0.0100	0.0100		9.4500e-003	9.4500e-003	0.0000	47.3396	47.3396	0.0121	0.0000	47.6429
Total	**0.0233**	**0.2190**	**0.2638**	**5.4000e-004**		**0.0100**	**0.0100**		**9.4500e-003**	**9.4500e-003**	**0.0000**	**47.3396**	**47.3396**	**0.0121**	**0.0000**	**47.6429**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Tower 584 Foundation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0233	0.2190	0.2638	5.4000e-004		0.0100	0.0100		9.4500e-003	9.4500e-003	0.0000	47.3395	47.3395	0.0121	0.0000	47.6429
Total	**0.0233**	**0.2190**	**0.2638**	**5.4000e-004**		**0.0100**	**0.0100**		**9.4500e-003**	**9.4500e-003**	**0.0000**	**47.3395**	**47.3395**	**0.0121**	**0.0000**	**47.6429**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Vault Installations & Completions (A) - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0187	0.1725	0.1963	3.6000e-004		8.1300e-003	8.1300e-003		7.8700e-003	7.8700e-003	0.0000	31.3554	31.3554	4.4900e-003	0.0000	31.4677
Total	**0.0187**	**0.1725**	**0.1963**	**3.6000e-004**		**8.1300e-003**	**8.1300e-003**		**7.8700e-003**	**7.8700e-003**	**0.0000**	**31.3554**	**31.3554**	**4.4900e-003**	**0.0000**	**31.4677**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Vault Installations & Completions (A) - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0187	0.1725	0.1963	3.6000e-004		8.1300e-003	8.1300e-003		7.8700e-003	7.8700e-003	0.0000	31.3554	31.3554	4.4900e-003	0.0000	31.4677
Total	**0.0187**	**0.1725**	**0.1963**	**3.6000e-004**		**8.1300e-003**	**8.1300e-003**		**7.8700e-003**	**7.8700e-003**	**0.0000**	**31.3554**	**31.3554**	**4.4900e-003**	**0.0000**	**31.4677**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Tower 584 Structure - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2600e-003	0.0127	0.0143	3.0000e-005		5.8000e-004	5.8000e-004		5.3000e-004	5.3000e-004	0.0000	2.2617	2.2617	7.3000e-004	0.0000	2.2800
Total	**1.2600e-003**	**0.0127**	**0.0143**	**3.0000e-005**		**5.8000e-004**	**5.8000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**2.2617**	**2.2617**	**7.3000e-004**	**0.0000**	**2.2800**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Tower 584 Structure - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2600e-003	0.0127	0.0143	3.0000e-005		5.8000e-004	5.8000e-004		5.3000e-004	5.3000e-004	0.0000	2.2617	2.2617	7.3000e-004	0.0000	2.2800
Total	**1.2600e-003**	**0.0127**	**0.0143**	**3.0000e-005**		**5.8000e-004**	**5.8000e-004**		**5.3000e-004**	**5.3000e-004**	**0.0000**	**2.2617**	**2.2617**	**7.3000e-004**	**0.0000**	**2.2800**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0537	0.4746	0.5592	9.3000e-004		0.0227	0.0227		0.0213	0.0213	0.0000	79.3668	79.3668	0.0228	0.0000	79.9377
Paving	5.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0543**	**0.4746**	**0.5592**	**9.3000e-004**		**0.0227**	**0.0227**		**0.0213**	**0.0213**	**0.0000**	**79.3668**	**79.3668**	**0.0228**	**0.0000**	**79.9377**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0537	0.4746	0.5592	9.3000e-004		0.0227	0.0227		0.0213	0.0213	0.0000	79.3667	79.3667	0.0228	0.0000	79.9376
Paving	5.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0543**	**0.4746**	**0.5592**	**9.3000e-004**		**0.0227**	**0.0227**		**0.0213**	**0.0213**	**0.0000**	**79.3667**	**79.3667**	**0.0228**	**0.0000**	**79.9376**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0423	0.3693	0.4587	7.7000e-004		0.0172	0.0172		0.0161	0.0161	0.0000	65.1261	65.1261	0.0187	0.0000	65.5945
Paving	4.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0427**	**0.3693**	**0.4587**	**7.7000e-004**		**0.0172**	**0.0172**		**0.0161**	**0.0161**	**0.0000**	**65.1261**	**65.1261**	**0.0187**	**0.0000**	**65.5945**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0423	0.3693	0.4587	7.7000e-004		0.0172	0.0172		0.0161	0.0161	0.0000	65.1260	65.1260	0.0187	0.0000	65.5944
Paving	4.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0427**	**0.3693**	**0.4587**	**7.7000e-004**		**0.0172**	**0.0172**		**0.0161**	**0.0161**	**0.0000**	**65.1260**	**65.1260**	**0.0187**	**0.0000**	**65.5944**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.9 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.0687	0.1086	1.8000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	15.3195	15.3195	8.4000e-004	0.0000	15.3404
Total	**0.0147**	**0.0687**	**0.1086**	**1.8000e-004**		**3.0900e-003**	**3.0900e-003**		**3.0900e-003**	**3.0900e-003**	**0.0000**	**15.3195**	**15.3195**	**8.4000e-004**	**0.0000**	**15.3404**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.9 Architectural Coating - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.0687	0.1086	1.8000e-004		3.0900e-003	3.0900e-003		3.0900e-003	3.0900e-003	0.0000	15.3195	15.3195	8.4000e-004	0.0000	15.3404
Total	**0.0147**	**0.0687**	**0.1086**	**1.8000e-004**		**3.0900e-003**	**3.0900e-003**		**3.0900e-003**	**3.0900e-003**	**0.0000**	**15.3195**	**15.3195**	**8.4000e-004**	**0.0000**	**15.3404**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.10 Vault Shaft Excavations (B) - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7200e-003	0.0442	0.0830	1.2000e-004		1.8700e-003	1.8700e-003		1.7200e-003	1.7200e-003	0.0000	10.5973	10.5973	3.4300e-003	0.0000	10.6830
Total	**4.7200e-003**	**0.0442**	**0.0830**	**1.2000e-004**	**6.0000e-005**	**1.8700e-003**	**1.9300e-003**	**1.0000e-005**	**1.7200e-003**	**1.7300e-003**	**0.0000**	**10.5973**	**10.5973**	**3.4300e-003**	**0.0000**	**10.6830**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2500e-003	0.0822	0.0217	3.4000e-004	0.0103	5.0000e-004	0.0108	2.8400e-003	4.8000e-004	3.3100e-003	0.0000	33.8865	33.8865	1.9700e-003	5.3900e-003	35.5405
Vendor	6.4000e-004	0.0241	8.7000e-003	1.1000e-004	3.7800e-003	1.2000e-004	3.9000e-003	1.0900e-003	1.1000e-004	1.2000e-003	0.0000	10.5523	10.5523	3.7000e-004	1.5200e-003	11.0148
Worker	6.6500e-003	4.8400e-003	0.0708	2.1000e-004	0.0263	1.5000e-004	0.0265	6.9900e-003	1.4000e-004	7.1200e-003	0.0000	19.6507	19.6507	4.6000e-004	4.7000e-004	19.8030
Total	**8.5400e-003**	**0.1112**	**0.1011**	**6.6000e-004**	**0.0404**	**7.7000e-004**	**0.0412**	**0.0109**	**7.3000e-004**	**0.0116**	**0.0000**	**64.0895**	**64.0895**	**2.8000e-003**	**7.3800e-003**	**66.3584**

3.10 Vault Shaft Excavations (B) - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7200e-003	0.0442	0.0830	1.2000e-004		1.8700e-003	1.8700e-003		1.7200e-003	1.7200e-003	0.0000	10.5973	10.5973	3.4300e-003	0.0000	10.6830
Total	**4.7200e-003**	**0.0442**	**0.0830**	**1.2000e-004**	**2.0000e-005**	**1.8700e-003**	**1.8900e-003**	**0.0000**	**1.7200e-003**	**1.7200e-003**	**0.0000**	**10.5973**	**10.5973**	**3.4300e-003**	**0.0000**	**10.6830**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2500e-003	0.0822	0.0217	3.4000e-004	0.0103	5.0000e-004	0.0108	2.8400e-003	4.8000e-004	3.3100e-003	0.0000	33.8865	33.8865	1.9700e-003	5.3900e-003	35.5405
Vendor	6.4000e-004	0.0241	8.7000e-003	1.1000e-004	3.7800e-003	1.2000e-004	3.9000e-003	1.0900e-003	1.1000e-004	1.2000e-003	0.0000	10.5523	10.5523	3.7000e-004	1.5200e-003	11.0148
Worker	6.6500e-003	4.8400e-003	0.0708	2.1000e-004	0.0263	1.5000e-004	0.0265	6.9900e-003	1.4000e-004	7.1200e-003	0.0000	19.6507	19.6507	4.6000e-004	4.7000e-004	19.8030
Total	**8.5400e-003**	**0.1112**	**0.1011**	**6.6000e-004**	**0.0404**	**7.7000e-004**	**0.0412**	**0.0109**	**7.3000e-004**	**0.0116**	**0.0000**	**64.0895**	**64.0895**	**2.8000e-003**	**7.3800e-003**	**66.3584**

3.11 Vault Installations & Completions (B) - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2200e-003	0.0747	0.0974	1.8000e-004		3.1100e-003	3.1100e-003		3.0100e-003	3.0100e-003	0.0000	15.6817	15.6817	2.1900e-003	0.0000	15.7365
Total	**8.2200e-003**	**0.0747**	**0.0974**	**1.8000e-004**		**3.1100e-003**	**3.1100e-003**		**3.0100e-003**	**3.0100e-003**	**0.0000**	**15.6817**	**15.6817**	**2.1900e-003**	**0.0000**	**15.7365**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-003	0.0658	0.0173	2.7000e-004	8.2600e-003	4.0000e-004	8.6600e-003	2.2700e-003	3.8000e-004	2.6500e-003	0.0000	27.1092	27.1092	1.5700e-003	4.3100e-003	28.4324
Vendor	5.1000e-004	0.0193	6.9600e-003	9.0000e-005	3.0300e-003	9.0000e-005	3.1200e-003	8.7000e-004	9.0000e-005	9.6000e-004	0.0000	8.4419	8.4419	2.9000e-004	1.2200e-003	8.8119
Worker	5.3200e-003	3.8700e-003	0.0566	1.7000e-004	0.0210	1.2000e-004	0.0212	5.5900e-003	1.1000e-004	5.7000e-003	0.0000	15.7206	15.7206	3.6000e-004	3.8000e-004	15.8424
Total	**6.8300e-003**	**0.0889**	**0.0809**	**5.3000e-004**	**0.0323**	**6.1000e-004**	**0.0329**	**8.7300e-003**	**5.8000e-004**	**9.3100e-003**	**0.0000**	**51.2716**	**51.2716**	**2.2200e-003**	**5.9100e-003**	**53.0867**

3.11 Vault Installations & Completions (B) - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2200e-003	0.0747	0.0974	1.8000e-004		3.1100e-003	3.1100e-003		3.0100e-003	3.0100e-003	0.0000	15.6817	15.6817	2.1900e-003	0.0000	15.7365
Total	**8.2200e-003**	**0.0747**	**0.0974**	**1.8000e-004**		**3.1100e-003**	**3.1100e-003**		**3.0100e-003**	**3.0100e-003**	**0.0000**	**15.6817**	**15.6817**	**2.1900e-003**	**0.0000**	**15.7365**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-003	0.0658	0.0173	2.7000e-004	8.2600e-003	4.0000e-004	8.6600e-003	2.2700e-003	3.8000e-004	2.6500e-003	0.0000	27.1092	27.1092	1.5700e-003	4.3100e-003	28.4324
Vendor	5.1000e-004	0.0193	6.9600e-003	9.0000e-005	3.0300e-003	9.0000e-005	3.1200e-003	8.7000e-004	9.0000e-005	9.6000e-004	0.0000	8.4419	8.4419	2.9000e-004	1.2200e-003	8.8119
Worker	5.3200e-003	3.8700e-003	0.0566	1.7000e-004	0.0210	1.2000e-004	0.0212	5.5900e-003	1.1000e-004	5.7000e-003	0.0000	15.7206	15.7206	3.6000e-004	3.8000e-004	15.8424
Total	**6.8300e-003**	**0.0889**	**0.0809**	**5.3000e-004**	**0.0323**	**6.1000e-004**	**0.0329**	**8.7300e-003**	**5.8000e-004**	**9.3100e-003**	**0.0000**	**51.2716**	**51.2716**	**2.2200e-003**	**5.9100e-003**	**53.0867**

3.12 Nichols Canyon Road Segment - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0253	0.2145	0.4168	7.2000e-004		9.9900e-003	9.9900e-003		9.1900e-003	9.1900e-003	0.0000	62.9717	62.9717	0.0204	0.0000	63.4808
Total	**0.0253**	**0.2145**	**0.4168**	**7.2000e-004**		**9.9900e-003**	**9.9900e-003**		**9.1900e-003**	**9.1900e-003**	**0.0000**	**62.9717**	**62.9717**	**0.0204**	**0.0000**	**63.4808**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.8000e-004	0.0514	0.0135	2.1000e-004	6.4500e-003	3.1000e-004	6.7600e-003	1.7700e-003	3.0000e-004	2.0700e-003	0.0000	21.1790	21.1790	1.2300e-003	3.3700e-003	22.2128
Vendor	8.0000e-004	0.0301	0.0109	1.3000e-004	4.7300e-003	1.5000e-004	4.8700e-003	1.3600e-003	1.4000e-004	1.5000e-003	0.0000	13.1904	13.1904	4.6000e-004	1.9000e-003	13.7685
Worker	8.3100e-003	6.0500e-003	0.0885	2.7000e-004	0.0329	1.8000e-004	0.0331	8.7300e-003	1.7000e-004	8.9000e-003	0.0000	24.5634	24.5634	5.7000e-004	5.9000e-004	24.7538
Total	**9.8900e-003**	**0.0876**	**0.1129**	**6.1000e-004**	**0.0441**	**6.4000e-004**	**0.0447**	**0.0119**	**6.1000e-004**	**0.0125**	**0.0000**	**58.9328**	**58.9328**	**2.2600e-003**	**5.8600e-003**	**60.7351**

3.12 Nichols Canyon Road Segment - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0253	0.2145	0.4168	7.2000e-004		9.9900e-003	9.9900e-003		9.1900e-003	9.1900e-003	0.0000	62.9716	62.9716	0.0204	0.0000	63.4807
Total	**0.0253**	**0.2145**	**0.4168**	**7.2000e-004**		**9.9900e-003**	**9.9900e-003**		**9.1900e-003**	**9.1900e-003**	**0.0000**	**62.9716**	**62.9716**	**0.0204**	**0.0000**	**63.4807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.8000e-004	0.0514	0.0135	2.1000e-004	6.4500e-003	3.1000e-004	6.7600e-003	1.7700e-003	3.0000e-004	2.0700e-003	0.0000	21.1790	21.1790	1.2300e-003	3.3700e-003	22.2128
Vendor	8.0000e-004	0.0301	0.0109	1.3000e-004	4.7300e-003	1.5000e-004	4.8700e-003	1.3600e-003	1.4000e-004	1.5000e-003	0.0000	13.1904	13.1904	4.6000e-004	1.9000e-003	13.7685
Worker	8.3100e-003	6.0500e-003	0.0885	2.7000e-004	0.0329	1.8000e-004	0.0331	8.7300e-003	1.7000e-004	8.9000e-003	0.0000	24.5634	24.5634	5.7000e-004	5.9000e-004	24.7538
Total	**9.8900e-003**	**0.0876**	**0.1129**	**6.1000e-004**	**0.0441**	**6.4000e-004**	**0.0447**	**0.0119**	**6.1000e-004**	**0.0125**	**0.0000**	**58.9328**	**58.9328**	**2.2600e-003**	**5.8600e-003**	**60.7351**

3.12 Nichols Canyon Road Segment - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0253	0.2145	0.4168	7.2000e-004		9.9900e-003	9.9900e-003		9.1900e-003	9.1900e-003	0.0000	62.9717	62.9717	0.0204	0.0000	63.4808
Total	**0.0253**	**0.2145**	**0.4168**	**7.2000e-004**		**9.9900e-003**	**9.9900e-003**		**9.1900e-003**	**9.1900e-003**	**0.0000**	**62.9717**	**62.9717**	**0.0204**	**0.0000**	**63.4808**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.7000e-004	0.0509	0.0137	2.1000e-004	6.4500e-003	3.1000e-004	6.7600e-003	1.7700e-003	3.0000e-004	2.0700e-003	0.0000	20.7726	20.7726	1.2400e-003	3.3000e-003	21.7878
Vendor	7.8000e-004	0.0299	0.0107	1.3000e-004	4.7300e-003	1.5000e-004	4.8700e-003	1.3600e-003	1.4000e-004	1.5000e-003	0.0000	12.9458	12.9458	4.6000e-004	1.8700e-003	13.5137
Worker	7.8200e-003	5.4900e-003	0.0830	2.6000e-004	0.0329	1.7000e-004	0.0331	8.7300e-003	1.6000e-004	8.8900e-003	0.0000	23.8168	23.8168	5.2000e-004	5.6000e-004	23.9957
Total	**9.3700e-003**	**0.0863**	**0.1074**	**6.0000e-004**	**0.0441**	**6.3000e-004**	**0.0447**	**0.0119**	**6.0000e-004**	**0.0125**	**0.0000**	**57.5352**	**57.5352**	**2.2200e-003**	**5.7300e-003**	**59.2972**

3.12 Nichols Canyon Road Segment - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0253	0.2145	0.4168	7.2000e-004		9.9900e-003	9.9900e-003		9.1900e-003	9.1900e-003	0.0000	62.9716	62.9716	0.0204	0.0000	63.4807
Total	**0.0253**	**0.2145**	**0.4168**	**7.2000e-004**		**9.9900e-003**	**9.9900e-003**		**9.1900e-003**	**9.1900e-003**	**0.0000**	**62.9716**	**62.9716**	**0.0204**	**0.0000**	**63.4807**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.7000e-004	0.0509	0.0137	2.1000e-004	6.4500e-003	3.1000e-004	6.7600e-003	1.7700e-003	3.0000e-004	2.0700e-003	0.0000	20.7726	20.7726	1.2400e-003	3.3000e-003	21.7878
Vendor	7.8000e-004	0.0299	0.0107	1.3000e-004	4.7300e-003	1.5000e-004	4.8700e-003	1.3600e-003	1.4000e-004	1.5000e-003	0.0000	12.9458	12.9458	4.6000e-004	1.8700e-003	13.5137
Worker	7.8200e-003	5.4900e-003	0.0830	2.6000e-004	0.0329	1.7000e-004	0.0331	8.7300e-003	1.6000e-004	8.8900e-003	0.0000	23.8168	23.8168	5.2000e-004	5.6000e-004	23.9957
Total	**9.3700e-003**	**0.0863**	**0.1074**	**6.0000e-004**	**0.0441**	**6.3000e-004**	**0.0447**	**0.0119**	**6.0000e-004**	**0.0125**	**0.0000**	**57.5352**	**57.5352**	**2.2200e-003**	**5.7300e-003**	**59.2972**

3.13 Terminal Tower/Receiving Station Upgrades - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0382	0.3414	0.5452	9.9000e-004		0.0147	0.0147		0.0137	0.0137	0.0000	86.9526	86.9526	0.0229	0.0000	87.5245
Total	**0.0382**	**0.3414**	**0.5452**	**9.9000e-004**		**0.0147**	**0.0147**		**0.0137**	**0.0137**	**0.0000**	**86.9526**	**86.9526**	**0.0229**	**0.0000**	**87.5245**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.8000e-004	0.0514	0.0135	2.1000e-004	6.4500e-003	3.1000e-004	6.7600e-003	1.7700e-003	3.0000e-004	2.0700e-003	0.0000	21.1790	21.1790	1.2300e-003	3.3700e-003	22.2128
Vendor	8.0000e-004	0.0301	0.0109	1.3000e-004	4.7300e-003	1.5000e-004	4.8700e-003	1.3600e-003	1.4000e-004	1.5000e-003	0.0000	13.1904	13.1904	4.6000e-004	1.9000e-003	13.7685
Worker	8.3100e-003	6.0500e-003	0.0885	2.7000e-004	0.0329	1.8000e-004	0.0331	8.7300e-003	1.7000e-004	8.9000e-003	0.0000	24.5634	24.5634	5.7000e-004	5.9000e-004	24.7538
Total	**9.8900e-003**	**0.0876**	**0.1129**	**6.1000e-004**	**0.0441**	**6.4000e-004**	**0.0447**	**0.0119**	**6.1000e-004**	**0.0125**	**0.0000**	**58.9328**	**58.9328**	**2.2600e-003**	**5.8600e-003**	**60.7351**

3.13 Terminal Tower/Receiving Station Upgrades - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0382	0.3414	0.5452	9.9000e-004		0.0147	0.0147		0.0137	0.0137	0.0000	86.9525	86.9525	0.0229	0.0000	87.5244
Total	**0.0382**	**0.3414**	**0.5452**	**9.9000e-004**		**0.0147**	**0.0147**		**0.0137**	**0.0137**	**0.0000**	**86.9525**	**86.9525**	**0.0229**	**0.0000**	**87.5244**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.8000e-004	0.0514	0.0135	2.1000e-004	6.4500e-003	3.1000e-004	6.7600e-003	1.7700e-003	3.0000e-004	2.0700e-003	0.0000	21.1790	21.1790	1.2300e-003	3.3700e-003	22.2128
Vendor	8.0000e-004	0.0301	0.0109	1.3000e-004	4.7300e-003	1.5000e-004	4.8700e-003	1.3600e-003	1.4000e-004	1.5000e-003	0.0000	13.1904	13.1904	4.6000e-004	1.9000e-003	13.7685
Worker	8.3100e-003	6.0500e-003	0.0885	2.7000e-004	0.0329	1.8000e-004	0.0331	8.7300e-003	1.7000e-004	8.9000e-003	0.0000	24.5634	24.5634	5.7000e-004	5.9000e-004	24.7538
Total	**9.8900e-003**	**0.0876**	**0.1129**	**6.1000e-004**	**0.0441**	**6.4000e-004**	**0.0447**	**0.0119**	**6.1000e-004**	**0.0125**	**0.0000**	**58.9328**	**58.9328**	**2.2600e-003**	**5.8600e-003**	**60.7351**

3.13 Terminal Tower/Receiving Station Upgrades - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0382	0.3414	0.5452	9.9000e-004		0.0147	0.0147		0.0137	0.0137	0.0000	86.9526	86.9526	0.0229	0.0000	87.5245
Total	**0.0382**	**0.3414**	**0.5452**	**9.9000e-004**		**0.0147**	**0.0147**		**0.0137**	**0.0137**	**0.0000**	**86.9526**	**86.9526**	**0.0229**	**0.0000**	**87.5245**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.7000e-004	0.0509	0.0137	2.1000e-004	6.4500e-003	3.1000e-004	6.7600e-003	1.7700e-003	3.0000e-004	2.0700e-003	0.0000	20.7726	20.7726	1.2400e-003	3.3000e-003	21.7878
Vendor	7.8000e-004	0.0299	0.0107	1.3000e-004	4.7300e-003	1.5000e-004	4.8700e-003	1.3600e-003	1.4000e-004	1.5000e-003	0.0000	12.9458	12.9458	4.6000e-004	1.8700e-003	13.5137
Worker	7.8200e-003	5.4900e-003	0.0830	2.6000e-004	0.0329	1.7000e-004	0.0331	8.7300e-003	1.6000e-004	8.8900e-003	0.0000	23.8168	23.8168	5.2000e-004	5.6000e-004	23.9957
Total	**9.3700e-003**	**0.0863**	**0.1074**	**6.0000e-004**	**0.0441**	**6.3000e-004**	**0.0447**	**0.0119**	**6.0000e-004**	**0.0125**	**0.0000**	**57.5352**	**57.5352**	**2.2200e-003**	**5.7300e-003**	**59.2972**

3.13 Terminal Tower/Receiving Station Upgrades - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0382	0.3414	0.5452	9.9000e-004		0.0147	0.0147		0.0137	0.0137	0.0000	86.9525	86.9525	0.0229	0.0000	87.5244
Total	**0.0382**	**0.3414**	**0.5452**	**9.9000e-004**		**0.0147**	**0.0147**		**0.0137**	**0.0137**	**0.0000**	**86.9525**	**86.9525**	**0.0229**	**0.0000**	**87.5244**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.7000e-004	0.0509	0.0137	2.1000e-004	6.4500e-003	3.1000e-004	6.7600e-003	1.7700e-003	3.0000e-004	2.0700e-003	0.0000	20.7726	20.7726	1.2400e-003	3.3000e-003	21.7878
Vendor	7.8000e-004	0.0299	0.0107	1.3000e-004	4.7300e-003	1.5000e-004	4.8700e-003	1.3600e-003	1.4000e-004	1.5000e-003	0.0000	12.9458	12.9458	4.6000e-004	1.8700e-003	13.5137
Worker	7.8200e-003	5.4900e-003	0.0830	2.6000e-004	0.0329	1.7000e-004	0.0331	8.7300e-003	1.6000e-004	8.8900e-003	0.0000	23.8168	23.8168	5.2000e-004	5.6000e-004	23.9957
Total	**9.3700e-003**	**0.0863**	**0.1074**	**6.0000e-004**	**0.0441**	**6.3000e-004**	**0.0447**	**0.0119**	**6.0000e-004**	**0.0125**	**0.0000**	**57.5352**	**57.5352**	**2.2200e-003**	**5.7300e-003**	**59.2972**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.5066	3.5066	1.7000e-004	2.0000e-005	3.5169
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3.5066	3.5066	1.7000e-004	2.0000e-005	3.5169
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	11172	3.5066	1.7000e-004	2.0000e-005	3.5169
Total		**3.5066**	**1.7000e-004**	**2.0000e-005**	**3.5169**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	11172	3.5066	1.7000e-004	2.0000e-005	3.5169
Total		**3.5066**	**1.7000e-004**	**2.0000e-005**	**3.5169**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.5400e-003	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Unmitigated	2.5400e-003	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Total	**2.5400e-003**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.9000e-004**	**7.9000e-004**	**0.0000**	**0.0000**	**8.4000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.0600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.9000e-004	7.9000e-004	0.0000	0.0000	8.4000e-004
Total	**2.5400e-003**	**0.0000**	**4.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.9000e-004**	**7.9000e-004**	**0.0000**	**0.0000**	**8.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix F
Noise and Vibration Assessment

taha
environmental planners

Technical Memorandum

TO: Nathaniel Counts
AECOM

FROM: Terry A. Hayes Associates Inc.

DATE: October 10, 2022

RE: Toluca-Hollywood Line 1 Upgrade Project– Noise and Vibration Assessment

Introduction

Terry A. Hayes Associates Inc. (TAHA) has completed a Noise and Vibration Assessment for the Toluca-Hollywood Line 1 Upgrade Project (proposed project) in accordance with the provisions of the California Environmental Quality Act (CEQA) Statutes and Guidelines. This Assessment is organized as follows:

- Introduction
- Project Description
- Noise and Vibration Topical Information
- Existing Setting
- Regulatory Framework
- Significance Thresholds
- Methodology
- Impact Assessment
- References

Terry A. Hayes Associates Inc.
3535 Hayden Avenue, Suite 350
Culver City, California 90232
310.839.4200 fax 310.839.4201

Project Description

The City of Los Angeles Department of Water and Power (LADWP) proposes to upgrade the approximately 1.8-mile underground portion of the existing Toluca-Hollywood 230 kilovolt (kV) Line 1 (TOL-HWD L1) cable, which runs from the Nichols Canyon Terminal Tower to the Hollywood Receiving Station. All work would be located within the road right-of-way (ROW), the confines of LADWP property, or within an easement. The proposed project would include the following work:

- Trenching and installing a new underground cable adjacent to the existing underground TOL-HWD L1 alignment from Hollywood Boulevard southeast to the Hollywood Receiving Station.
- Trenching and removing the existing underground TOL-HWD L1 pipe and cable and installing a new underground pipe and cable inside the same trench alignment within Nichols Canyon Road, north of Hollywood Boulevard to the Nichols Canyon Terminal Tower.
- Splicing the new cable in Nichols Canyon Road together with the new cable south of Hollywood Boulevard and transferring the circuit to the new cable. The existing pipe south of Hollywood Boulevard would be abandoned in place.
- Raising an existing transmission tower along the existing TOL-HWD L1 and lowering a portion of an existing Burbank Water and Power (BWP) distribution line that crosses under the TOL-HWD L1.
- Making modifications to the Nichols Canyon Terminal Tower and the Hollywood Receiving Station to accommodate the system upgrade.

Figure 1 shows the regional vicinity of the proposed project area. **Figure 2** shows the Toluca-Hollywood project area.

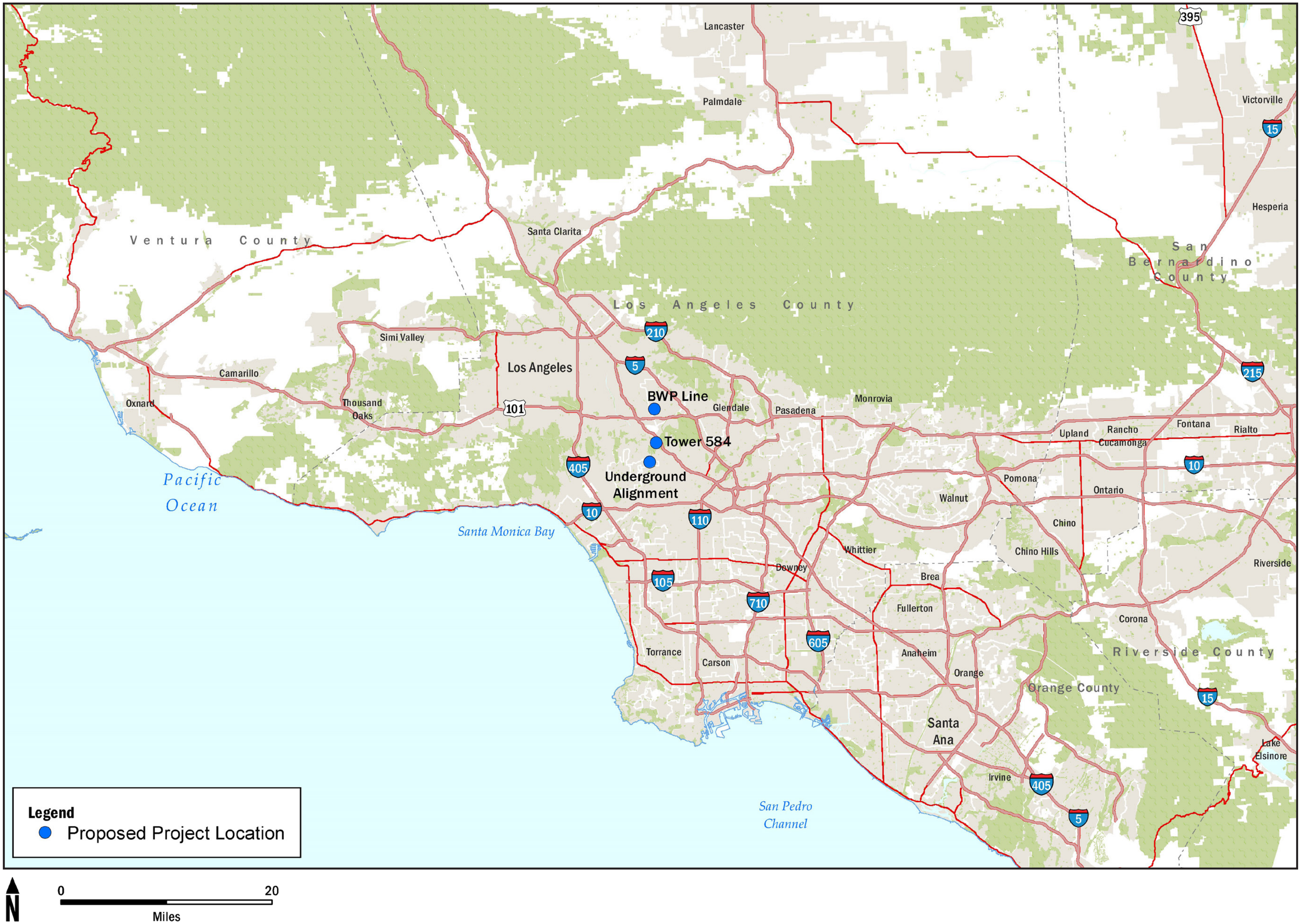
CONSTRUCTION SCHEDULE

Construction for the proposed project would span approximately three years and is preliminarily scheduled to begin in mid-2023 with an in-service date of Spring 2026. Within the approximate three-year span, construction of the underground alignment is anticipated to occur in two parts: (1) an approximately two-year period for the trench/conduit and vault installation (south of Hollywood Boulevard) and the Tower 584 raise, anticipated between mid-2023 and mid-2025; and (2) an approximate 6-month period (with a 5-month transmission line outage) for the Nichols Canyon Road pipe replacement and the modifications at the terminal tower and receiving station, along with final connections, commissioning, and testing anticipated between late 2025 and early 2026.

It should be noted the BWP line lowering would occur in advance of the approximate three-year construction period. The BWP line lowering would be a short-duration activity of approximately 30 days. The City of Los Angeles Rush Hour Ordinance limits in-street construction on weekdays to the hours of 9:00 a.m. through 3:30 p.m. Construction hours would be limited to Monday through Friday from 9:00 a.m. to 3:30 p.m., and Saturday from 8:00 a.m. to 6:00 p.m.

CONSTRUCTION ACTIVITIES

The following is a brief summary of construction activities. Refer to the Project Description of the Initial Study/Mitigated Negative Declaration for additional construction details.



Source: AECOM, 2022.

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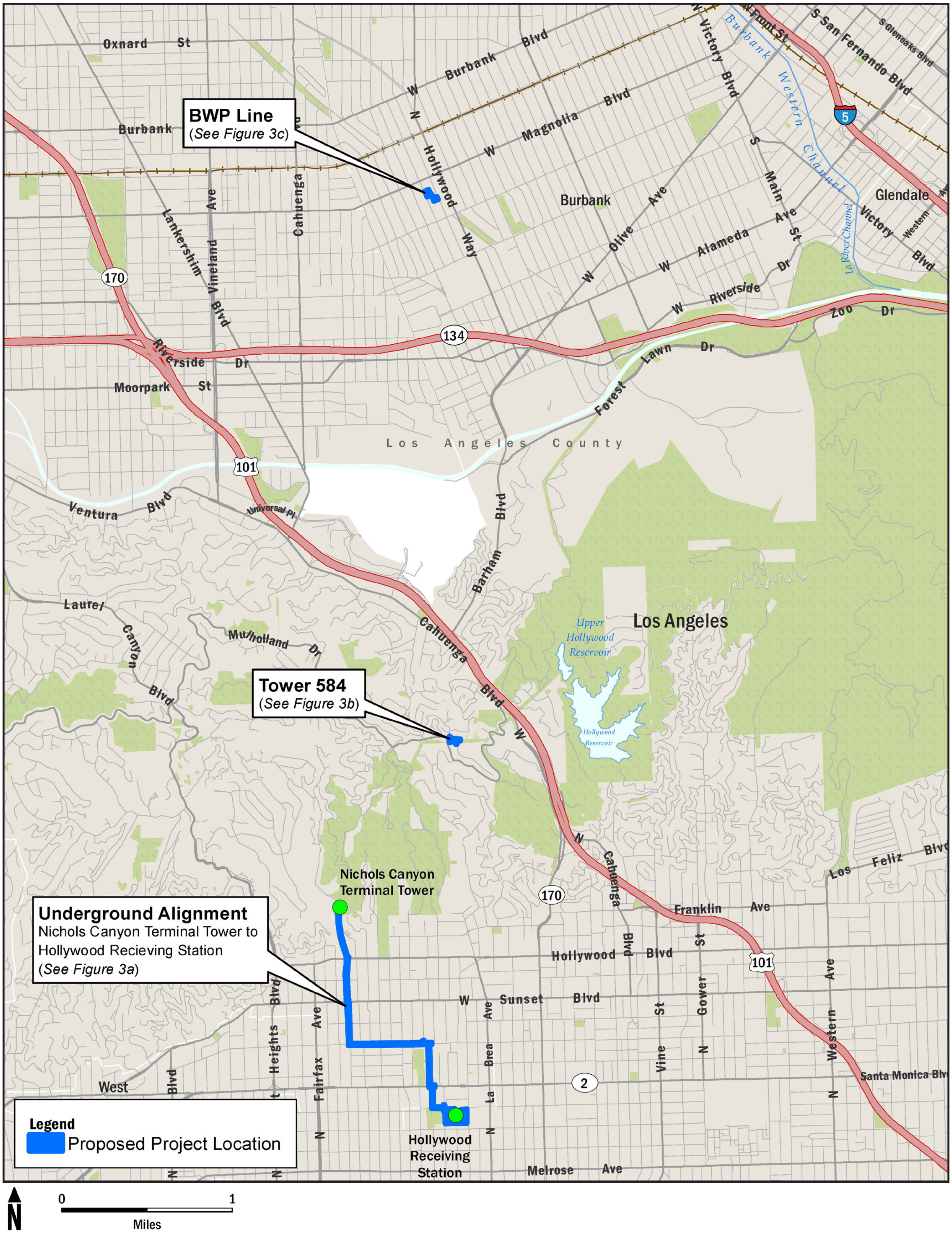
FIGURE 1

REGIONAL LOCATION



Source: AECOM, 2022.

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FIGURE 2

PROJECT LOCATION

- **BWP Distribution Line Lowering:** BWP would lower the distribution line (i.e., by moving the distribution line and other wires to a lower position on their poles and cutting off the pole tops). This activity would primarily involve hand tools along with tool trucks, bucket trucks, and lifts.
- **Maintenance Vault Excavation:** A total of eight (8) maintenance vaults would be installed along the proposed project corridor. The vault holes would be excavated approximately 12 feet wide, 35 feet long, and 15 feet deep to accommodate the precast maintenance vaults along the proposed transmission line alignment. This activity would primarily be completed using backhoes, excavators and dump trucks.
- **Maintenance Vault Installation**: The precast maintenance vaults would be installed within the roadway, between approximately 850 and 1,100 feet apart, along the underground transmission line alignment. This activity would primarily be completed using cranes and concrete trucks.
- **Trenching for Duct Banks**: The underground transmission line would be installed using open-cut trenching techniques. The typical trench would be approximately three feet wide and six feet deep. When segments of the trench are restored, more trenching would occur further down the street until the conduit system is installed for the entire alignment. This activity would primarily be completed using backhoes, dump trucks, and concrete trucks.
- **Cable Pulling, Splicing, and Termination**: Once the conduit is in place, cable segments between two maintenance vaults would be pulled into the ducts. Cable pulling would be completed using equipment attached to winch trucks.
- **Roadway Restoration**: Roadways would be restored using asphalt pavers and compaction rollers.
- **Tower 584 Raising:** The tower located near the intersection of Mulholland Drive and Macapa Drive would be raised in five-foot segments (to a maximum of 15 feet) using a proprietary process that employs hydraulic jacks to raise transmission line towers. In addition to raising the tower, foundation work would also be done at the tower. Construction at Tower 584 would typically include the use of a hydraulic lift equipment, boom lift truck, crane, drilling rig, excavator, and concrete trucks.
- **Nichols Canyon Road Pipe Replacement:** North of Hollywood Boulevard along Nichols Canyon Road the existing underground alignment would be used for the proposed XLPE cable due to space constraints from a number of existing underground utilities. This would involve draining and cleaning the existing pipe, trenching and removing the existing pipe and cable, and installing a new underground pipe and cable within the same trench/alignment. This activity would be primarily completed using a backhoes, excavators, tank trucks, equipment attached to winch trucks, and road repair equipment.
- **Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station:** Modifications within the Nichols Canyon Terminal Tower and Hollywood Receiving Station properties (i.e., replacement of concrete pad, subsurface support structure, and aboveground rack) would be required to connect the underground portion of the cable to associated above ground equipment. The existing pump houses and accompanying tanks within the terminal tower and receiving station would be demolished and removed, as they would no longer be supporting an oil-filled cable. Additionally. within the Hollywood Receiving Station property, the existing pipe and cable would be abandoned and trenching for a new pipe/cable alignment (approximately 350 feet in length) would be performed. These activities would be primarily completed using a backhoes, excavators, cranes, dump trucks, concrete trucks, tank trucks, equipment attached to winch trucks, and road repair equipment.

PROJECT OPERATIONS

Annual inspections of the integrity of the transmission line would be performed and would include the inspection of all of the structures at the stations and maintenance vaults for corrosion and misalignment. The maintenance activities listed below may require the temporary closure of a single roadway lane for the duration of the activity. No other operational activities resulting from the proposed project would occur. Activities associated with long-term operations and maintenance would be minimal.

Noise and Vibration Topical Information

The standard unit of measurement for noise is the decibel (dB). The human ear is not equally sensitive to sound at all frequencies. The A-weighted scale, abbreviated dBA, reflects the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately 3 to 140 dBA. The noise analysis discusses sound levels in terms of Equivalent Noise Level (L_{eq}). L_{eq} is the average noise level on an energy basis for any specific time period. The L_{eq} for one hour is the energy average noise level during the hour. The average noise level is based on the energy content (acoustic energy) of the sound. L_{eq} can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. The equivalent noise level is expressed in units of dBA.

Noise levels decrease as the distance from the noise source to the receiver increases. Noise generated by a stationary noise source, or "point source," decreases by approximately 6 dBA over hard surfaces (e.g., reflective surfaces such as parking lots or smooth bodies of water) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt, grass, or scattered bushes and trees) for each doubling of the distance. For example, if a noise source produces a noise level of 89 dBA at a reference distance of 50 feet, then the noise level is 83 dBA at a distance of 100 feet from the noise source, 77 dBA at a distance of 200 feet over a hard surface.

Noise generated by a mobile source decreases by approximately 3 dBA over hard surfaces and 4.8 dBA over soft surfaces for each doubling of the distance. Generally, noise is most audible when the source is in a direct line-of-sight of the receiver. Solid barriers, such as walls, berms, or buildings that break the line-of-sight between the source and the receiver greatly reduce noise levels from the source since sound can only reach the receiver by bending over the top of the barrier. However, if a barrier is not sufficiently high or long to break the line-of-sight from the source to the receiver, its effectiveness is greatly reduced.

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of vibration are trains, buses on rough roads, and construction activities, such as rock blasting, pile driving, and heavy earth-moving equipment. High levels of vibration may cause physical personal injury or damage to buildings. However, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that may affect concentration or disturb sleep. In addition, high levels of vibration may damage fragile buildings or interfere with equipment that is highly sensitive to vibration (e.g., electron microscopes).

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The VdB acts to compress the range of numbers required to describe vibration.[1]

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[1]FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

Existing Setting

To characterize the existing noise environment around the project area, ambient noise was monitored using a SoundPro DL Sound Level Meter on Tuesday, February 1, 2022, from 10:00 a.m. to 2:00 p.m. in 15-minute increments. This time of day represents a typical construction time without the added noise source of peak hour traffic. Monitored noise levels ranged from 55.8 to 75.8 dBA L_{eq}. Traffic was the primary source of noise at each site. The monitoring locations are shown in **Figure 3A** through **Figure 3C** and monitored noise levels are shown in **Table 1**.

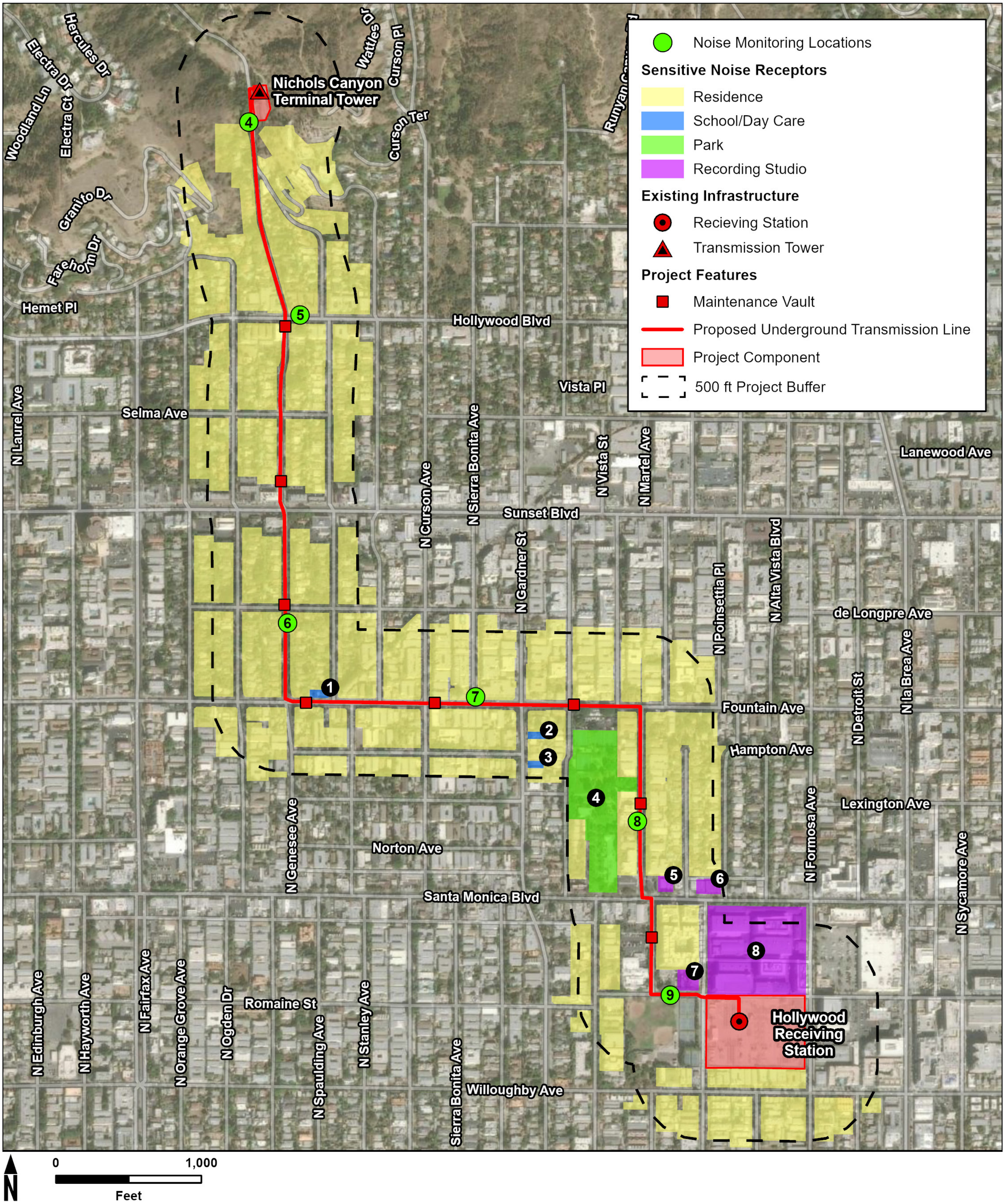
TABLE 1: EXISTING AMBIENT NOISE LEVELS AT MONITORING LOCATIONS

Noise Monitoring Site (Figures 3A – 3C)	Noise Monitoring Location	Noise Level (dBA, L_{eq})
1	Tower 556	55.8
2	Clark Avenue/Screenland Dr.	60.5
3	7187 Macapa Dr.	56.1
4	2025 Nichols Canyon Rd.	64.3
5	7714 Hollywood Blvd.	75.8
6	1334 Genesee Ave.	60.4
7	7665 Fountain Ave.	72.7
8	1215 Fuller Ave.	57.3
9	Fuller Ave./Romaine St.	57.1
SOURCE: TAHA, 2022.		

The area surrounding the proposed project is characterized by low-rise single and multi-family residential structures, retail and service commercial uses, and institutional uses such as schools, parks, daycares, and movie studios. Sensitive receptors are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land, and typically include residences, schools, parks, and recording studios. Parks with active uses (baseball fields, tennis courts) are not considered sensitive to noise. As shown in **Figure 3A** through **Figure 3C**, sensitive receptors are located within 500 feet of the proposed construction activities. In addition, non-residential sensitive receptors are identified in **Table 2**.

TABLE 2: NON-RESIDENTIAL SENSITIVE RECEPTORS

Figure 3A - 3C ID. No.	Sensitive Receptor
1	Fountain Kids Academy Day Care
2	Walther School
3	Gardner Little School
4	Plummer Park
5	Invisible Studios Recording Studio
6	Westlake Studios Recording Studio
7	Quixote Studios - West Hollywood (Stage 5) Studios
8	The Lot at Formosa Televisions Studios
SOURCE: TAHA, 2022.	



Source: TAHA, 2022.

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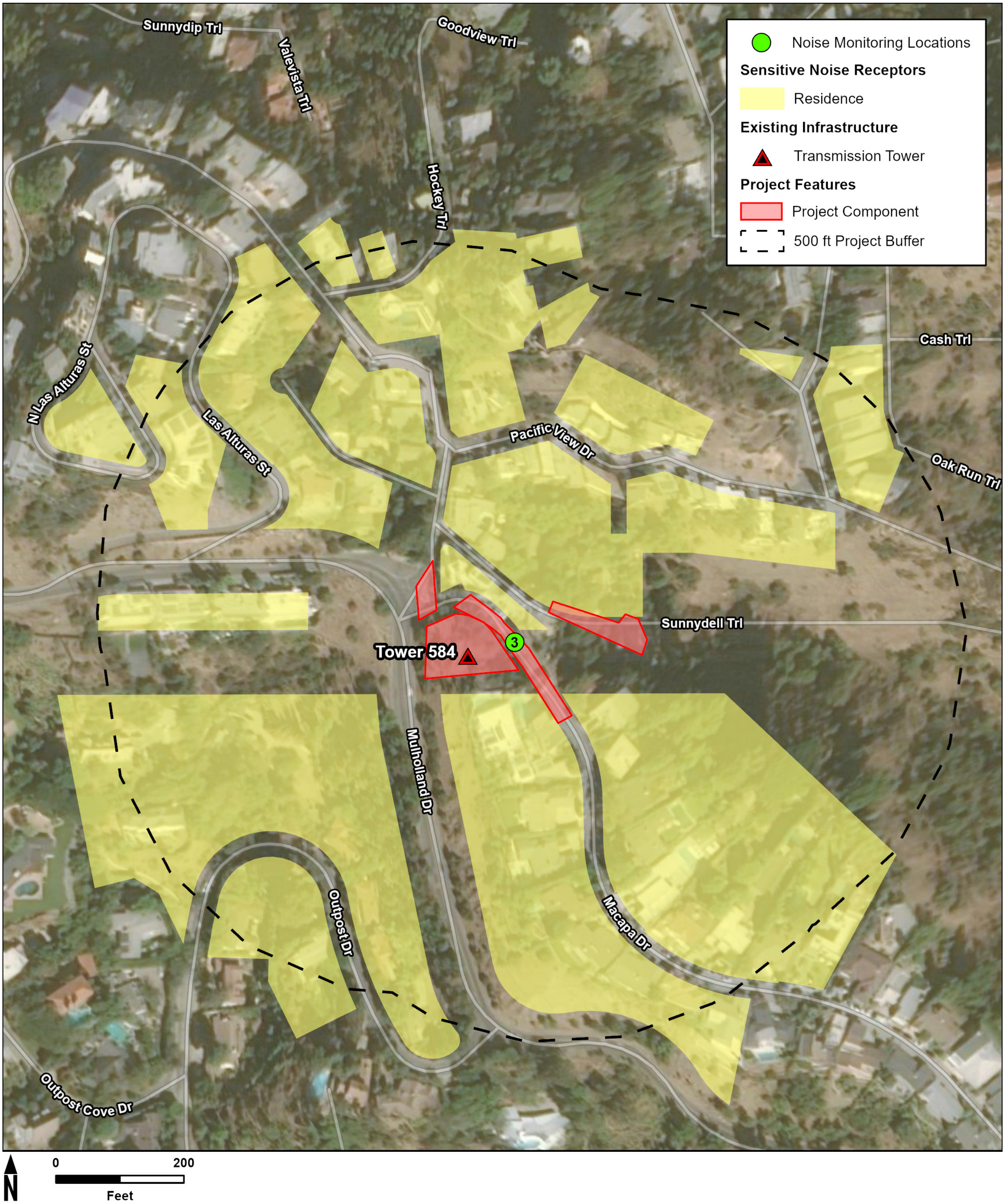
FIGURE 3A

NOISE MONITORING LOCATIONS AND SENSITIVE RECEPTORS



Source: TAHA, 2022.

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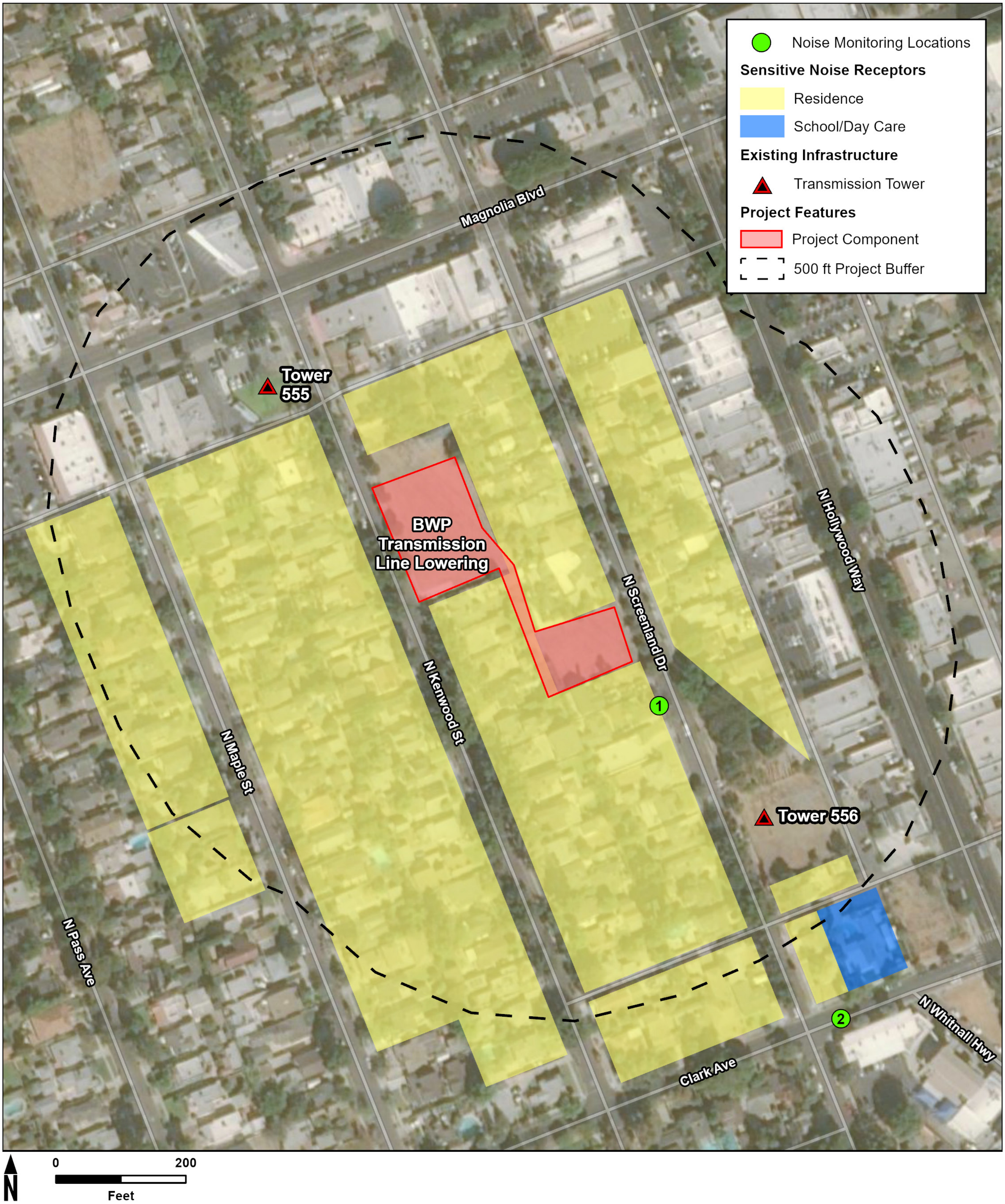
FIGURE 3B

NOISE MONITORING LOCATIONS AND SENSITIVE RECEPTORS



Source: TAHA, 2022.

FIGURE 3C

NOISE MONITORING LOCATIONS AND SENSITIVE RECEPTORS

Regulatory Framework

NOISE

Federal. The Noise Control Act of 1972 established programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In 1981, the United States Environmental Protection Agency (USEPA) determined that subjective issues such as noise would be better addressed at local levels of government, thereby allowing more individualized control for specific issues by designated federal, state, and local government agencies. Consequently, in 1982, responsibilities for regulating noise control policies were transferred to specific federal agencies, and state and local governments. However, noise control guidelines and regulations contained in the USEPA rulings in prior years remain in place.

State. The State of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, sound transmission through buildings, occupational noise control, and noise insulation. State regulations governing noise levels generated by individual motor vehicles and occupational noise control are not applicable to planning efforts, nor are these areas typically subject to CEQA analysis.

Local. As discussed above, the proposed project facilities would be located entirely underground and therefore would not create perceptible noise during operation. In addition, maintenance and repair activities, and the noise associated with these activities, would be comparable to current conditions after project implementation. Therefore, the following summary of local regulations focuses on those that pertain to noise that would be created by project construction activities.

The City of Los Angeles has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise-sensitive land uses. Regarding construction, Los Angeles Municipal Code (LAMC) Section 41.40 (Noise Due to Construction, Excavation Work – When Prohibited) states that no construction or repair work shall be performed between the hours of 9:00 p.m. and 7:00 a.m. on Monday through Friday since such activities would generate loud noises and disturb persons occupying sleeping quarters in any adjacent dwelling, hotel, apartment, or other place of residence. Further, no person, other than an individual homeowner engaged in the repair or construction of his/her single-family dwelling, shall perform any construction or repair work of any kind or perform such work within 500 feet of land so occupied before 8:00 a.m. or after 6:00 p.m. on any Saturday, nor at any time on any Sunday or on a federal holiday. Under certain conditions, the City may grant a waiver to allow limited construction activities to occur outside of the limits described above.

LAMC Section 112.05 (Maximum Noise Level of Powered Equipment or Powered Hand Tools) specifies the maximum noise level of powered equipment or powered hand tools. Any powered equipment or hand tool that produces a maximum noise level exceeding 75 dBA is prohibited. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means the above noise limitation cannot be met despite the use of mufflers, shields, sound barriers and/or any other noise-reduction device or techniques during the operation of equipment.

The City of Burbank Municipal Code has designated hours of construction applicable to all construction, alteration, movement, enlargement, replacement, repair, equipment, maintenance, removal and demolition work. Chapter 9-1-1-105.8 of the BMC prohibits construction activity between 7:00 PM and 7:00 AM Monday through Friday, between 5:00 PM and 8:00 AM on Saturdays, and at any time on Sundays or national holidays.

VIBRATION

The City has not established significance thresholds related to vibration. In the absence of City thresholds, Federal Transit Administration (FTA) guidance may be used to assess the potential for vibration-related damage and annoyance.[2] For damage, the impact criteria are established based on the structural foundation of the potentially impacted building. Site visits indicate that residential buildings near the project area are generally constructed with non-engineered timber and masonry, and larger buildings (such as hospitals) near the project area are constructed with reinforced-concrete, steel or timber. Vibration levels that exceed a peak particle velocity (PPV) of 0.2 inches per second could potentially damage non-engineered timber and masonry buildings and vibration levels that reach 0.5 inches per second could potentially damage reinforced-concrete, steel, or timber buildings. Historic uses are held to a vibration damage threshold of 0.12 inches per second, as they are more sensitive to vibration damage than newer structures. The most stringent annoyance criteria related to annoyance is 65 VdB for buildings subject to frequent vibration events (e.g., multiple equipment passbys). The frequent event annoyance criteria for residences and institutional land uses with primarily daytime use are 72 and 75 VdB, respectively.

Significance Thresholds

NOISE

Because project operations would not create perceptible noise and noise-generating maintenance and repair activities would be comparable to existing conditions this assessment only considers construction noise. The assessment was undertaken to determine whether construction activities for the proposed project would have the potential to result in significant environmental impacts related to noise or vibration in the context of the Appendix G Environmental Checklist criteria of the CEQA Guidelines. Implementation (i.e., construction) of the proposed project may result in a significant environmental impact related to noise and vibration if the proposed project would result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
b) Generation of excessive ground-borne vibration or ground-borne noise levels; and/or
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

The proposed project would exceed the local standards and substantially increase temporary construction noise levels if construction activities would occur within 500 feet of a noise-sensitive use and outside the hours allowed in the LAMC. The allowable hours of construction in the LAMC include 7:00 a.m. to 9:00 p.m. Monday through Friday and 8:00 a.m. to 6:00 p.m. on Saturday. In addition, the LAMC states that equipment noise levels should not exceed 75 dBA L_{eq} unless technically infeasible.

VIBRATION

Because project operations would not create perceptible vibration and vibration-generating maintenance and repair activities comparable to existing conditions, this assessment only consider construction vibration. The construction--+related vibration analysis considers the potential for building damage and annoyance. Maximum vibration levels were assessed based on frequent vibration events happening more than 70 times in one day, which would be consistent with the movement of construction equipment. The proposed project would result in a significant construction vibration impact if:

- Vibration levels would exceed 0.12 inches per second at historic structures.
- Vibration levels would exceed 0.2 inches per second at non-historic structures constructed of non-engineered timber and masonry.
- Vibration levels would exceed 65 VdB at sensitive buildings, such as recording studios and medical facilities.

[2]FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

Methodology

NOISE

The noise and vibration analyses consider construction sources. Noise levels associated with typical construction equipment were obtained from the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM).[3] This model predicts noise from construction based on a compilation of empirical data and the application of acoustical propagation formulas. Maximum equipment noise levels were adjusted based on anticipated percent of use. Combined construction activity noise levels were estimated by combining anticipated equipment for each activity using RCNM. The projected noise level during the construction period at receptors was calculated by (1) making a distance adjustment to the construction source sound level and (2) logarithmically adding the adjusted construction noise source level to the ambient noise level.

According to California Department of Transportation (Caltrans) guidance, air temperature and humidity affect molecular absorption differently depending on the frequency spectrum and can vary significantly over long distances in a complex manner. Molecular absorption in air also reduces noise levels with distance. However, according to Caltrans, this phenomenon only accounts for about 1 dBA per 1,000 feet, which is an inaudible and negligible difference in noise levels. Noise levels for this analysis have been estimated using a decrease of 6 dBA over hard surfaces for each doubling of the distance. The methodology and formulas obtained from the Caltrans Technical Noise Supplement can be viewed below.

(1) Noise Distance Attenuation Formula: $dBA_2 = dBA_1 + C \times LOG_{10} (D_1/D_2)$

Where:

dBA_1 *= Noise level at the reference distance of 50 feet*

dBA_2 *= Noise level at the receptor*

C = Coefficient for hard ground or soft ground

Hard ground C = 20
Soft ground C = 25

D_1 *= Reference distance (50 feet)*

D_2 *= Distance from source to receptor (measured distance)*

(2) Logarithmic Noise Level Addition Formula: $Ns = 10*LOG_{10}((10^{(N1/10)})+(10^{(N2/10)}))$

Where:

Ns = Noise level Sum

N1 = Noise level one

N2 = Noise level two

VIBRATION

Vibration levels were estimated using example vibration levels and propagation formulas provided by FTA.[4] The methodology and formulas obtained from the FTA Transit Noise and Vibration Assessment guidance can be viewed below. Vibration damage is assessed using formula (3) and vibration annoyance is assessed using formula (4).

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[3] FHWA, *Roadway Construction Noise Model*, Version 1.1, August 2008.
[4] FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

(3) *Vibration Damage Attenuation Formula:* $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

Where:

PPV_{equip} *= Peak particles velocity in inches per second of the equipment adjusted for distance*

PPV_{ref} *= Reference vibration level in inches per second at 25 feet*

D = Distance from the equipment to the receptor in feet

(4) *Vibration Annoyance Attenuation Formula:* $Lv_{equip} = Lv_{ref} - 30 \times LOG\ (D/25)$

Where:

Lv_{equip} *= Vibration level in vibration decibels of equipment adjusted for distance*

Lv_{ref} *= Reference vibration level in vibration decibels at 25 feet*

D = Distance from the equipment to the receptor in feet

Impact Assessment

a) Would the proposed project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Less-Than-Significant Impact with Mitigation Incorporated)

Noise impacts from construction of the proposed project would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. Construction activities typically require the use of numerous pieces of noise-generating equipment. Typical noise levels from various types of equipment that would be used during construction are listed in **Table 3**. Noise levels from individual pieces of equipment typically are between 70.3 and 83.3 dBA L_{eq} at 50 feet.

TABLE 3: NOISE LEVEL RANGES OF TYPICAL CONSTRUCTION EQUIPMENT	
Construction Equipment	**Noise Level at 50 feet (dBA)**
Asphalt paver	74.2
Backhoe	73.6
Compaction Roller	73.0
Concrete Pump Truck	74.4
Concrete Truck	74.8
Crane	72.6
Drilling Rig	77.4
Dump Truck	72.5
Excavator	76.7
Flatbed Truck (Stake Bed/Tank Truck)	70.3
Material Delivery Truck	70.3
Mounted Impact Hammer	83.3
Pickup Truck	71.0
Pickup Truck (Winch Truck)	71.0
Water Truck	71.0
SOURCE: FHWA, *Roadway Construction Noise Model*, Version 1.1, 2008.	

To more accurately characterize construction-period noise levels, the noise levels shown in **Table 4** take into account the likelihood that multiple pieces of construction equipment would be operating simultaneously and the typical overall noise levels that would be expected. Some pieces of equipment would be used only for certain tasks (e.g., concrete saw to cut pavement, an excavator would only be used to excavate), and they would not operate continuously during the day and generally would not operate simultaneously. Therefore, combined noise levels take into account only construction equipment that would likely be operated simultaneously.

MAINTENANCE VAULT EXCAVATION AND INSTALLATION

The maintenance vaults would be installed within the roadway, between approximately 850 and 1,100 feet apart, along the proposed transmission line alignment. The vault location would first be excavated and then the precast sections of the maintenance vault would be delivered and assembled in the excavated hole. Maintenance vault excavation and installation is anticipated to generate an average noise level of approximately 74.9 dBA, L_{eq} to 78.1 dBA, L_{eq}. Maintenance vault excavation and installation would affect the same receptors as open trench construction. Open trench construction would result in greater average noise levels than maintenance vault construction and has therefore been conservatively utilized as the basis of this analysis.

TABLE 4: REPRESENTATIVE PHASED CONSTRUCTION NOISE LEVELS

Construction Phases and Equipment	Noise Level at 50 feet (dBA, L_{eq})
MAINTENANCE VAULT EXCAVATION	
Backhoe	73.6
Dump Truck /a/	72.5
Excavator /a/	76.7
Pickup Truck	71.0
Water Truck	71.0
Maintenance Vault Excavation Combined	**78.1**
MAINTENANCE VAULT INSTALLATION	
Concrete Pump Truck	74.4
Concrete Truck	74.8
Crane (250 ton) /a/	72.6
Pickup Truck /a/	71.0
Maintenance Vault Installation Combined	**74.9**
TRENCHING FOR DUCT BANKS	
Backhoe /a/	73.6
Concrete Pump Truck	74.4
Concrete Truck	74.8
Dump Truck	72.5
Mounted Impact Hammer /a/	83.3
Pickup Truck	71.0
Trenching for Duct Banks Combined	**83.7**
INSTALLATION OF NEW XLPE CABLE, CABLE PULLING, SLICING, AND TERMINATION	
Flatbed Truck (Stake Bed)	70.3
Pickup Truck (Winch Truck)	71.0
Installation of New XLPE Cable, Cable Pulling, Slicing, and Termination Combined	**73.7**
ROADWAY RESTORATION	
Paver/a/	74.2
Roller Compactor /a/	73.0
Roadway Restoration Combined	**76.7**
BWP DISTRIBUTION LINE LOWERING	
Handheld Equipment	N/A
Pickup Truck	71.0
Man Lift (2) /a/	70.7
BWP Distribution Line Lowering Combined	**70.7**

TABLE 4: REPRESENTATIVE PHASED CONSTRUCTION NOISE LEVELS	
Construction Phases and Equipment	**Noise Level at 50 feet (dBA, L_{eq})**
TOWER 584 RAISE	
Backhoe	73.6
Concrete Trucks	74.8
Drilling Rig	77.4
Excavator /a/	76.7
Crew Trucks	71.0
Material Delivery Truck	70.3
Dump Trucks /a/	72.5
Tower 584 Raise Combined	**78.1**
MODIFICATIONS AT NICHOLS CANYON TERMINAL TOWER AND HOLLYWOOD RECEIVING STATION	
Backhoe	73.6
Concrete Truck	74.8
Crane	72.6
Dump Truck /a/	72.5
Excavator /a/	76.7
Flatbed Truck (Stake Bed/Tank Truck)	70.3
Pickup Truck (Winch Truck)	71.0
Combined Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station Noise Level	**78.1**
Combined Open-Trench Construction and Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station Noise Level	**84.8**
/a/ Construction equipment that would be used simultaneously during construction phase and that would create the loudest noise level by phase. **SOURCE**: FHWA, *Roadway Construction Noise Model*, Version 1.1, 2008.	

OPEN TRENCH CONSTRUCTION: TRENCHING FOR DUCT BANKS, INSTALLATION OF NEW XLPE CABLE, AND ROADWAY RESTORATION

The underground transmission line would be installed using open-cut trenching techniques that would require an approximately 10- to 15-foot-wide temporary construction corridor. Open-trench construction would begin with pavement breaking and trenching for the duct banks. Conduits would be installed and then concrete would be poured over the conduits and compacted. The open-cut trenching stage of construction would result in the loudest average noise level of approximately 83.7 dBA, L_{eq}. The new XLPE cable would then be placed at one maintenance vault then pulled to the next maintenance vault. Installation of the cable would use minimal equipment such as a flatbed truck for delivery of the cables and a winch truck to pull the cables. The average noise levels related to installation of the cable would be approximately 73.7 dBA, L_{eq}. After completion of this work the roadway would be restored utilizing a roller and compactor. The average noise level of this phase would be approximately 76.7 dBA, L_{eq}.

Open-trench construction, installation of the XLPE cable, and roadway restoration would occur within Nichols Canyon Road, Genesee Avenue, Fountain Avenue, Fuller Avenue, and Romaine Street ROW. Conservatively, the open-trench construction average noise level of approximately 83.7 dBA, L_{eq} has been utilized as the reference noise level for this phase. **Table 5** (Nichols Canyon Road), **Table 6** (Genesee Avenue)**, Table 7** (Fountain Avenue), **Table 8** (Fuller Avenue), **Table 9** (Romaine Street) present the estimated maximum construction noise levels related to open-trench construction at sensitive receptors within 500 feet of each segment of the proposed project. The LAMC limits equipment noise levels to 75 dBA L_{eq} unless technically infeasible. Noise levels would exceed 75 dBA at first row sensitive receptors, and the threshold would typically not be exceeded at distances of 150 feet or greater.

TABLE 5: OPEN TRENCH CONSTRUCTION NOISE LEVELS AT RECEPTORS – NICHOLS CANYON ROAD

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) /a/	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
FIRST BUILDING ROW RECEPTORS				
Residences along Nichols Canyon Rd.	50	64.3	83.7	Yes
Residences along Stanley Ave.	170	64.3	73.1	No
Residences along Granito Dr.	500	64.3	63.7	No
Residences to the north along Nichols Canyon Road	500	64.3	63.7	No
SECOND BUILDING ROW RECEPTORS				
Residences along Courtney Ave. and Ogden Ave.	150	64.3	69.7	No
THIRD BUILDING ROW RECEPTORS				
Residences along Courtney Ave., Ogden Ave. and Nichols Canyon Rd.	300	64.3	62.1	No

/a/ The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
SOURCE: TAHA, 2022.

TABLE 6: OPEN TRENCH CONSTRUCTION NOISE LEVELS AT RECEPTORS – GENESEE AVENUE

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) /a/	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
FIRST BUILDING ROW RECEPTORS				
Residences along Genesee Ave.	50	60.4	83.7	Yes
Residences along Hollywood Blvd.	50	75.8	83.7	Yes
Residences along Nichols Canyon Rd.	80	64.3	79.6	Yes
SECOND BUILDING ROW RECEPTORS				
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	180	60.4	68.1	No
THIRD BUILDING ROW RECEPTORS				
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	350	60.4	60.8	No

/a/ The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
SOURCE: TAHA, 2022.

TABLE 7: OPEN TRENCH CONSTRUCTION NOISE LEVELS AT RECEPTORS – FOUNTAIN AVENUE

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) /a/	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
FIRST BUILDING ROW RECEPTORS				
Residences along Fountain Ave.	50	72.7	83.7	Yes
Fountain Kids Academy Day Care	50	72.7	83.7	Yes
Invisible Studios	80	72.7	79.6	Yes
Residences north and south of Fountain Ave.	100	72.7	77.7	Yes
Wahlter School	180	72.7	72.6	No
SECOND BUILDING ROW RECEPTORS				
Residences north and south of Fountain Ave.	200	72.7	67.2	No
Plummer Park Passive Recreation Uses	320	72.7	63.1	No
THIRD BUILDING ROW RECEPTORS				
Residences north and south of Fountain Ave.	350	72.7	60.8	No
Gardner Little School Day Care	370	72.7	60.3	No

/a/ The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
SOURCE: TAHA, 2022.

TABLE 8: OPEN TRENCH CONSTRUCTION NOISE LEVELS AT RECEPTORS – FULLER AVENUE

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) /a/	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
FIRST BUILDING ROW RECEPTORS				
Residences along Fuller Ave.	50	57.3	83.7	Yes
Plummer Park Passive Recreation Uses	50	57.3	83.7	Yes
Residences west of Fuller Ave.	220	57.3	70.8	No
Quixote Studios - West Hollywood (Stage 5)	250	57.3	69.7	No
Residences south of Romaine St.	500	57.3	63.7	No
SECOND BUILDING ROW RECEPTORS				
Residences east of Fuller Ave.	200	57.3	67.2	No
Westlake Studios	350	72.7	62.3	No
Residences west of Fuller Ave.	360	57.3	62.1	No
THIRD BUILDING ROW RECEPTORS				
Residences east of Fuller Ave.	320	57.3	61.6	No

/a/ The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
SOURCE: TAHA, 2022.

TABLE 9: OPEN TRENCH CONSTRUCTION NOISE LEVELS AT RECEPTORS – ROMAINE STREET

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) /a/	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
FIRST BUILDING ROW RECEPTORS				
Quixote Studios - West Hollywood (Stage 5)	50	57.1	83.7	Yes
Residences along Romaine St.	50	57.1	83.7	Yes
The Lot at Formosa	70	57.1	80.8	Yes
Residences north of Romaine St.	180	57.1	72.6	No
Residences southwest of Romaine St.	250	57.1	69.7	No
Residences south of Romaine St.	500	57.1	63.7	No

/a/ The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
SOURCE: TAHA, 2022.

BWP DISTRIBUTION LINE LOWERING

BWP would lower the distribution line (i.e., by moving the distribution line and other wires to a lower position on their poles and cutting off the pole tops). BWP distribution line lowering is anticipated to involve hand tools, pickup trucks and man lifts and would generate limited noise. Equipment is anticipated to intermittently generate noise levels between 70.7 dBA, L_{eq} and 71.0 dBA, L_{eq}. The proposed project would comply with the allowable hours of construction of 7:00 AM to 7:00 PM Monday through Friday and 8:00 AM to 5:00 PM on Saturdays and would not violate the City of Burbank Municipal Code.

TOWER 584 RAISE

Raising of Tower 584 would include the use of hydraulic jacks to raise the tower. In addition to raising the tower, foundation work would also be done at the tower. Construction at Tower 584 would typically include the use of a crane, drilling rig, excavator, and concrete trucks. The average noise levels during Tower 584 work would be approximately 78.1 dBA, L_{eq}. **Table 10** presents the estimated maximum construction noise levels related to Tower 584 construction at sensitive receptors within 500 feet of the work zone The LAMC limits equipment noise levels to 75 dBA L_{eq} unless technically infeasible. Noise levels would exceed 75 dBA at first row sensitive receptors, and the threshold would typically not be exceeded at distances of 100 feet or greater.

TABLE 10: TOWER 584 CONSTRUCTION NOISE LEVELS AT RECEPTORS

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) /a/	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
FIRST BUILDING ROW RECEPTORS				
Residences adjacent to Tower 584	50	56.1	78.1	Yes
Residences	100	56.1	72.1	No
Residences	200	56.1	66.1	No
Residences	400	56.1	55.5	No

/a/ The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
SOURCE: TAHA, 2022.

MODIFICATIONS AT NICHOLS CANYON TERMINAL TOWER AND HOLLYWOOD RECEIVING STATION.

Modifications to support the system upgrade at the Nichols Canyon Terminal Tower and Hollywood Receiving Station properties would include replacement of the existing concrete pad and support structure of the existing TOL-HWD L1 rack, removal and replacement of the aboveground TOL-HWD L1 rack/equipment, subsurface structural supports for the replacement rack, and removal of the existing pump houses and accompanying tanks that would no longer be needed. It should be noted, construction activity at the Hollywood Receiving Station property would primarily occur within the northern central portion of the property which would reduce noise levels for sensitive receptors to the south of the Hollywood Receiving Station property. The average noise levels during this activity would be approximately 78.1 dBA, L_{eq}. These two properties would also require open-cut trenching activities for the underground TOL-HWD L1 cable within the respective property limits. This activity could potentially overlap with the other modifications that would occur within the Nichols Canyon Terminal Tower and Hollywood Receiving Station properties. Therefore, a combined reference noise level of 84.8 dBA, L_{eq} for the combination of trenching activities and the modifications has been used as the basis of the analysis. **Table 11** (Nichols Canyons Terminal Tower) and **Table 12** (Hollywood Receiving Station) present the estimated maximum construction noise levels related to modifications at the two properties at sensitive receptors within 500 feet of the work zones. The LAMC limits equipment noise levels to 75 dBA L_{eq} unless technically infeasible. Noise levels would exceed 75 dBA at first row sensitive receptors, and the threshold would typically not be exceeded at distances greater than 150 feet.

TABLE 11: MODIFICATIONS AT NICHOLS CANYON TERMINAL TOWER

Sensitive Receptor	Distance (feet)	Existing Noise Level (dBA) /a/	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
FIRST BUILDING ROW RECEPTORS				
Residences adjacent to Nichols Canyon Terminal Tower	85	64.3	80.2	Yes
Residences along Nichols Canyon Rd.	150	64.3	75.3	Yes
Residences	200	64.3	72.8	No
Residences	400	64.3	66.7	No

/a/ The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
SOURCE: TAHA, 2022.

TABLE 12: MODIFICATIONS AT HOLLYWOOD RECEIVING STATION

Sensitive Receptor	Distance (feet) /a/	Existing Noise Level (dBA) /b/	Project Noise Level (dBA)	Exceed Threshold (75 dBA, L_{eq})
FIRST BUILDING ROW RECEPTORS				
The Lot at Formosa to the north	90	57.1	79.7	Yes
Quixote Studios - West Hollywood (Stage 5)	100	57.1	78.8	Yes
Residences to the south	300	57.1	69.2	No
SECOND BUILDING ROW RECEPTORS				
Residences along Poinsettia Pl.	230	57.1	67.0	No

/a/ Distance from the construction work zone, not property line.
/b/ The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
SOURCE: TAHA, 2022.

ON-SITE CONSTRUCTION NOISE SUMMARY

Construction activities would occur Monday through Friday, and workers would typically be onsite for eight hours per day from 7:00 a.m. to ending by late afternoon. No work outside of these hours, or work on weekends or national holidays, is anticipated. Construction activity would therefore comply with the allowable hours of construction in the LAMC, including 7:00 a.m. to 9:00 p.m. Monday through Friday, 8:00 a.m. to 6:00 p.m. on Saturday, and no construction activity on Sundays or federal holidays. Construction related to the BWP distribution line lowering would comply with the Burbank Municipal does allowable hours of construction, including 7:00 a.m. to 7:00 p.m. Monday through Friday, 8:00 a.m. to 5:00 p.m. on Saturday, and no construction activity on Sundays or federal holiday. Nonetheless, construction activity during the open trench construction, terminal tower/receiving station modifications, and raising of Tower 584 would result in noise levels that would exceed the LAMC 75 dBA threshold, typically at first row receptors. Therefore, without mitigation, the proposed project would result in a significant impact related to on-site construction noise.

OFF-SITE TRUCK TRIPS

In addition to on-site construction activities, noise would be generated off-site by construction-related trucks. Construction of the proposed project would require the hauling and export of debris and excavated material from the site, as well as delivery of construction materials such as the XLPE cable and backfill to the site. The maximum number of truck trips that would occur is anticipated to be 40 truck trips per day, which is conservative. An additional, conservative worst-case/peak maximum hourly haul truck volume over an eight hour workday would approximately be 15 truck trips per hour.

A doubling of traffic volumes is typically needed to audibly increase noise levels along a roadway segment. **Table 13** shows traffic volumes recorded by the City of Los Angeles Department of Transportation along streets that would likely be utilized as the haul route for trucks travelling to and from the project area. Daily traffic along these roadways is between approximately 2,000 daily trips and 45,000 daily trips, with approximately 100 to 5,000 peak hour trips in the AM and PM peak hour. An additional 15 truck trips per hour would not double the existing volume along any roadway segment. Off-site vehicle activity would not audibly change average daily noise levels due to the low volume of truck trips per day. Therefore, the proposed project would result in a less-than-significant impact related to construction truck noise.

TABLE 13: EXISTING TRAFFIC VOLUMES

Roadway	Daily Traffic	Peak Hour Traffic	
		AM	PM
Nichols Canyon Rd. at Hollywood Blvd.	4,154	304	633
Genesee Ave. at Sunset Ave.	2,574	212	252
Sunset Blvd. at Genesee Ave.	45,236	2,845	2,867
Fountain Ave. at Fuller Ave.	12,784	2,034	2,813
Fuller Ave. at Sunset Blvd.	1,852	92	142
Santa Monica Blvd. at Highland Ave.	2,9884	5,347	5,201

SOURCE: LADOT, *24 Hours Traffic Volume*.

Mitigation Measures

N1 Construction equipment shall be properly maintained and equipped with mufflers to manufacturer specifications.

N2 Rubber-tired equipment shall be used rather than tracked equipment when feasible.

N3 Equipment shall be turned off when not in use for an excess of five minutes, except for equipment that requires idling to maintain performance.

N4 A public liaison shall be appointed for project construction will be responsible for addressing public concerns about construction activities, including excessive noise. As needed, the liaison shall determine the cause of the concern (e.g., starting too early, bad muffler) and implement measures to address the concern.

N5 The public shall be notified in advance of the location and dates of construction hours and activities.

Significance After Mitigation

Construction. Mitigation Measures **N1** through **N5** are designed to reduce construction noise levels. The equipment mufflers associated with Mitigation Measure **N1** would reduce construction noise levels by approximately 5 dBA. Mitigation Measures **N2** through **N5**, although difficult to quantify, would also reduce and/or control or address construction noise. Mitigated noise levels for previously identified sensitive receptors that would experience construction noise above thresholds are shown in **Table 14**. Mitigation Measures **N1** through **N5** would reduce noise levels to the greatest extent possible at nearby sensitive receptors. Consistent with the LAMC, all feasible measures would be taken to control construction noise. Therefore, the proposed project would result in a less-than-significant impact related to construction noise with mitigation incorporated.

TABLE 14: MITIGATED CONSTRUCTION NOISE LEVELS AT IMPACTED RECEPTORS					
Sensitive Receptor	**Distance (feet)**	**Existing Noise Level (dBA) /a/**	**Mitigation Measure /b/**	**Mitigated Project Noise Level (dBA)**	**Exceed Threshold (75 dBA, L_{eq})**
OPEN TRENCH – NICHOLS CANYON RD.					
Residences along Nichols Canyon Rd.	50	64.3	N1	78.7	**Yes**
Residences along Courtney Ave. and Ogden Ave.	150	64.3	N1	64.7	No
Residences along Stanley Ave.	170	64.3	N1	68.1	No
Residences along Courtney Ave. and Ogden Ave.	300	64.3	N1	57.1	No
Residences along Granito Dr.	500	64.3	N1	58.7	No
Residences to the north along Nichols Canyon Rd.	500	64.3	N1	58.7	No
OPEN TRENCH – GENESEE AVE.					
Residences along Genesee Ave.	50	60.4	N1	78.7	**Yes**
Residences along Hollywood Blvd.	50	75.8	N1	78.7	**Yes**
Residences along Nichols Canyon Rd.	80	64.3	N1	74.6	No
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	180	60.4	N1	63.1	No
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	350	60.4	N1	55.8	No
OPEN TRENCH – FOUNTAIN AVE.					
Residences along Fountain Ave.	50	72.7	N1	78.7	**Yes**
Fountain Kids Academy Day Care	50	72.7	N1	78.7	**Yes**
Invisible Studios	80	72.7	N1	74.6	No
Residences north and south of Fountain Ave.	100	72.7	N1	72.7	No
Wahlter School	180	72.7	N1	67.6	No
Residences north and south of Fountain Ave.	200	72.7	N1	62.2	No
Plummer Park Passive Recreation Uses	320	72.7	N1	58.1	No
Residences north and south of Fountain Ave.	350	72.7	N1	55.8	No
Gardner Little School Day Care	370	72.7	N1	55.3	No
OPEN TRENCH – FULLER AVE.					
Residences along Fuller Ave.	50	57.3	N1	78.7	**Yes**
Plummer Park Passive Recreation Uses	50	57.3	N1	78.7	**Yes**
Residences west of Fuller Ave.	220	57.3	N1	65.8	No
Quixote Studios - West Hollywood (Stage 5)	250	57.3	N1	64.7	No
Residences south of Romaine St.	500	57.3	N1	58.7	No
Residences east of Fuller Ave.	200	57.3	N1	62.2	No
Westlake Studios	350	72.7	N1	57.3	No
Residences west of Fuller Ave.	360	57.3	N1	57.1	No
Residences east of Fuller Ave.	320	57.3	N1	56.6	No
OPEN TRENCH – ROMAINE ST..					
Quixote Studios - West Hollywood (Stage 5)	50	57.1	N1	78.7	**Yes**
Residences along Romaine St.	50	57.1	N1	78.7	**Yes**
The Lot at Formosa	70	57.1	N1	75.8	**Yes**
Residences north of Romaine St.	180	57.1	N1	67.6	No
Residences southwest of Romaine St.	250	57.1	N1	64.7	No
Residences south of Romaine St.	500	57.1	N1	58.7	No
TOWER 584					
Residences adjacent to Tower 584	50	56.1	N1	73.1	No
Residences	100	56.1	N1	67.1	No
Residences	200	56.1	N1	61.1	No
Residences	400	56.1	N1	50.5	No
MODIFICATIONS AT NICHOLS CANYON TERMINAL TOWER					
Residences adjacent to Nichols Canyon Terminal Tower	85	64.3	N1	75.2	**Yes**
Residences along Nichols Canyon Road	150	64.3	N1	70.3	No

TABLE 14: MITIGATED CONSTRUCTION NOISE LEVELS AT IMPACTED RECEPTORS					
Sensitive Receptor	**Distance (feet)**	**Existing Noise Level (dBA) /a/**	**Mitigation Measure /b/**	**Mitigated Project Noise Level (dBA)**	**Exceed Threshold (75 dBA, L_{eq})**
Residences	200	64.3	N1	67.8	No
Residences	400	64.3	N1	61.7	No
MODIFICATIONS AT HOLLYWOOD RECEIVING STATION					
The Lot at Formosa to the north	90	57.1	N1	74.7	No
Quixote Studios - West Hollywood (Stage 5)	100	57.1	N1	73.8	No
Residences along Poinsettia Place	230	57.1	N1	62.0	No
Residences to the south	300	57.1	N1	64.2	No

/a/ The average hourly noise level for weekday daytime (7:00 a.m. to 9:00 p.m.) activities.
/b/ Mitigation Measure **N1** Includes a 5 dB reduction for equipment mufflers.
SOURCE: TAHA, 2022.

b) Would the proposed project result in generation of excessive ground-borne vibration or ground-borne noise levels? (Less-Than-Significant Impact)

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

Based on visual characteristics of adjacent structures (e.g., age), residential building foundations are assumed to be constructed of non-engineered timber and masonry, and the larger structures, such as hospitals are assumed to be constructed of reinforced-concrete, steel, or timber. According to the FTA guidance, buildings constructed of non-engineered timber and masonry can withstand vibration levels up to 0.2 inches per second without experiencing damage. Equipment that would be utilized would be most similar to a caisson drill, excavator, large bulldozer, and small bulldozer. Vibration levels for various types of construction equipment with an average source level reported in terms of velocity are shown in **Table 15**. Construction equipment would largely be stationary on the project site and would not regularly traverse the site resulting in the generation of vibration at off-site uses. Structures adjacent to the open-trench construction, work at Tower 584, the Nichols Canyon Terminal Tower, and Hollywood Receiving Station would typically be at least 50 feet from the construction activity. At a distance of 50 feet, vibration generating equipment would generate vibration levels below the vibration damage threshold of 0.2 inches per second for non-engineered timber and masonry buildings.

TABLE 15: TYPICAL OUTDOOR CONSTRUCTION EQUIPMENT VIBRATION LEVELS				
Equipment	**PPV at 25 Feet (Inches/Second)**	**PPV at 50 Feet (Inches/Second)**	**VdB at 25 Feet (micro-inches/Second)**	**VdB at 50 Feet (micro-inches/Second)**
Caisson Drill	0.089	0.031	87	78
Excavator	0.040	0.014	80	71
Large Bulldozer	0.089	0.031	87	78
Small Bulldozer	0.003	0.001	58	49

SOURCE: FTA, *Transit Noise and Vibration Impact Assessment*, September 2018; New Hampshire Department of Transportation, *Ground Vibrations Emanating from Construction Equipment*, September 8, 2012.

Seven historic structures have been identified within 100 feet of construction activity. Historic uses can experience vibration level of 0.12 inches per second before there is risk of damage to the structure. As shown in **Table 16**, the nearest historic structure is Hellman House, which is located approximately 25 feet from where construction activity would occur along Nichols Canyon Road. The type and size of equipment used for open-trench construction would be most similar to a small bulldozer, which generates a vibration level of approximately 0.003 PPV inches per second at 25 feet.

TABLE 16: HISTORIC USE VIBRATION ANALYSIS

Historic Uses/Address	Distance from Construction Activity (feet)	Reference Vibration Level (Inches/Second)	PPV at Historic Use (Inches/Second)	Exceed 0.12 Inches/Second Threshold
Hellman House 1845 N. Courtney Ave.	25	0.003	0.003	No
Historic Residence 1435 N. Genesee Ave.	40	0.003	0.001	No
Historic Residence 1635 N. Genesee Ave.	50	0.003	0.001	No
Screen Actors Guild Headquarters	50	0.003	Less than 0.001	No
Historic Residence 1438 N. Genesee Ave.	80	0.003	Less than 0.001	No
Historic Residence 1422 N. Genesee Ave.	80	0.003	Less than 0.001	No
Historic Residence 1339 N. Genesee Ave.	80	0.003	Less than 0.001	No

SOURCE: FTA, *Transit Noise and Vibration Impact Assessment*, September 2018; Los Angeles Department of City Planning Office of Historic Resources, *HistoricPlacesLA*, accessed March 28, 2022.

Vibration at this distance would be approximately 0.003 inches per second from a small bulldozer, which would be less than the vibration damage threshold of 0.12 inches per second. Historic residences on N. Genesee Avenue would all be more than 25 feet away or more and would not receive vibration levels that would exceed the vibration damage threshold of 0.12 inches per second. In addition to on-site construction activities, construction trucks on the roadway network have the potential to generate vibration. However, rubber-tired vehicles, including trucks, rarely generate perceptible vibration.[5] It is not anticipated that project-related trucks would generate perceptible vibration adjacent to the roadway network. Therefore, the proposed project would result in a less-than-significant impact related to structure damage from construction vibration.

Vibration annoyance is another concern related to construction activity. However, perceptible vibration is not typically a concern for human health and is a common occurrence within the urban environment. Special uses such as select medical facilities, research facilities and recording studios would be potentially impacted by construction vibration annoyance due to the presences of sensitive equipment. Vibration levels that would be generated by construction equipment were calculated for special uses identified within the vicinity of the proposed project which includes recording and televisions studios listed in **Table 17**. The type and size of equipment used for open-trench construction would be most similar to a small bulldozer, which generates a vibration level of approximately 58 VdB micro-inches per second at 25 feet. Construction at the Hollywood Receiving Station would use equipment most similar to an excavator which generates a vibration level of approximately 80 VdB at 25 feet. As shown in **Table 16**, vibration levels at the four identified recording and televisions studios would not exceed the 65 VdB threshold. In addition to on-site construction activities, construction trucks on the roadway network have the potential to expose vibration-sensitive land uses. Rubber-tired vehicles, including trucks, rarely generate perceptible vibration.[6] It is not anticipated that project-related trucks would generate perceptible vibration

[5]FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.
[6]*Ibid.*

adjacent to the roadway network. Therefore, the proposed project would result in a less-than-significant impact related to vibration annoyance.

TABLE 17: CONSTRUCTION VIBRATION LEVELS AT SENSITIVE RECEPTORS (ANNOYANCE)

Sensitive Receptor	Distance (feet) /a/	Vibration Level at Structure (VdB)	Reference Equipment	Threshold (VdB)	Exceed Threshold?
Quixote Studios - West Hollywood (Stage 5)	50	49	Small Bulldozer	65	No
Invisible Studios	80	43	Small Bulldozer	65	No
The Lot at Formosa	90	63	Excavator	65	No
Westlake Studios	350	24	Small Bulldozer	65	No

/a/ Measured from the project site to the nearest structure.
SOURCE: TAHA, 2022.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the proposed project expose people residing or working in the project area to excessive noise levels? (No Impact)

The proposed project is located within two miles of Van Nuys Airport to the east. According to the Los Angeles County Airport Land Use Commission, the proposed project area is not within the Airport Influence Area.[7] Therefore, no impact related to airport or airstrip noise would occur.

References

Burbank Municipal Code, *Chapter 9-1-1-105.8*, February 8, 2022.

California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, 2008.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

Los Angeles County Airport Land Use Commission, May 2003.

Los Angeles Department of City Planning Office of Historic Resources, *HistoricPlacesLA*, accessed March 28, 2022.

Los Angeles Department of Transportation, *24 Hours Traffic Volume Santa Monica Boulevard at Highland* Avenue, April 21, 2015.

Los Angeles Department of Transportation, *24 Hours Traffic Volume Fountain Avenue at Fuller Avenue*, November 5, 1993.

Los Angeles Department of Transportation, *24 Hours Traffic Volume Fuller Avenue at Sunset Boulevard*, May 16, 2012.

[7]Los Angeles County Airport Land Use Commission, May 2003.

Los Angeles Department of Transportation, *24 Hours Traffic Volume Nichols Canyon Road at Hollywood Boulevard*, January 23, 2007.

Los Angeles Department of Transportation, *24 Hours Traffic Volume Genesee Avenue at Sunset Boulevard*, October 2, 2007.

Los Angeles Department of Transportation, *24 Hours Traffic Volume Sunset Boulevard at Genesee Avenue*, October 1, 2007.

Los Angeles Municipal Code, *Chapter XI (Noise Regulation)*, December 31, 2021.

Los Angeles Municipal Code, *Section 112.05 (Maximum Noise Level of Powered Equipment or Hand Powered Tools)*, December 31, 2021.

Los Angeles Municipal Code, *Section 41.40 (Noise Due to Construction, Excavation Work – When Prohibited)*, December 31, 2021.

New Hampshire Department of Transportation, *Ground Vibrations Emanating from Construction Equipment*, September 8, 2012.

Appendix

Noise and Vibration Calculations

Noise Formulas

Noise Distance Attenuation

Hard Site

Ni = No - 20 * LOG(Di/Do)

Ni = attenuated noise level of interest
No = reference noise level
Di = distance to receptor (Di>Do)
Do = reference distance

Source: (Bolt, Beranek, and Newman, 1971)

Summation of Noise Levels

Equation: Ns=10 x LOG10((10^(N1/10))+(10^(N2/10))+(10^(N3/10))+(10^(N4/10)))

Ns = Noise Level Sum
N1 = Noise Level 1
N2 = Noise Level 2
N3 = Noise Level 3
N4 = Noise Level 4

Efficient Summation Formula
=10*LOG(SUM(10^(UserRange/10)))

Source: California Department of Transportation, Technical Noise Supplement, 2013

Construction Noise Analysis

Phased Construction Noise Levels	
Construction Equipment	**Noise Level at 50 feet (dBA)**
Maintenance Vault Excavation	
Backhoe	73.6
Dump Truck	72.5
Excavator	76.7
Pickup Truck	71.0
Water Truck	71.0
Maitenance Vault Excavation Combined	**78.1**
Maintenance Vault Installation	
Concrete Pump Truck	74.4
Concrete Truck	74.8
Crane (250 ton)	72.6
Pickup Truck	71.0
Maintenance Vault Installation Combined	**74.9**
Trenching for Duct Banks	
Backhoe	73.6
Concrete Pump Truck	74.4
Concrete Truck	74.8
Dump Truck	72.5
Mounted Impact Hammer	83.3
Pickup Truck	71.0
Trenching for Duct Banks Combined	**83.7**
Installation of New XLPE Cable, Cable Pulling, Splicing, and Termination	
Flatbed Truck (Stake Bed)	70.3
Pickup Truck (Winch Truck)	71.0
Installation of Cable Combined	**73.7**
Modifications at Nichols Canyon Terminal Tower and Hollywood Receiving Station	
Backhoe	73.6
Concrete Truck	74.8
Crane	72.6
Dump Truck	72.5
Excavator	76.7
Flatbed Truck (Stake Bed/Tank Truck)	70.3
Pickup Truck (Winch Truck)	71.0
Terminal Tower and Hollywood Receiving Station Combined	**78.1**
Roadway Restoration	
Asphalt paver	74.2
Compaction Roller	73.0
Roadway Restoration	**76.7**
BWP Transmission Line Lowering	
Pickup Truck (Tool Truck)	71.0
Man Lift	67.7
Man Lift	67.7
BWP Transmission Line Lowering	**70.7**
Tower 584 Raise	
Backhoe	73.6
Concrete Truck	74.8
Crane	72.6
Drilling Rig	77.4
Dump Trucks	72.5
Material Delivery Truck	70.3
Excavator	76.7
Tower 584 Raise Combined	**78.1**
Combined Noise of Open-Trench+ Mods at Nichols Canyon Terminal Tower and Hollywood Receiving Station	**84.8**

Source: Federal Highway Administration, *Roadway Construction Noise Model* , 2008

EXISTING AMBIENT NOISE LEVELS	
(Site Number) Noise Monitoring Locations	**Sound Level (dBA, Leq)**
(1) Tower 556	55.8
(2) Clark Ave/Screenland Dr.	60.5
(3) Residence 7187 Macapa Dr.	56.1
(4) Residence (2025 Nichols Canyon Rd.)	64.3
(5) Residence (7714 Hollywood Blvd.)	75.8
(6) Residence (1339 Genesse Ave.)	60.4
(7) Residence (7665 Fountain Ave.)	72.7
(8) Residence (1215 Fuller Ave.)	57.3
(9) Fuller Ave./Romain St.	57.1

CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (TOWER 584)									
Sensitive Receptors	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Max Construction Noise (dBA, Leq)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**LA City Noise Threshold**	**Exceed Threshold?**	**Noise Level Difference (dBA, Leq)**
First Row Receptors									
Residences adjacent to Tower 584	50	0	78.1	78.1	56.1	78.1	75	Yes	3.1
Residences	100	0	78.1	72.1	56.1	72.2	75	No	-2.9
Residences	200	0	78.1	66.1	56.1	66.5	75	No	-8.9
Second Row Receptors									
Residences	400	4.5	78.1	55.5	56.1	58.8	75	No	-19.5

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (MODIFICATIONS AT NICHOLS TERMINAL TOWER)										
Sensitive Receptors	**Figure ID**	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Max Construction Noise (dBA, Leq)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**LA City Noise Threshold**	**Exceed Threshold?**	**Noise Level Difference (dBA, Leq)**
First Row Receptors										
Residences adjacent to Nichols Canyon Terminal	1	85	0	84.8	80.2	64.3	80.3	75	Yes	5.2
Residences along Nichols Canyon Road		150	0	84.8	75.3	64.3	75.6	75	Yes	0.3
Residences		200	0	84.8	72.8	64.3	73.3	75	No	-2.2
Residences		400	0	84.8	66.7	64.3	68.7	75	No	-8.3

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (OPEN TRENCH NICHOLS CANYON RD)									
Sensitive Receptors	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Max Construction Noise (dBA, Leq)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**LA City Noise Threshold**	**Exceed Threshold?**	**Noise Level Difference (dBA, Leq)**
First Row Receptors									
Residences along Nichols Canyon Rd.	50	0	83.7	83.7	64.3	83.7	75	Yes	8.7
Residences along Stanley Ave.	170	0	83.7	73.1	64.3	73.6	75	No	-1.9
Residences along Granito Dr.	500	0	83.7	63.7	64.3	67.0	75	No	-11.3
Residences to the north along Nichols Canyon Road	500	0	83.7	63.7	64.3	67.0	75	No	-11.3
Second Row Receptors									
Residences along Courtney Ave. and Ogden Ave.	150	4.5	83.7	69.7	64.3	70.8	75	No	-5.3
Third Row Receptors									
Residences along Courtney Ave. and Ogden Ave.	300	6	83.7	62.1	64.3	66.4	75	No	-12.9

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (MODIFICATIONS AT HOLLYWOOD RECEVING STATION)									
Sensitive Receptors	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Max Construction Noise (dBA, Leq)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**LA City Noise Threshold**	**Exceed Threshold?**	**Noise Level Difference (dBA, Leq)**
First Row Receptors									
The Lot at Formosa to the north	90	0	84.8	79.7	57.1	79.7	75	Yes	4.7
Quixote Studios - West Hollywood (Stage 5)	100	0	84.8	78.8	57.1	78.8	75	Yes	3.8
Residences to the south	300	0	84.8	69.2	57.1	69.5	75	No	-5.8
Second Row Receptors									
Residences along Poinsettia Place	230	4.5	84.8	67.0	57.1	67.5	75	No	-8.0

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (OPEN TRENCH GENESEE AVE)									
Sensitive Receptors	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Max Construction Noise (dBA, Leq)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**LA City Noise Threshold**	**Exceed Threshold?**	**Noise Level Difference (dBA, Leq)**
First Row Receptors									
Residences along Genesee Ave.	50	0	83.7	83.7	60.4	83.7	75	Yes	8.7
Residences along Hollywood Blvd.	50	0	83.7	83.7	75.8	84.4	75	Yes	8.7
Residences along Nichols Canyon Rd.	80	0	83.7	79.6	64.3	79.7	75	Yes	4.6
Second Row Receptors									
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	180	4.5	83.7	68.1	60.4	68.8	75	No	-6.9
Third Row Receptors									
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	350	6	83.7	60.8	60.4	63.6	75	No	-14.2

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (OPEN TRENCH FOUNTAIN AVENUE)									
Sensitive Receptors	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Max Construction Noise (dBA, Leq)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**LA City Noise Threshold**	**Exceed Threshold?**	**Noise Level Difference (dBA, Leq)**
First Row Receptors									
Residences along Fountain Ave.	50	0	83.7	83.7	72.7	84.0	75	Yes	8.7
Fountain Kids Academy Day Care	50	0	83.7	83.7	72.7	84.0	75	Yes	8.7
Invisible Studios	80	0	83.7	79.6	72.7	80.4	75	Yes	4.6
Residences north and south of Fountain Ave.	100	0	83.7	77.7	72.7	78.9	75	Yes	2.7
Wahlter School	180	0	83.7	72.6	72.7	75.6	75	No	-2.4
Second Row Receptors									
Residences north and south of Fountain Ave.	200	4.5	83.7	67.2	72.7	73.8	75	No	-7.8
Plummer Park Passive Recreation Uses	320	4.5	83.7	63.1	72.7	73.1	75	No	-11.9
Third Row Receptors									
Residences north and south of Fountain Ave.	350	6	83.7	60.8	72.7	73.0	75	No	-14.2
Gardner Little School Day Care	370	6	83.7	60.3	72.7	72.9	75	No	-14.7

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (OPEN TRENCH FULLER AVENUE)									
Sensitive Receptors	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Max Construction Noise (dBA, Leq)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**LA City Noise Threshold**	**Exceed Threshold?**	**Noise Level Difference (dBA, Leq)**
First Row Receptors									
Residences along Fuller Ave.	50	0	83.7	83.7	57.3	83.7	75	Yes	8.7
Plummer Park Passive Recreation Uses	50	0	83.7	83.7	57.3	83.7	75	Yes	8.7
Residences west of Fuller Ave.	220	0	83.7	70.8	57.3	71.0	75	No	-4.2
Quixote Studios - West Hollywood (Stage 5)	250	0	83.7	69.7	57.3	70.0	75	No	-5.3
Residences south of Romaine St.	500	0	83.7	63.7	57.3	64.6	75	No	-11.3
Second Row Receptors									
Residences east of Fuller Ave.	200	4.5	83.7	67.2	57.3	67.6	75	No	-7.8
Westlake Studios	350	4.5	83.7	62.3	72.7	73.1	75	No	-12.7
Residences west of Fuller Ave.	360	4.5	83.7	62.1	57.3	63.3	75	No	-12.9
Third Row Receptors									
Residences east of Fuller Ave.	320	6	83.7	61.6	57.3	63.0	75	No	-13.4

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (OPEN TRENCH ROMAINE STREET)									
Sensitive Receptors	**Distance (feet)**	**Intervening Building /a/**	**Reference Noise Level (dBA)**	**Max Construction Noise (dBA, Leq)**	**Existing Ambient (dBA, Leq)**	**New Ambient (dBA, Leq)**	**LA City Noise Threshold**	**Exceed Threshold?**	**Noise Level Difference (dBA, Leq)**
First Row Receptors									
Quixote Studios - West Hollywood (Stage 5)	50	0	83.7	83.7	57.1	83.7	75	Yes	8.7
Residences along Romaine St.	50	0	83.7	83.7	57.1	83.7	75	Yes	8.7
The Lot at Formosa	70	0	83.7	80.8	57.1	80.8	75	Yes	5.8
Residences north of Romaine St.	180		83.7	72.6	57.1	72.7	75	No	-2.4
Residences southwest of Romaine St.	250	0	83.7	69.7	57.1	70.0	75	No	-5.3
Residences south of Romaine St.	500	0	83.7	63.7	57.1	64.6	75	No	-11.3

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

MITIGATED CONSTRUCTION NOISE										
Sensitive Receptors	Distance (feet)	Intervening Building /a/	Reference Noise Level (dBA)	Mitigation Measure /b/	Mitigation /b/	Mitigated Reference Noise Level	Mitigated Max Construction Noise (dBA, Leq)	Existing Ambient (dBA, Leq)	LA City Noise Threshold	Exceed Threshold?
CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (OPEN TRENCH NICHOLS CANYON RD)										
Residences along Nichols Canyon Rd.	50	0	83.7	N1	5	78.7	78.7	64.3	75	Yes
Residences along Courtney Ave. and Ogden Ave.	150	4.5	83.7	N1	5	78.7	64.7	64.3	75	No
Residences along Stanley Ave.	170	0	83.7	N1	5	78.7	68.1	64.3	75	No
Residences along Courtney Ave. and Ogden Ave.	300	6	83.7	N1	5	78.7	57.1	64.3	75	No
Residences along Granito Dr.	500	0	83.7	N1	5	78.7	58.7	64.3	75	No
Residences to the north along Nichols Canyon Road	500	0	83.7	N1	5	78.7	58.7	64.3	75	No
CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (OPEN TRENCH GENESEE AVE)										
Residences along Genesee Ave.	50	0	83.7	N1	5	78.7	78.7	60.4	75	Yes
Residences along Hollywood Blvd.	50	0	83.7	N1	5	78.7	78.7	75.8	75	Yes
Residences along Nichols Canyon Rd.	80	0	83.7	N1	5	78.7	74.6	64.3	75	No
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	180	4.5	83.7	N1	5	78.7	63.1	60.4	75	No
Residences along Courtney Ave., Ogden Ave., and Nichols Canyon Rd.	350	6	83.7	N1	5	78.7	55.8	60.4	75	No
CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (OPEN TRENCH FOUNTAIN AVENUE)										
Residences along Fountain Ave.	50	0	83.7	N1	5	78.7	78.7	72.7	75	Yes
Fountain Kids Academy Day Care	50	0	83.7	N1	5	78.7	78.7	72.7	75	Yes
Invisible Studios	80	0	83.7	N1	5	78.7	74.6	72.7	75	No
Residences north and south of Fountain Ave.	100	0	83.7	N1	5	78.7	72.7	72.7	75	No
Wahlter School	180	0	83.7	N1	5	78.7	67.6	72.7	75	No
Residences north and south of Fountain Ave.	200	4.5	83.7	N1	5	78.7	62.2	72.7	75	No
Plummer Park Passive Recreation Uses	320	4.5	83.7	N1	5	78.7	58.1	72.7	75	No
Residences north and south of Fountain Ave.	350	6	83.7	N1	5	78.7	55.8	72.7	75	No
Gardner Little School Day Care	370	6	83.7	N1	5	78.7	55.3	72.7	75	No
CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (OPEN TRENCH FULLER AVENUE)										
Residences along Fuller Ave.	50	0	83.7	N1	5	78.7	78.7	57.3	75	Yes
Plummer Park Passive Recreation Uses	50	0	83.7	N1	5	78.7	78.7	57.3	75	Yes
Residences west of Fuller Ave.	220	0	83.7	N1	5	78.7	65.8	57.3	75	No
Stage 1001	250	0	83.7	N1	5	78.7	64.7	57.3	75	No
Residences south of Romaine St.	500	0	83.7	N1	5	78.7	58.7	57.3	75	No
Residences east of Fuller Ave.	200	4.5	83.7	N1	5	78.7	62.2	57.3	75	No
Residences west of Fuller Ave.	360	4.5	83.7	N1	5	78.7	57.1	57.3	75	No
Residences east of Fuller Ave.	320	6	83.7	N1	5	78.7	56.6	57.3	75	No
CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (OPEN TRENCH ROMAINE STREET)										
Stage 1001	50	**0**	83.7	N1	5	78.7	78.7	57.1	75	Yes
Residences along Romaine St.	50	**0**	83.7	N1	5	78.7	78.7	57.1	75	Yes
The Lot at Formosa	70	**0**	83.7	N1	5	78.7	75.8	57.1	75	Yes
Residences north of Romaine St.	180	**0**	83.7	N1	5	78.7	67.6	57.1	75	No
Residences southwest of Romaine St.	250	**0**	83.7	N1	5	78.7	64.7	57.1	75	No
Residences south of Romaine St.	500	**0**	83.7	N1	5	78.7	58.7	57.1	75	No
CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (TOWER 584)										
Residences adjacent to Tower 584	50	0	78.1	N1	5	73.1	73.1	56.1	75	No
Residences	100	0	78.1	N1	5	73.1	67.1	56.1	75	No
Residences	200	0	78.1	N1	5	73.1	61.1	56.1	75	No
Residences	400	4.5	78.1	N1	5	73.1	50.5	56.1	75	No
CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (MODIFICATIONS AT NICHOLS CANYON TERMINAL TOWER)										
Residences adjacent to Nichols Canyon Terminal	85	0	84.8	N1	5	79.8	75.2	64.3	75	Yes
Residences along Nichols Canyon Road	150	0	84.8	N1	5	79.8	70.3	64.3	75	No
Residences	200	0	84.8	N1	5	79.8	67.8	64.3	75	No
Residences	400	0	84.8	N1	5	79.8	61.7	64.3	75	No
CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS (MODIFICATIONS AT HOLLYWOOD RECEIVING STATION)										
The Lot at Formosa to the north	90	0	84.8	N1	5	79.8	74.7	57.1	75	No
Quixote Studios - West Hollywood (Stage 5)	100	0	84.8	N1	5	79.8	73.8	57.1	75	No
Residences along Poinsettia Place	230	4.5	84.8	N1	5	79.8	62.0	57.1	75	No
Residences to the south	300	0	84.8	N1	5	79.8	64.2	57.1	75	No

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row
/b/ Mitigation Measure N1 includes a 5 dB reduction for equipment mufflers.

Vibration Formulas

Vibration PPV Attenuation

Equation: PPVequip = PPVref x (25/D)^1.5
PPV (equip) is the peak particle velocity in in/sec of the equipment adjusted for distance
PPV (ref) is the reference vibration level in in/sec at 25 feet from Table 12-2
D is the distance from the equipment to the receiver.

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.

Vibration VdB Attenuation

Equation: Lv(D) = Lv(25 ft) – 30log(D/25)
D = Distance (feet)
Lv(D) = Vibration Level

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.

Vibration Damage and Annoyance Analysis

Construction Vibration Damage Criteria	
Building/Structural Category	PPV, in/sec
Reinforced-concrete, steel or timber	0.500
Non-engineered timber and masonry buildings	0.200
Buildings extremely susceptible to vibration damage	0.120

Vibration Velocities for Construction Equipment				
Equipment	PPV at 25 Feet (Inches/Second)	PPV at 50 Feet (Inches/Second)	VdB at 25 feet (Micro-Inches/Second)	VdB at 50 feet (Micro-Inches/Second)
Caisson Drill	0.089	0.031	87	78
Excavator	0.040	0.014	80	71
Small Bulldozer	0.003	0.001	58	49
Large Bulldozer	0.089	0.031	87	78

Historic Uses Vibration Analysis						
Historic Uses	Address	Distance from Construction Activity (feet)	Reference Equipment	Reference Vibration Level	PPV at Historic Use (Inches/Second) - Excavator	Exceed Threshold?
Hellman House	1845 N. Courtney Ave.Los Angeles, CA 90046	25	Small Bulldozer	0.003	0.0030	No
Historic Residence - 1635 N. Genesse Ave.	1635 N. Genesee Ave. Los Angeles, CA 90046	50	Small Bulldozer	0.003	0.0011	No
Screen Actors Guild Headquarters	7750 W. Sunset BLVD. Los Angeles, CA 90046	50	Small Bulldozer	0.003	0.0011	No
Historic Residence - 1438 N. Genesee Ave.	1438 N. Genesee Ave. Los Angeles, CA 90046	80	Small Bulldozer	0.003	0.0005	No
Historic Residence - 1435 N. Genesee Ave.	1435 N. Genesee Ave. Los Angeles, CA 90046	40	Small Bulldozer	0.003	0.0015	No
Historic Residence - 1422 N. Genesee Ave.	1425 N. Genesee Ave. Los Angeles, CA 90046	80	Small Bulldozer	0.003	0.0005	No
Historic Residence - 1339 N. Genesee Ave.	1339 N. Genesee Ave. Los Angeles, CA 90046	80	Small Bulldozer	0.003	0.0005	No

Source: FTA, Transit Noise and Vibration Impact Assessment, September 2018; New Hampshire Department of Transportation, Ground Vibrations Emanating from Construction Equipment, September 8, 2012

Vibration Annoyance Analysis							
Sensitive Receptor	Distance (feet)	Equipment	Vibration Level at Structure (VdB)	Coupling to Building Foundation	Vibration Level at Structure after Adjustment(VdB)	Threshold (VdB)	Exceed Threshold?
Stage 1001	50	Small Bulldozer	49	0	49	65	No
Invisible Studios	80	Small Bulldozer	43	0	43	65	No
The Lot at Formosa	90	Excavator	63	0	63	65	No
Westlake Studios	350	Small Bulldozer	24	0	24	65	No

Noise Monitoring Data

Site 1: Tower 556

Session Report

2/2/2022

Information Panel

Name	LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-1
Start Time	2/1/2022 9:54:35 AM
Stop Time	2/1/2022 10:10:48 AM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:02

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	55.8 dB	Lmax	1	72.6 dB
Lmin	1	46.5 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

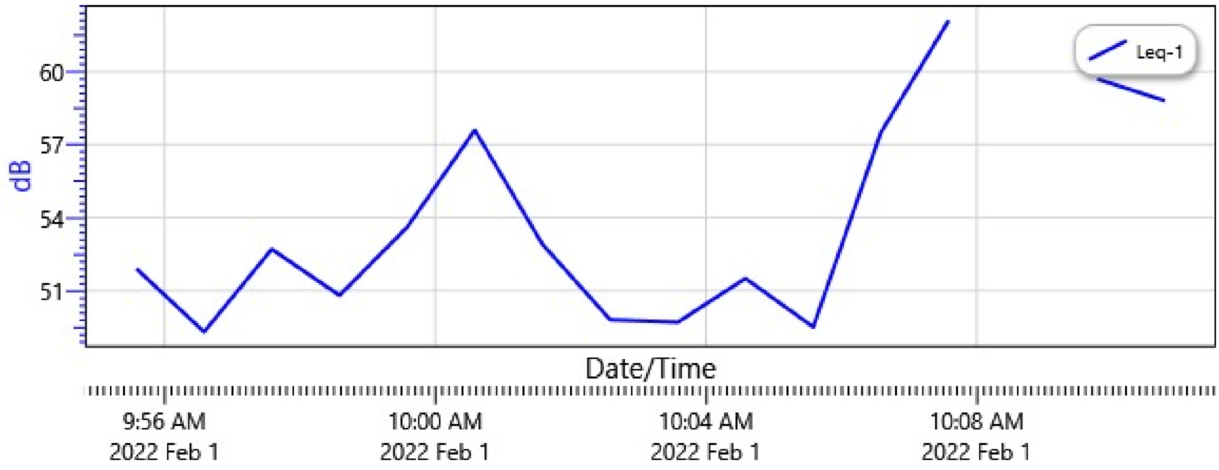
Logged Data Table

Date/Time	Leq-1
2/1/2022 9:55:35 AM	51.9
9:56:35 AM	49.3
9:57:35 AM	52.7
9:58:35 AM	50.8
9:59:35 AM	53.6
10:00:35 AM	57.6
10:01:35 AM	52.9
10:02:35 AM	49.8
10:03:35 AM	49.7
10:04:35 AM	51.5
10:05:35 AM	49.5
10:06:35 AM	57.5
10:07:35 AM	62.1

10:09:47 AM	59.7
10:10:47 AM	58.8

Logged Data Chart

LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-1: Logged Data Chart



Noise Measurement Report Form

Project: LADWP Toluca Contract No (s): N/A

Date: 2-1-2022 Day of Week: Tuesday Time: 0953

Monitoring Site Number: ST-1 Monitoring Site Address: Tower 556

Measurement Taken By: KB

Approximate Wind Speed: 3 mph [km/hr] Approximate Wind Direction: From the ______

Approximate distance of Sound Level Meter from Receptor Location: ______

Approximate distance of Sound Level Meter from Project Site: ______

Receptor Land Use (Check One) ☒ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: ______ Serial Number: ______

Meter Setting ☒ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 min

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	52.0		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Main noise source is Hollywood Wy.
2. Movers making noise
3.
4.

Site 2: Clark Avenue/Screenland Drive

Session Report

2/2/2022

Information Panel

Name	LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-2
Start Time	2/1/2022 10:12:44 AM
Stop Time	2/1/2022 10:27:44 AM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	60.5 dB	Lmax	1	73.7 dB
Lmin	1	47.1 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

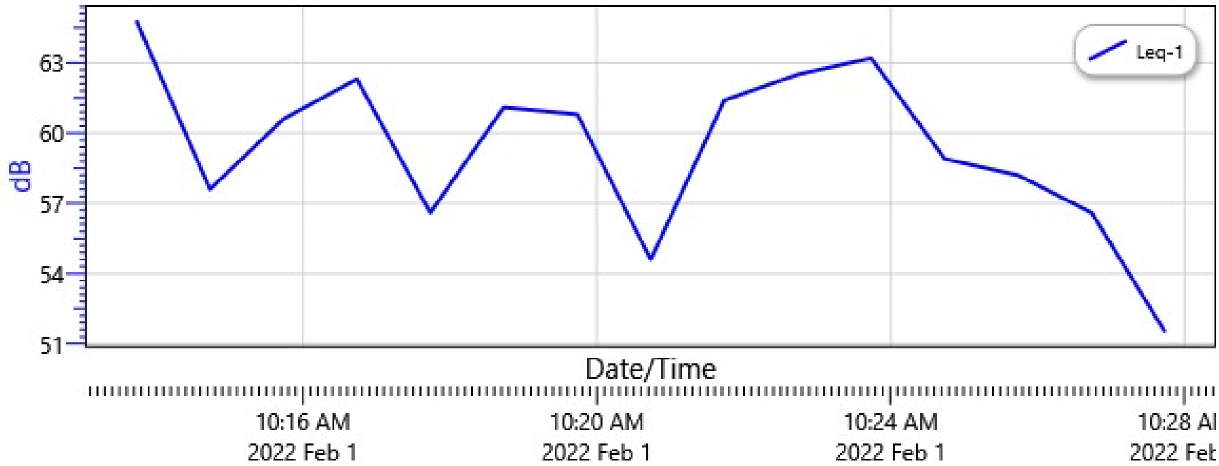
Logged Data Table

Date/Time	Leq-1
2/1/2022 10:13:44 AM	64.8
10:14:44 AM	57.6
10:15:44 AM	60.6
10:16:44 AM	62.3
10:17:44 AM	56.6
10:18:44 AM	61.1
10:19:44 AM	60.8
10:20:44 AM	54.6
10:21:44 AM	61.4
10:22:44 AM	62.5
10:23:44 AM	63.2
10:24:44 AM	58.9
10:25:44 AM	58.2

10:26:44 AM	56.6
10:27:44 AM	51.5

Logged Data Chart

LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-2: Logged Data Chart



Noise Measurement Report Form

Project: LADWP Toluca Transmission Contract No (s): N/A

Date: 2-1-2022 Day of Week: Tuesday Time: 1011

Monitoring Site Number: ST-2 Monitoring Site Address: Clark Ave/Screenland Dr

Measurement Taken By: KD

Approximate Wind Speed: 5 mph [km/hr] Approximate Wind Direction: From the ______

Approximate distance of Sound Level Meter from Receptor Location: ______

Approximate distance of Sound Level Meter from Project Site: ______

Receptor Land Use (Check One) ☒ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: ______ Serial Number: ______

Meter Setting ☒ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 min

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	60.5		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Hollywood Wy main noise source, some traffic on Clark Ave
2. Aircraft fly overs
3.
4.

Site 3: 7187 Macapa Drive

Session Report

2/2/2022

Information Panel

Name	LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-3
Start Time	2/1/2022 10:49:49 AM
Stop Time	2/1/2022 11:04:49 AM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	56.1 dB	Lmax	1	73.5 dB
Lmin	1	45.9 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

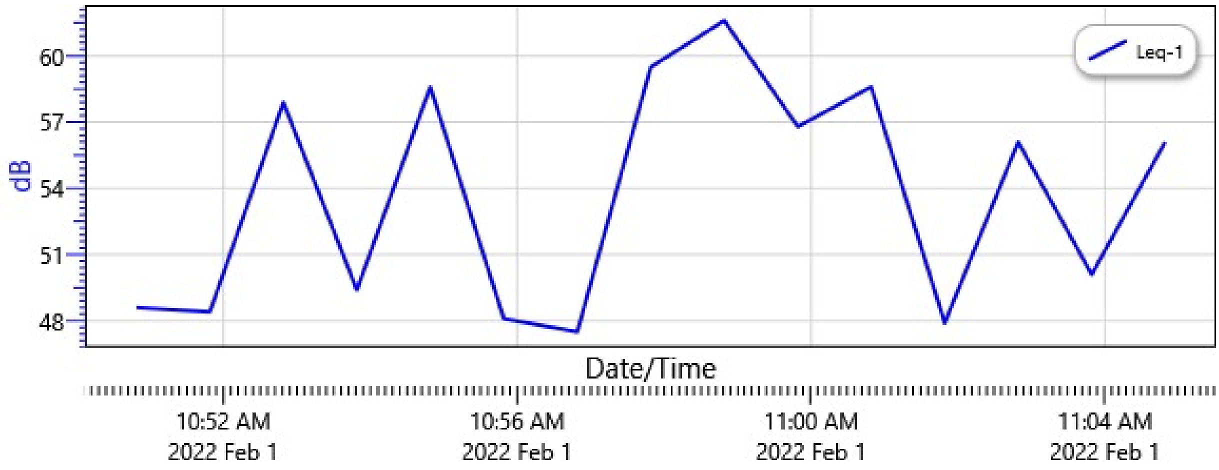
Logged Data Table

Date/Time	Leq-1
2/1/2022 10:50:49 AM	48.6
10:51:49 AM	48.4
10:52:49 AM	57.9
10:53:49 AM	49.4
10:54:49 AM	58.6
10:55:49 AM	48.1
10:56:49 AM	47.5
10:57:49 AM	59.5
10:58:49 AM	61.6
10:59:49 AM	56.8
11:00:49 AM	58.6
11:01:49 AM	47.9
11:02:49 AM	56.1

11:03:49 AM	50.1
11:04:49 AM	56.1

Logged Data Chart

LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-3: Logged Data Chart



Noise Measurement Report Form

Project: LADWP Toluca Transmission Line Contract No (s): N/A

Date: 7-1-2022 Day of Week: Tuesday Time: 1048

Monitoring Site Number: ST-3 Monitoring Site Address: 7187 Mclaren Dr

Measurement Taken By: EB

Approximate Wind Speed: 0 mph [km/hr] Approximate Wind Direction: From the ____

Approximate distance of Sound Level Meter from Receptor Location: ____

Approximate distance of Sound Level Meter from Project Site: ____

Receptor Land Use (Check One) ☒ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: ____ Serial Number: ____

Meter Setting ☒ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 min

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	56.4		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Light ~~A~~. traffic, landscaping in distance, Freeway audible in distance
2.
3.
4.

Site 4: 2025 Nichols Canyon Road

Session Report

2/2/2022

Information Panel

Name	LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-4
Start Time	2/1/2022 11:23:04 AM
Stop Time	2/1/2022 11:38:04 AM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	64.3 dB	Lmax	1	84.9 dB
Lmin	1	45.2 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

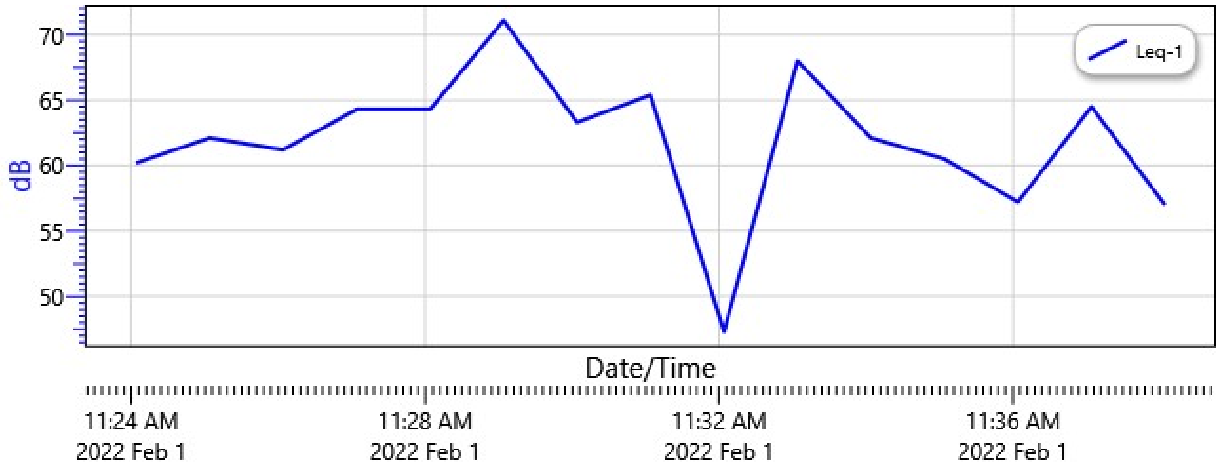
Logged Data Table

Date/Time	Leq-1
2/1/2022 11:24:04 AM	60.2
11:25:04 AM	62.1
11:26:04 AM	61.2
11:27:04 AM	64.3
11:28:04 AM	64.3
11:29:04 AM	71.1
11:30:04 AM	63.3
11:31:04 AM	65.4
11:32:04 AM	47.3
11:33:04 AM	68
11:34:04 AM	62.1
11:35:04 AM	60.5
11:36:04 AM	57.2

11:37:04 AM	64.5
11:38:04 AM	57

Logged Data Chart

LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-4: Logged Data Chart



Noise Measurement Report Form

Project: LADWP Toluca Transmission Contract No (s): N/A

Date: 2-1-2022 Day of Week: Tuesday Time:

Monitoring Site Number: ST-4 Monitoring Site Address: 2025 Nichols Canyon RD

Measurement Taken By: KB

Approximate Wind Speed: 4 mph [km/hr] Approximate Wind Direction: From the West

Approximate distance of Sound Level Meter from Receptor Location:

Approximate distance of Sound Level Meter from Project Site:

Receptor Land Use (Check One) ☒ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: Serial Number:

Meter Setting ☒ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 min

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

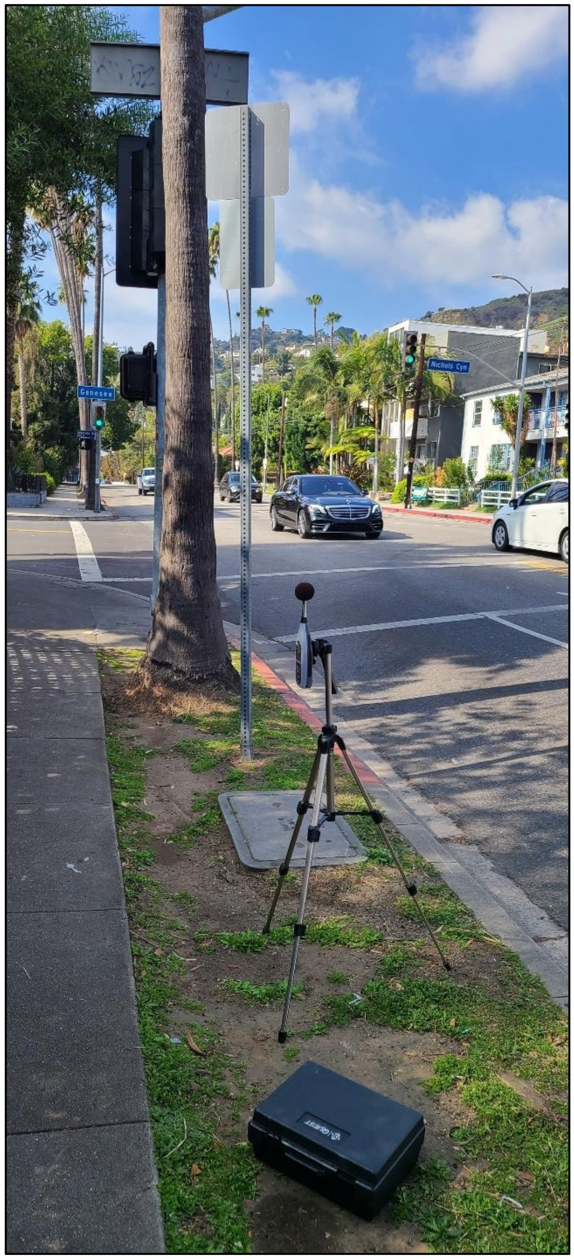
Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	64.4		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Speed 30 mph, some landscaping noise
2.
3.
4.

Site 5: 7714 Hollywood Boulevard



Session Report

2/2/2022

Information Panel

Name	LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-5
Start Time	2/1/2022 11:50:18 AM
Stop Time	2/1/2022 12:05:18 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	75.8 dB	Lmax	1	96 dB
Lmin	1	56.3 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

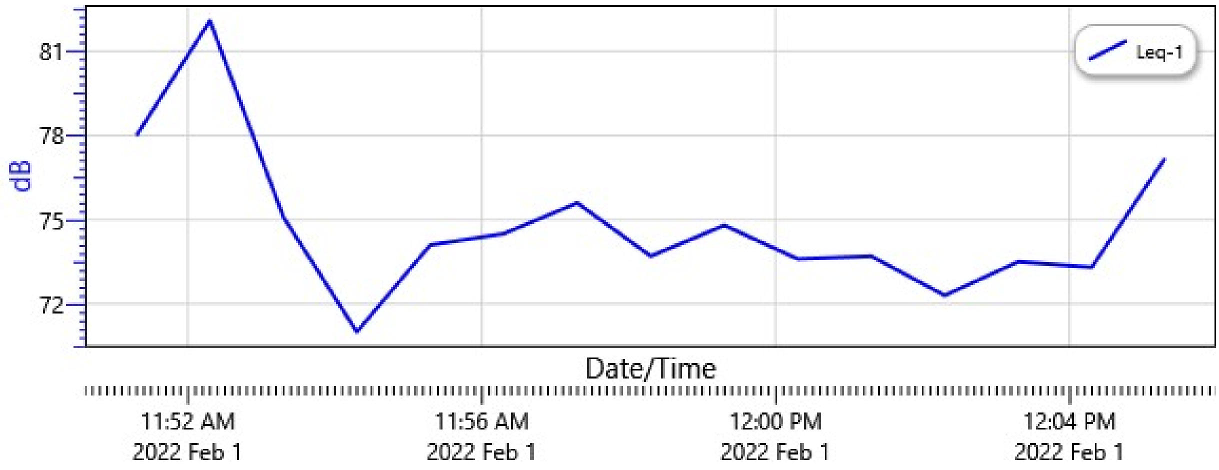
Logged Data Table

Date/Time	Leq-1
2/1/2022 11:51:18 AM	78
11:52:18 AM	82.1
11:53:18 AM	75.1
11:54:18 AM	71
11:55:18 AM	74.1
11:56:18 AM	74.5
11:57:18 AM	75.6
11:58:18 AM	73.7
11:59:18 AM	74.8
12:00:18 PM	73.6
12:01:18 PM	73.7
12:02:18 PM	72.3
12:03:18 PM	73.5

12:04:18 PM	73.3
12:05:18 PM	77.2

Logged Data Chart

LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-5: Logged Data Chart



Noise Measurement Report Form

Project: LADWP Toluca   Contract No (s): N/A

Date: 2-1-2022 Day of Week: Tuesday   Time: 1149

Monitoring Site Number: ST-5   Monitoring Site Address: 7714 Hollywood Blvd

Measurement Taken By: KB

Approximate Wind Speed: ______ mph [km/hr]   Approximate Wind Direction: From the ______

Approximate distance of Sound Level Meter from Receptor Location: ______

Approximate distance of Sound Level Meter from Project Site: ______

Receptor Land Use (Check One) ☒ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: ______ Serial Number: ______

Meter Setting ☒ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 min

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	75.8		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Hollywood Blvd loud, motorcycles, traffic

2.

3.

4.

Site 6: 1334 Genesee Avenue

Session Report

2/2/2022

Information Panel

Name	LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-6
Start Time	2/1/2022 12:13:49 PM
Stop Time	2/1/2022 12:28:49 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	60.4 dB	Lmax	1	79.6 dB
Lmin	1	46.6 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

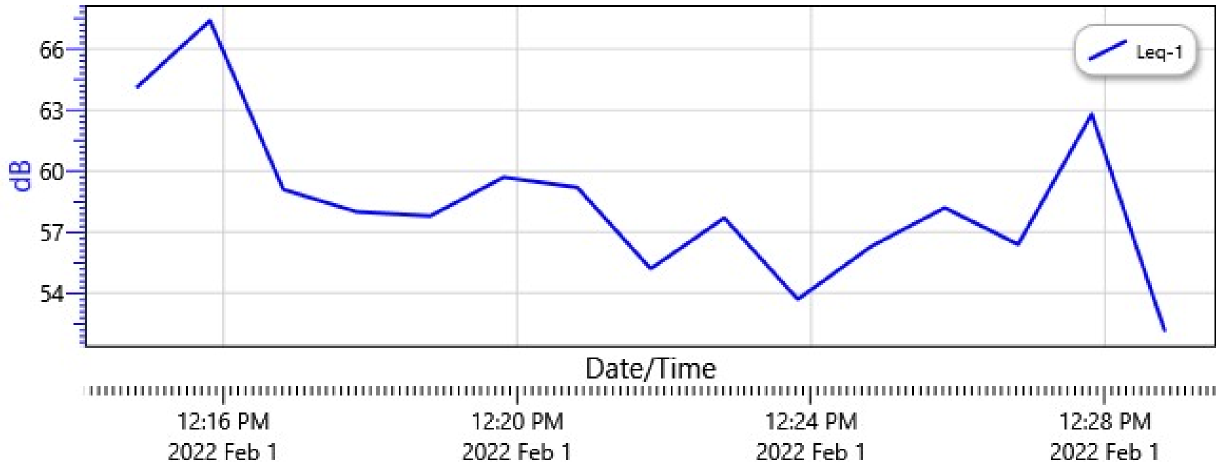
Logged Data Table

Date/Time	Leq-1
2/1/2022 12:14:49 PM	64.1
12:15:49 PM	67.4
12:16:49 PM	59.1
12:17:49 PM	58
12:18:49 PM	57.8
12:19:49 PM	59.7
12:20:49 PM	59.2
12:21:49 PM	55.2
12:22:49 PM	57.7
12:23:49 PM	53.7
12:24:49 PM	56.3
12:25:49 PM	58.2
12:26:49 PM	56.4

12:27:49 PM	62.8
12:28:49 PM	52.1

Logged Data Chart

LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-6: Logged Data Chart



Noise Measurement Report Form

Project: LADWP Toluca Transmission

Date: 2-1-2022 Day of Week: Tuesday Time: 1213 Contract No (s): N/A

Monitoring Site Number: ST-6 Monitoring Site Address: 1339 Genesse Ave

Measurement Taken By: KB

Approximate Wind Speed: ______ mph [km/hr] Approximate Wind Direction: From the ______

Approximate distance of Sound Level Meter from Receptor Location: ______

Approximate distance of Sound Level Meter from Project Site: ______

Receptor Land Use (Check One) ☒ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: ______ Serial Number: ______

Meter Setting ☒ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 min.

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	60.4		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

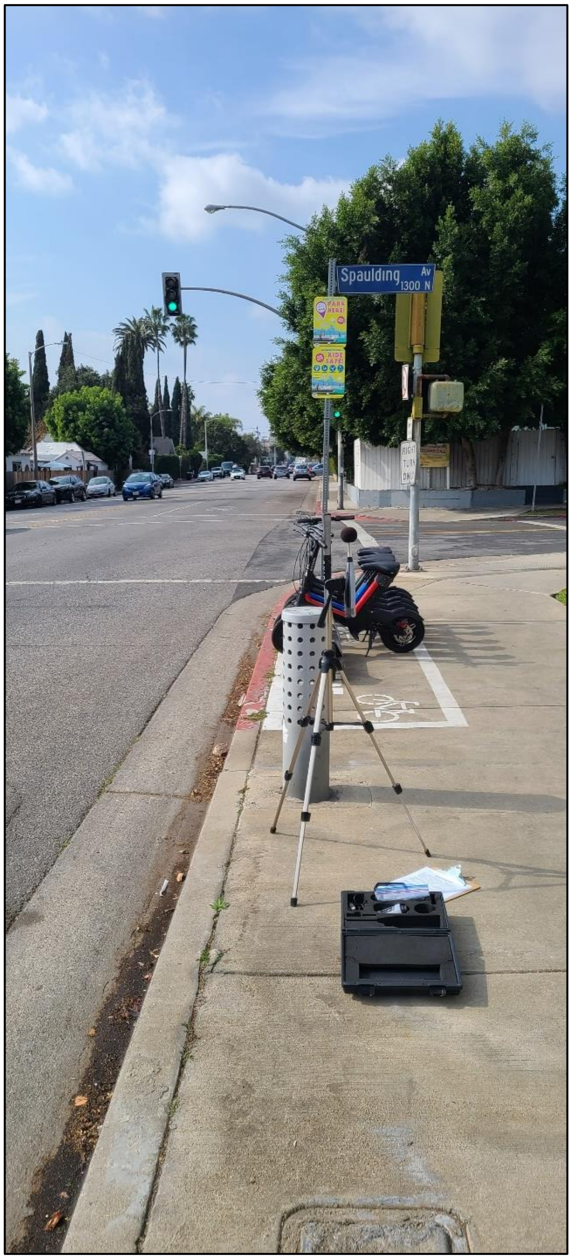
1. Some landscaping in distance

2.

3.

4.

Site 7: 7665 Fountain Avenue



Session Report

2/2/2022

Information Panel

Name	LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-7
Start Time	2/1/2022 12:33:21 PM
Stop Time	2/1/2022 12:48:21 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	72.7 dB	Lmax	1	81.7 dB
Lmin	1	50.9 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

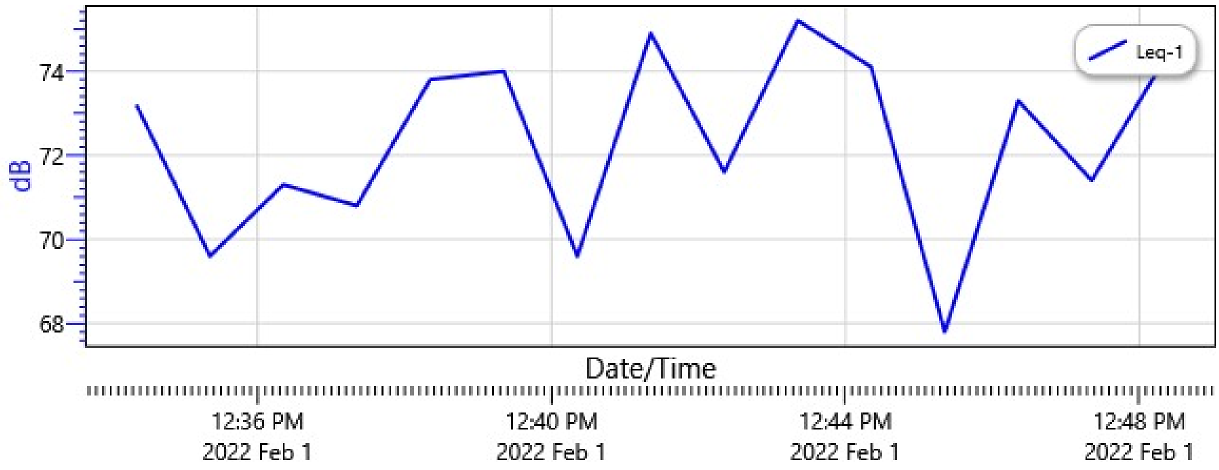
Logged Data Table

Date/Time	Leq-1
2/1/2022 12:34:21 PM	73.2
12:35:21 PM	69.6
12:36:21 PM	71.3
12:37:21 PM	70.8
12:38:21 PM	73.8
12:39:21 PM	74
12:40:21 PM	69.6
12:41:21 PM	74.9
12:42:21 PM	71.6
12:43:21 PM	75.2
12:44:21 PM	74.1
12:45:21 PM	67.8
12:46:21 PM	73.3

12:47:21 PM	71.4
12:48:21 PM	74.3

Logged Data Chart

LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-7: Logged Data Chart



Noise Measurement Report Form

Project: LADWP Toluca Transmission Contract No (s): N/A

Date: 2-1-2022 Day of Week: Tuesday Time: 1232

Monitoring Site Number: ST-7 Monitoring Site Address: 7665 Fountain Ave

Measurement Taken By: KD

Approximate Wind Speed: ______ mph [km/hr] Approximate Wind Direction: From the ______

Approximate distance of Sound Level Meter from Receptor Location: ______

Approximate distance of Sound Level Meter from Project Site: ______

Receptor Land Use (Check One) ☒ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: ______ Serial Number: ______

Meter Setting ☒ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: ______

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

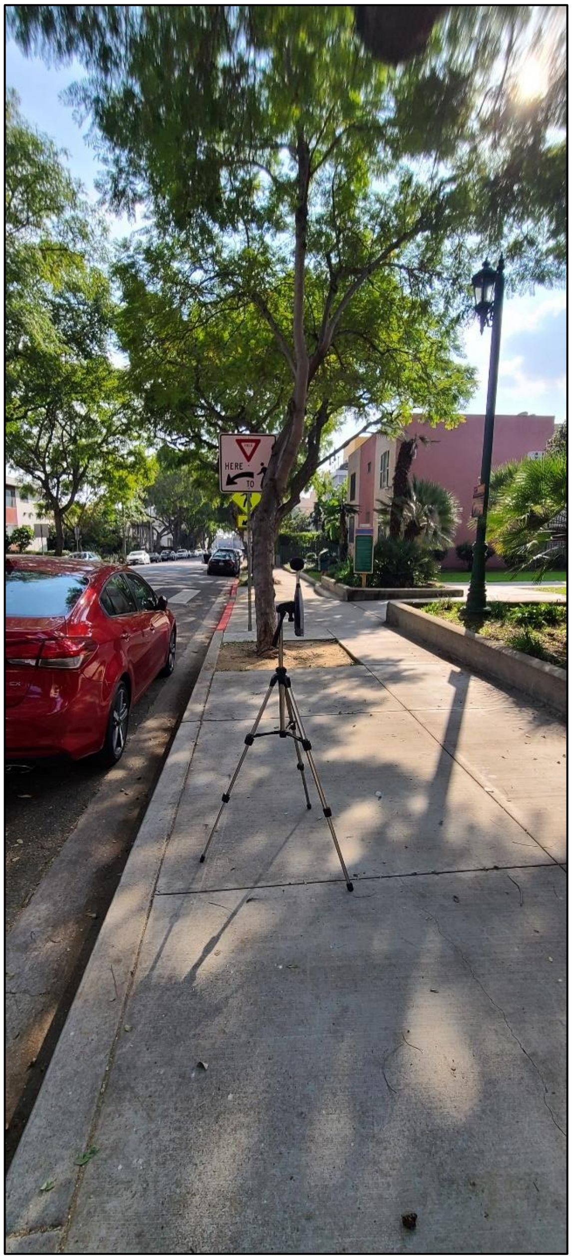
Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	72.8		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Fountain Ave traffic main noise source
2. Little Kids Country Kindergarten on corner of Spaulding Ave
3.
4.

Site 8: 1215 Fuller Avenue



Session Report

2/2/2022

Information Panel

Name	LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-8
Start Time	2/1/2022 1:16:01 PM
Stop Time	2/1/2022 1:31:01 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	57.3 dB	Lmax	1	75.9 dB
Lmin	1	46.2 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

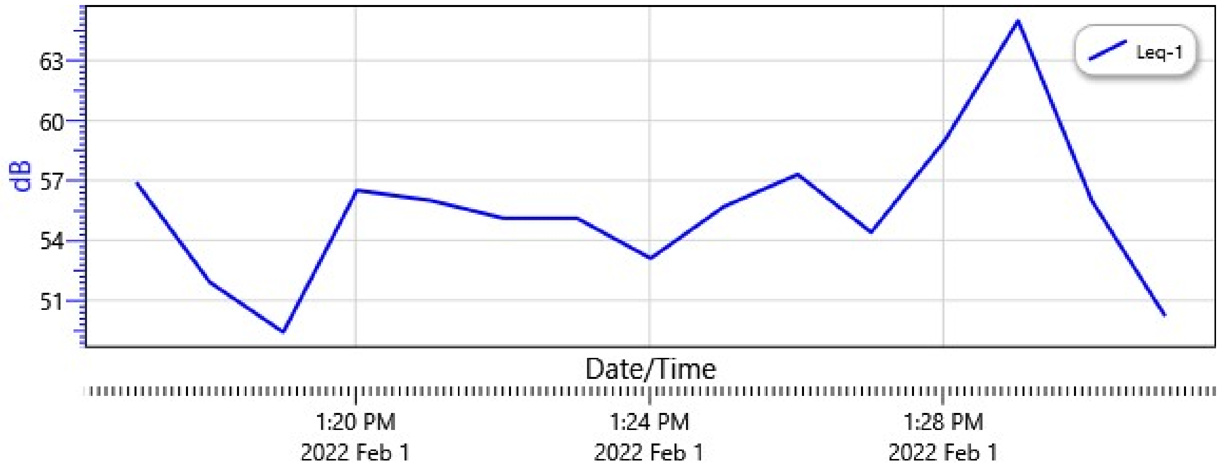
Logged Data Table

Date/Time	Leq-1
2/1/2022 1:17:01 PM	56.9
1:18:01 PM	51.9
1:19:01 PM	49.4
1:20:01 PM	56.5
1:21:01 PM	56
1:22:01 PM	55.1
1:23:01 PM	55.1
1:24:01 PM	53.1
1:25:01 PM	55.7
1:26:01 PM	57.3
1:27:01 PM	54.4
1:28:01 PM	59
1:29:01 PM	65

1:30:01 PM	56
1:31:01 PM	50.2

Logged Data Chart

LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-8: Logged Data Chart



Noise Measurement Report Form

Project: LADWP Toluca Transmission Line Contract No (s): N/A

Date: 2-1-2022 Day of Week: Tuesday Time: 1315

Monitoring Site Number: ST-8 Monitoring Site Address: 1215 Fuller Ave

Measurement Taken By: KB

Approximate Wind Speed: ______ mph [km/hr] Approximate Wind Direction: From the ______

Approximate distance of Sound Level Meter from Receptor Location: ______

Approximate distance of Sound Level Meter from Project Site: ______

Receptor Land Use (Check One) ☒ Residential / Institutional ☐ Commercial / Recreational

Sound Level Meter: Make and Model: ______ Serial Number: ______

Meter Setting ☒ A-Weighted Sound Level (SLOW) ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 min

Check the measurement purpose:

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

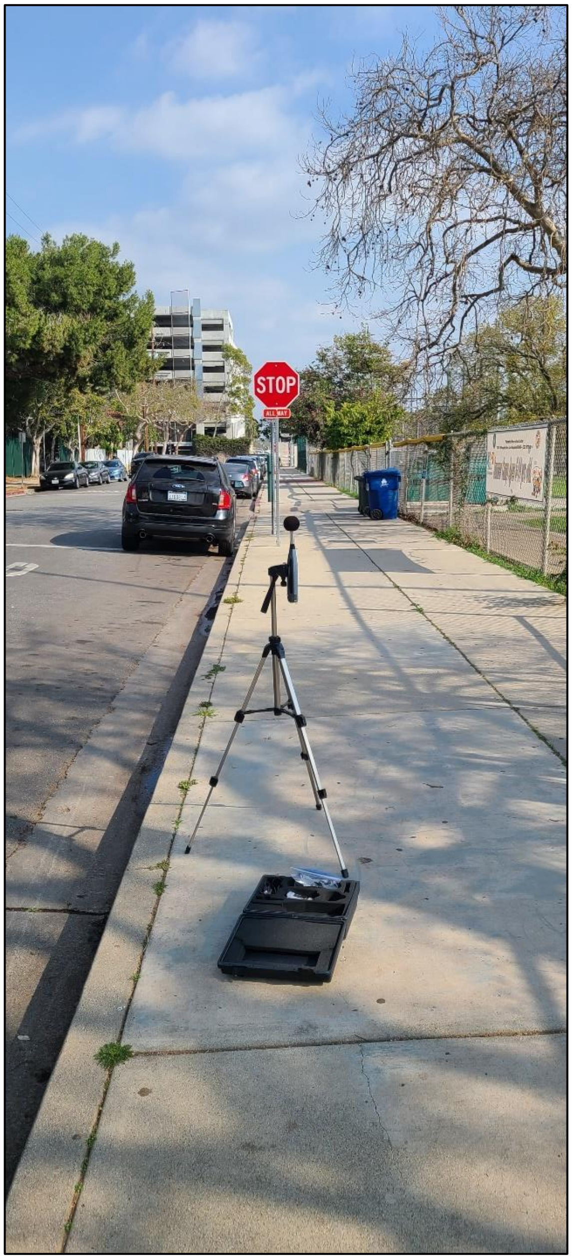
Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	57.3		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. traffic noise primarily from Arterial Streets
2. Aircraft flyovers noise
3.
4.

Site 9: Fuller Avenue/Romaine Street



Session Report

2/2/2022

Information Panel

Name	LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-9
Start Time	2/1/2022 1:45:07 PM
Stop Time	2/1/2022 2:00:07 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13H
Comments	
Run Time	00:15:00

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	57.1 dB	Lmax	1	79.3 dB
Lmin	1	46 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

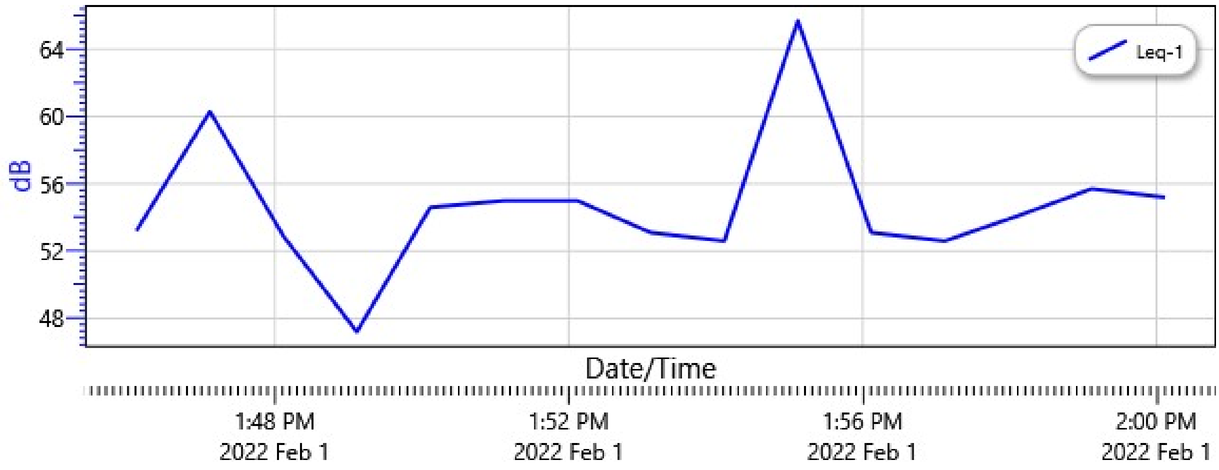
Logged Data Table

Date/Time	Leq-1
2/1/2022 1:46:07 PM	53.2
1:47:07 PM	60.3
1:48:07 PM	52.9
1:49:07 PM	47.2
1:50:07 PM	54.6
1:51:07 PM	55
1:52:07 PM	55
1:53:07 PM	53.1
1:54:07 PM	52.6
1:55:07 PM	65.7
1:56:07 PM	53.1
1:57:07 PM	52.6
1:58:07 PM	54.1

1:59:07 PM	55.7
2:00:07 PM	55.2

Logged Data Chart

LADWP Toluca-Hollywood Transmission Line 1 Replacement_ST-9: Logged Data Chart



Noise Measurement Report Form

Project: LADWP Toluca-Hollywood Transmi   Contract No (s): N/A

Date: ~~2~~ 12-1-2022   Day of Week: ________   Time: 1343

Monitoring Site Number: ST-1   Monitoring Site Address: ~~X~~ Fuller Ave / Romaine St.

Measurement Taken By: KB

Approximate Wind Speed: ______ mph [km/hr]   Approximate Wind Direction: From the ______

Approximate distance of Sound Level Meter from Receptor Location: ________

Approximate distance of Sound Level Meter from Project Site: ________

Receptor Land Use (Check One) [x] Residential / Institutional   ☐ Commercial / Recreational

Sound Level Meter: Make and Model: ________   Serial Number: ________

Meter Setting [x] A-Weighted Sound Level (SLOW)   ☐ C-Weighted Sound Level (FAST) for Impacts

Duration of Measurement: 15 min

Check the measurement purpose:

[x] Baseline condition   ☐ Ongoing construction   ☐ Major change   ☐ Complaint response

Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	57.2		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. ________

2. ________

3. ________

4. ________