Initial Study/Mitigated Negative Declaration

Victory Pump Station Replacement 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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Acronyms and Abbreviations

AB 52	Assembly Bill 52
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
BMP	Best Management Practice
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CRHR	California Register of Historical Resources
dBA	A-weighted decibel
EO	Executive Order
FESA	Federal Endangered Species Act
FP	Fully Protected
GHG	greenhouse gas
gpm	gallon-per-minute
HRA	Health Risk Assessment
LADWP	Los Angeles Department of Water and Power
LAHCM	Los Angeles Historic-Cultural Monuments
LAMC	Los Angeles Municipal Code
L_{eq}	equivalent continuous sound level
LST	Localized Significance Threshold
MBTA	Migratory Bird Treaty Act
MND	Mitigated Negative Declaration
$MTCO_2e$	Metric Tons of carbon dioxide equivalent
NOx	nitrogen oxide
NRHP	National Register of Historic Places
O_3	ozone
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter 10 microns in diameter or less
Preserve	Upper Las Virgenes Canyon Open Space Preserve
ROW	right-of-way
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SEA	Significant Ecological Area
SOx	sulfur oxide
SO_2	sulfur dioxide
SSC	Species of Special Concern
SUSMP	Standard Urban Stormwater Mitigation Plan
TAC	toxic air contaminants
US 101	United States Route 101

USACE	United States Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VHFHSZ	Very High Fire Hazard Severity Zone
VOC	volatile organic compounds
WL	Watch List

SECTION 1
PROJECT DESCRIPTION

1.1 Overview of the Project

The Los Angeles Department of Water and Power (LADWP) proposes to implement the Victory Pump Station Replacement Project (referred to herein as the proposed project or project), which involves the construction of a new pump station to replace the existing aged, temporary underground pumping facility (the existing facility) at 24661 Victory Boulevard in the West Hills community of Los Angeles. To allow for optimum performance of the proposed new pump station, approximately 1,300 linear feet of 8-inch-diameter pipeline would also be installed along Calvert Street from Sylvan Street to Valley Circle Boulevard, and approximately 500 linear feet of 12-inch-diameter pipeline would be installed in Calvert Street from Valley Circle Boulevard to Pat Avenue. The proposed project would allow the facility to meet current building, plumbing, mechanical, electrical, green and geological standards; reduce maintenance and access concerns; increase fire flow requirements; and provide for current and projected system demands for water supply more efficiently and reliably.

1.2 California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to proposed projects initiated by, funded by, or requiring discretionary approvals from state or local government agencies. As the proposed project would be funded and implemented by LADWP and require approval from the Los Angeles Board of Water and Power Commissioners, it constitutes a project as defined by CEQA (California Public Resources Code Section 21000 et seq.). The CEQA Guidelines Section 15367 states that "'Lead Agency' means the public agency which has the principal responsibility for carrying out or approving a project." Therefore, LADWP is the lead agency responsible for compliance with CEQA for the proposed project.

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

> "(a) the initial study shows that there is not substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or (b) the initial study identifies potentially significant effects, but (1) revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and (2) there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment."

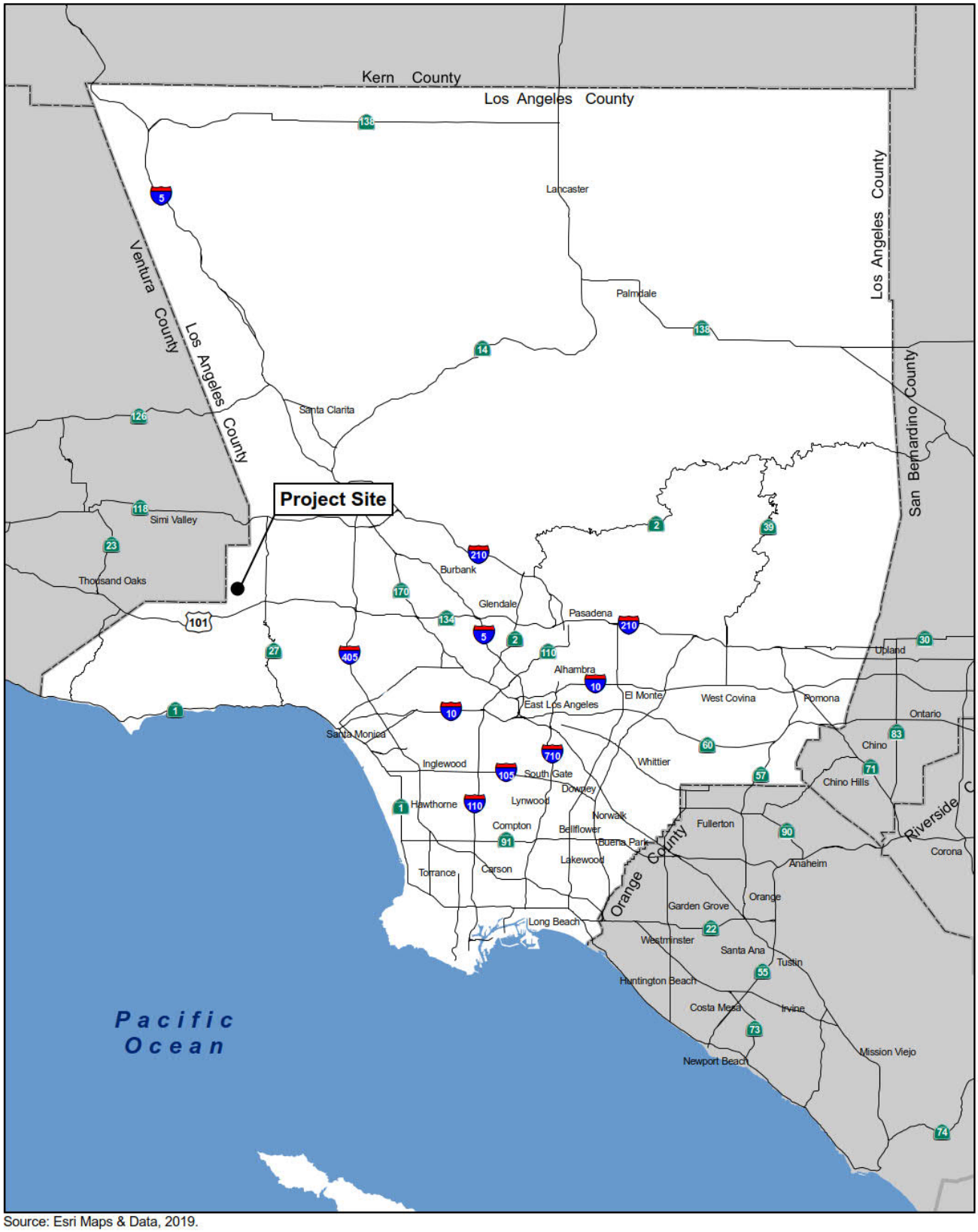
1.3 Project Location and Setting

The proposed replacement pump station building would be located within an existing LADWP easement on a residential parcel on the north side of Victory Boulevard, approximately 550 feet west of Pat Avenue in the West Hills community of the San Fernando Valley region of Los Angeles. LADWP also proposes to acquire in fee or by easement an undeveloped portion of an adjacent property along Victory Boulevard to the east of the existing easement to provide room for vehicle access and space for vehicles to turn around within the site. The pump station replacement site is generally bounded by the rear yards of adjacent single-family residential properties to the west, north, and east, and by the Victory Boulevard right-of-way (ROW) to the south. The proposed project also involves the installation of approximately 1,800 linear feet of 8- and 12-inch-diameter pipeline within Calvert Street between Pat Avenue and Sylvan Street (in the Woodland Hills community of Los Angeles), where it would tie into the existing Granada Trunk Line.

Local access is provided via Victory Boulevard, adjacent to the southern boundary of the pump station replacement site, and Valley Circle Boulevard, which intersects with the pipeline alignment at Calvert Street. Regional access is provided via U.S. Route 101 (US 101), approximately 2.2 miles south of the project site. Figure 1 shows the regional vicinity of the project site. Figure 2 shows the location of both project components, including the proposed pump station replacement site and the proposed pipeline alignment.

The pump station replacement site is currently developed with an underground pumping facility containing two 500 gallon-per-minute (gpm) pumps buried in a 9-foot diameter steel can. A 300 gpm internal combustion fire pump is also located on the LADWP easement. The current pump station replacement site is bounded by a chain link fence with a large access gate. The existing pump facility itself is enclosed within a wooden fenced area that screens it from public view. Figure 3 shows the location of the pump station replacement site.

The proposed pipeline alignment would be located within the existing ROW along Calvert Street, initiating approximately 600 feet southeast of the pump station replacement site. The proposed pipeline alignment commences at the intersection of Calvert Street and Pat Avenue and travels approximately 1,800 linear feet east on Calvert Street, terminating at the intersection of Calvert Street and Sylvan Street, where the line would tie into the Granada Trunk Line. Access to the proposed pipeline alignment site would be provided via the existing local roadway network. Figure 4 shows the location of the proposed pipeline alignment.



Source: Esri Maps & Data, 2019.

0 3 6 12 18 24 Miles

Figure 1
Regional Map

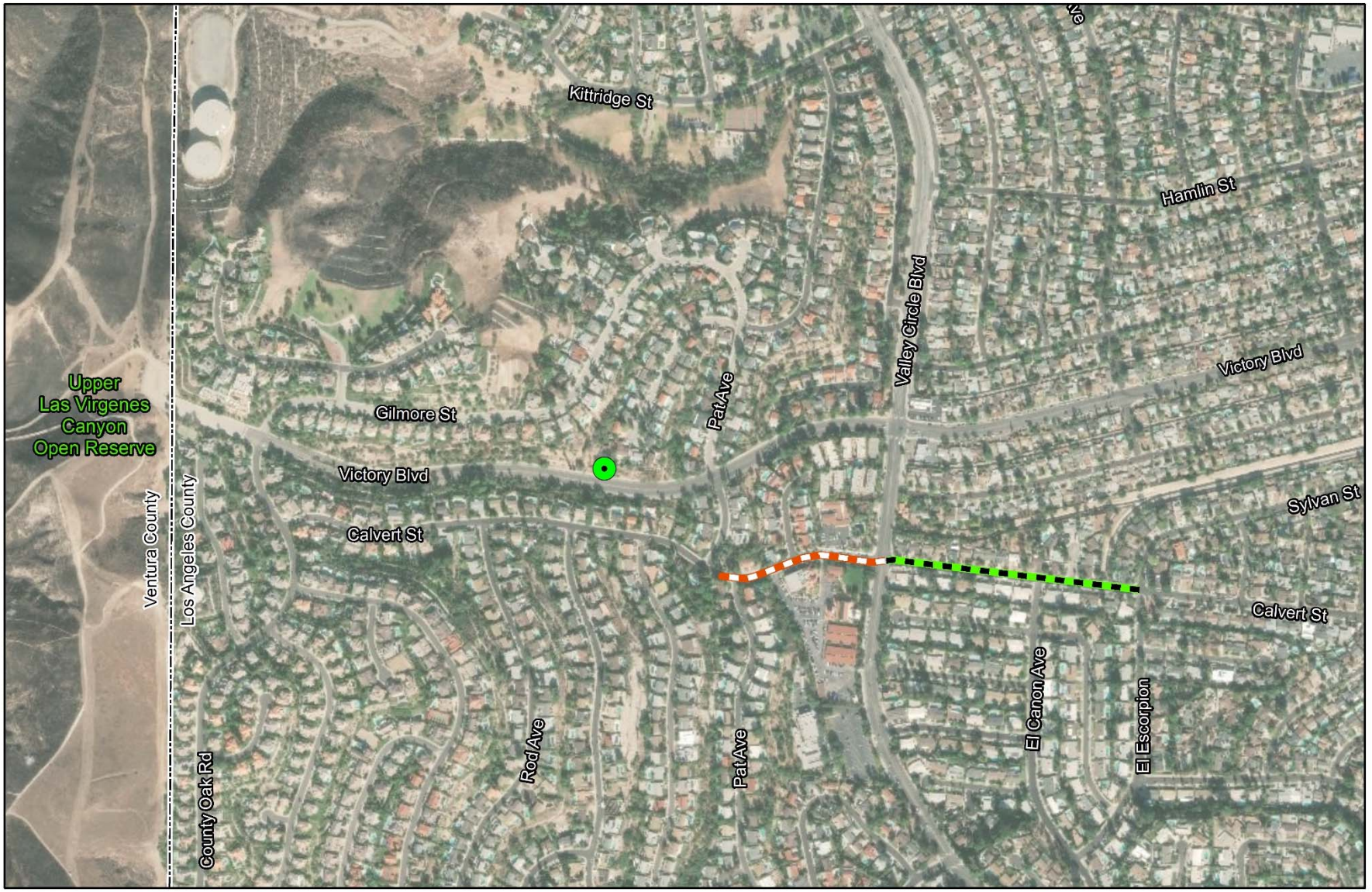
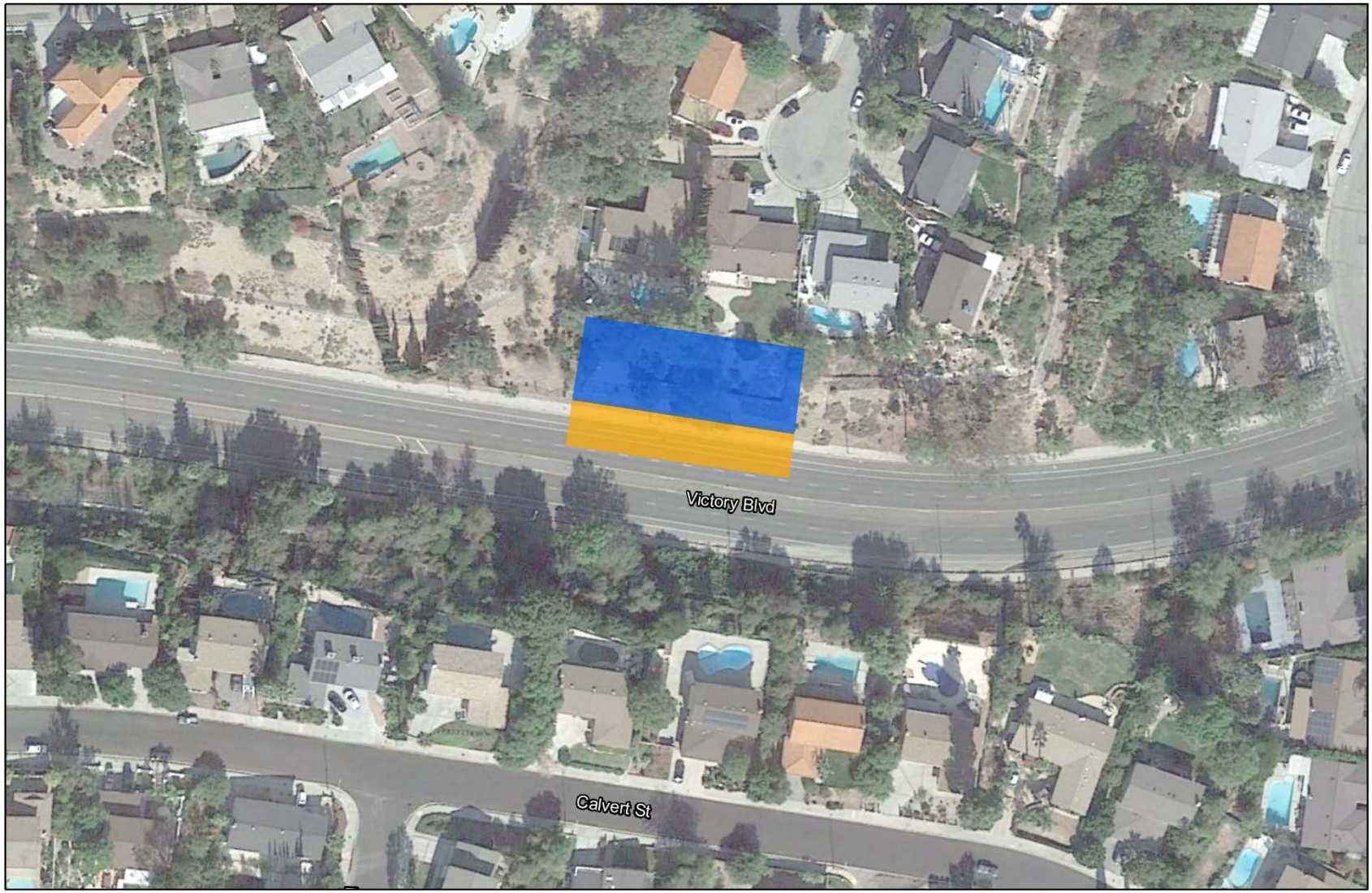


Figure 2

Project Vicinity Map



Source: Esri 2022; Created by: AECOM, 2022.

0 50 100 Feet

1" = 200'

Approximate Pump Station Replacement Site

Proposed Construction Laydown Area

Figure 3

Proposed Pump Station Replacement Site

Source: Esri 2019; Created by: AECOM, 2019.

0 175 350 Feet

1" = 350'

Proposed New 8-inch Pipeline Installation

Proposed 12-inch Pipeline Replacement

Existing Water Trunk Line

Figure 4

Proposed Pipeline Alignment

Both project components are located within areas zoned for Single Family Residences.[1] The surrounding area can be generally described as low/medium density residential, typically characterized by stand-alone dwellings on moderately-sized, landscaped lots, serviced by a network of local roads and sidewalks. Approximately 0.5-mile west of the pump station replacement site, at the western terminus of Victory Boulevard, is the Upper Las Virgenes Open Space Preserve, located in Ventura County.

Vegetation in the immediate vicinity of the proposed project typically consists of landscaped gardens and lawns associated with private residences and parkways adjacent to sidewalks. The area immediately to the north of the pump station easement is a residential rear-yard that includes mature trees. Several ornamental shrubs and trees are also located within the boundary of the project site.

The land surrounding the pump station replacement site is moderately sloped in a west to east direction, with an elevation of approximately 1,050 feet above sea level at the existing facility.

1.4 Project Background

The existing underground pump facility was commissioned for use in 1967 and was intended as a temporary facility. The existing pump facility is currently relied upon as the first in a series of two pump stations to provide a reliable potable water supply to the nearby 1,540-foot elevation service zone. The existing facility pumps water from the adjacent 1,305-foot elevation service zone to Donick Tank and Pump Station. The Victory Pump Station has direct line suction via 2,800 feet of existing 8-inch and 12-inch diameter distribution mainlines that connect from the Granada Trunk Line at Calvert Street and Sylvan Street (see Figure 5). Victory Pump Station is also the sole source of supply for the surrounding 1,383-foot elevation service zone. The existing facility is currently being utilized at maximum capacity to achieve the service output that it is required to provide.

The existing facility includes two pumps, each with a rated capacity of 500 gpm. However, due to higher suction grades coming from the 1,305-foot elevation service zone, which feeds the pump station, each pump can operate at approximately 850 to 1,000 gpm. The existing facility experiences issues related to routine and emergency maintenance due to the exceedance of its anticipated service life and the underground configuration, which impedes worker access. The proposed project would reduce maintenance issues and allow the pump station to more efficiently provide for current and projected demand for water in the service zones, as well as meet current fire flow requirements.

[1] City of Los Angeles Zoning Information and Map Access System (ZIMAS), available at: http://zimas.lacity.org/, accessed July 2022.

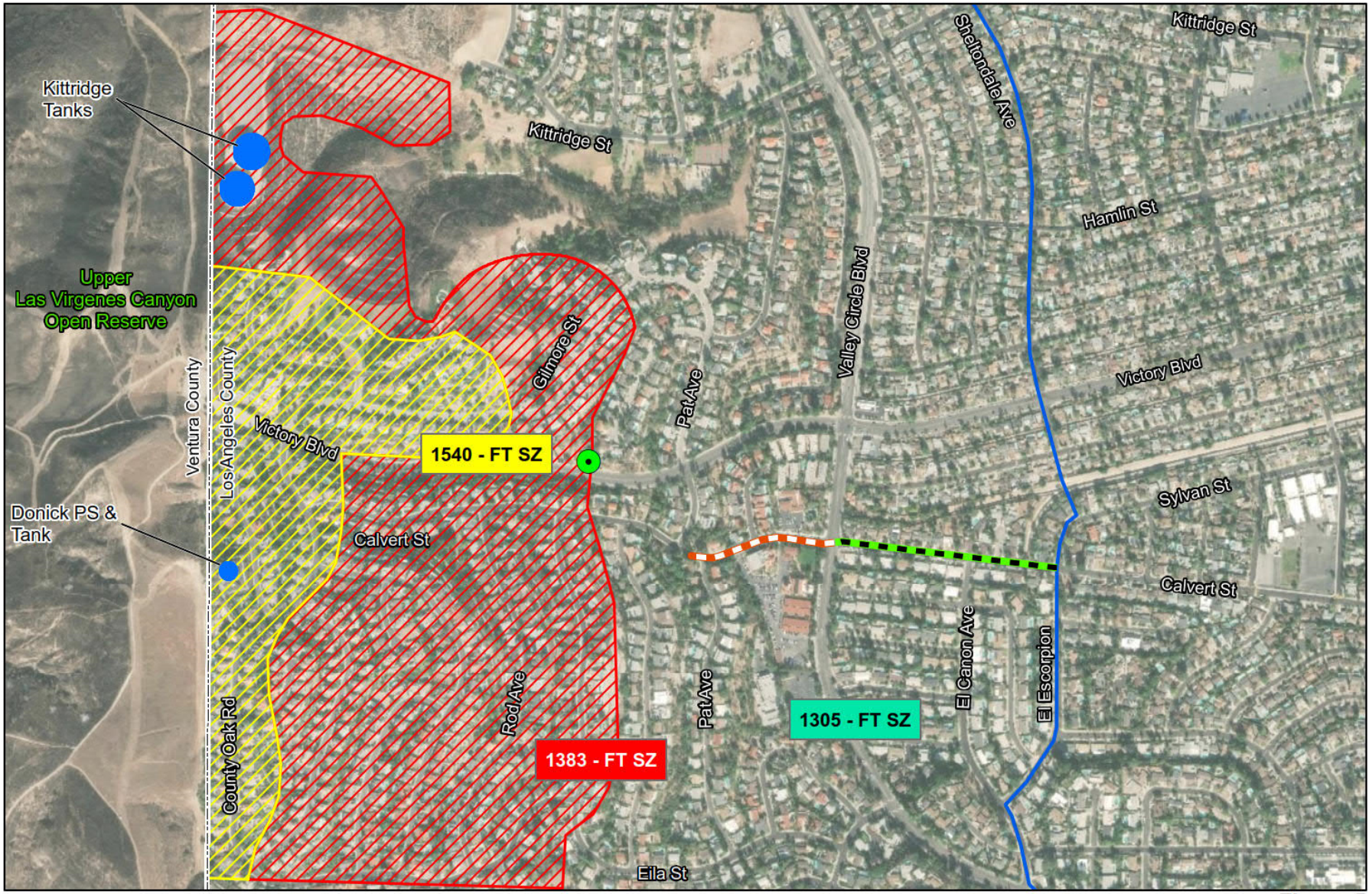


Figure 5

Existing Facilities and Service Area Locations

1.5 Project Objectives

The objectives of the proposed project are to:

- Remove the existing temporary and outdated underground pump facility from service.
- Construct a new pump station to increase the reliability and efficiency of domestic water supply and satisfy fire flow requirements to the surrounding 1,383-foot elevation and 1,540-foot elevation service zones.
- Replace existing pipeline with earthquake resistant ductile iron pipe material to provide resiliency to the potable water supply during potential seismic events.
- Reduce maintenance and access concerns by repositioning the new pump station above ground.

1.6 Description of the Proposed Project

A new pump station facility is required to replace the aged, temporary underground Victory Pump Station. To support the new pump station, approximately 1,800 feet of 8- and 12-inch-diameter pipeline would also need to be installed in nearby public roadways. These two components (pump station replacement and pipeline installation) would allow the station to meet current building, plumbing, mechanical, electrical, green and geological standards; reduce maintenance and access concerns; increase fire flow requirements; and more efficiently provide for current and projected system demands for water supply. The two proposed project components would be implemented as described below.

Pump Station Replacement

The pump station replacement would involve the construction of a new permanent pump station building and the decommissioning of the existing temporary underground pump facility. The proposed new pump station building would be approximately 27 feet tall by 27 feet wide and 38 feet long, consisting of concrete walls, windows, wood plank finishing, and metal roofing. The new pump station building would also include exterior security lighting. A 12-foot-wide access roller door would allow for the entry of maintenance vehicles, including trucks. A control room and a restroom would be included to provide office space and amenities for workers. Equipment would be installed within the control room to record flow and pressure via remote monitoring with a Supervisory Control and Data Acquisition system.

The new pump station building would house a total of three new pumps with provisions for a fourth, two pumps and a third future provision would be 1,100 gpm capacity electrical pumps to supply potable water to the service areas. While the existing pumps have a nameplate capacity of 500 gpm, they were installed in 1967 when the size of planned development in the surrounding service area was considerably smaller than existing areas of development currently served by the pump facility. Furthermore, as mentioned above, the existing pumps have been operating above their nameplate capacity (in the range of 850 to 1,000 gpm) due to higher suction grades from the adjacent 1,305-foot elevation service zone. Therefore, the replacement pumps would have a capacity that reflects the actual current demand for water in the service areas, increasing reliability and efficiency, and reducing wear on the new

pumping facilities. As possible, depending on actual demand, these pumps may be cycled, idling one pump at a time, to further extend their lifetime.

The fourth pump would be a 4,000 gpm diesel fire pump, which would replace the existing 300 gpm diesel fire pump to provide the fire flow capacity currently required by the Los Angeles Fire Department, given the expanded area of development since it was first installed. The diesel fire pump would be powered by a 400-horse-power internal combustion engine to run independently of the electric power system, which may not be reliable during a fire event. Installing the new pumps within an enclosed structure would serve to reduce noise from operation of the pumps and associated equipment.

Construction of retaining walls surrounding the proposed new pump station building would be required to accommodate the difference between the existing ground elevation and the pump station building floor. Additionally, a new exterior concrete pad would be installed in the northwest corner of the pump station replacement site to accommodate a new electrical transformer.

The existing fence at the site would be removed for the construction of the new pump station building. During construction, temporary fencing would be erected. Following the completion of the new pump station, new permanent steel security fencing would be erected. This would include the establishment of two new access gates and associated driveways. The new access gates would be 12-feet-wide swing gate (eastern driveway) and 12-feet-wide sliding gate (western driveway), to allow for truck and worker access. The establishment of the eastern driveway would require relocation of an existing street light and an electrical pull box. Additionally, three mature trees located within the existing easement would require removal[2] to allow for construction of the new building. The eastern portion of the project site would be paved with asphalt to provide for vehicle ingress and egress.

The following water line connections would be required to support the construction of the new pump station:

- Relocation of the existing 12-inch discharge line from the existing pump facility to outside the new building footprint prior to start of grading.

- Connection of the new 12-inch suction line to the existing 12-inch suction line on Victory Boulevard.

- Connection of the new 12-inch discharge line from the existing pump facility to the existing 12-inch discharge line on Victory Boulevard.

The existing pump facility would remain in service for the duration of construction until the new pumps are operational. Upon operation of the new pump station, the existing above-ground equipment, including electrical cabinets, light pole, meter vault, diesel pump, electrical conduit, and fencing would be removed. The area containing the existing underground pump station and associated equipment would be filled and paved over to provide vehicular access at the new pump station.

[2] Implementation of the proposed project would result in the removal of non-native trees such as Brazilian pepper tree (*Schinus terebinthifolius*) and Italian stone pine (*Pinus pinea*), as well as one native (but non-protected tree, velvet ash (*Fraxinus velutina*)), occurring on the parcel adjoining the east side of the current pump station site.

Pipeline Installation

To support the new pump station, approximately 1,800 linear feet of pipeline would be installed along Calvert Street between Pat Avenue and Sylvan Street. The westernmost approximately 500 linear feet of pipeline would be installed between Pat Avenue and Valley Circle Boulevard. This segment would consist of a new 12-inch diameter pipe, which would replace the existing 12-inch diameter pipeline at that location. The existing pipeline would be abandoned in place. The easternmost approximately 1,300 linear feet of pipeline would be a new, 8-inch diameter pipeline connected from the new 12-inch diameter pipeline at Valley Circle Boulevard to the existing Granada Trunk Line at Sylvan Street. The new 8-inch diameter pipeline would be installed parallel to an existing 8-inch mainline in Calvert Street, which would remain functioning in place to continue providing water service to support the pump station operations. The new pipeline segments would be composed of earthquake resistant ductile iron pipe material to provide resiliency to the potable water supply during potential seismic events.

1.7 Construction Schedule and Procedures

Construction of the proposed pump station is anticipated to begin in January 2026 and take approximately 24 months to complete, concluding in January 2028. Installation of the proposed pipeline would begin in late 2027. It would be installed at a rate of approximately 30 linear feet per day, taking a total of approximately 60 working days to complete. Construction activities would occur Monday through Friday, and workers would typically be on site for eight hours per day from approximately 7:00 a.m. to 3:00 p.m., which would comply with the City noise ordinance. No work outside of these hours, or work on weekends or national holidays, is anticipated. Construction procedures for each of the project components are described below.

Pump Station Replacement

Construction of the proposed new pump station is anticipated to begin in January 2026 with preparation of the site, including clearing and grading activities. Site preparation would require the removal of three existing trees located within the existing easement. The construction of the proposed new pump station building and the connection of the mainline water system to the new pump station equipment would occur following site preparation. The existing temporary internal combustion engine driven pump would be relocated and kept operational until construction of the replacement pump station is completed. Following construction of the new pump station building, site finalization activities would include the installation of permanent fencing, driveways and paving, and any required installation of landscaping and sidewalk and street repair.

Construction activities for the pump station replacement would occur within the boundaries of the LADWP easement, except the construction staging and laydown area, which would be established immediately adjacent to the construction site within Victory Boulevard. This would require the temporary occupation of the existing parking lane, the existing bicycle lane, and one existing vehicular travel lane, as well as the existing sidewalk along the north side of Victory Boulevard. The general location and extent of this construction site and associated laydown area is shown in Figure 3. It would be defined by fencing or other barriers. This laydown area would remain in this location for the duration of construction. Traffic controls would be provided, primarily with signage and restriping the roadway, to guide traffic around the staging area.

Generally, construction equipment would be delivered to the site once and remain on site for the duration of construction activities for which they are required. Vehicles transporting construction workers, those making recurrent deliveries of consumable materials, and haul trucks would arrive at and leave the site as required throughout construction. Any material that would be exported from the site would follow a designated haul route for the proposed project, which would commence at the pump station replacement site, travel eastbound on Victory Boulevard to Valley Circle Boulevard, and southbound on Valley Circle Boulevard to US 101. For hauling of debris and excavated material, the route would then continue westbound along the freeway for approximately 17 miles before exiting at Lost Hills Road, Calabasas, toward the Calabasas Landfill Facility. Materials deliveries may come from either the westbound or eastbound US 101, exiting at Valley Circle Boulevard to reach the project site.

Vehicles transporting construction workers would come and go from the site daily at the start and end of the scheduled work day. The typical anticipated daily work force for the pump station replacement would be approximately 15 construction workers. However, during peak construction, as many as 25 construction workers may be present on a given day. This would result in approximately 30 one-way construction worker trips per day typically and a maximum of approximately 50 one-way trips per day during peak periods, including one inbound and one outbound trip per worker. However, this does not account for any carpooling that may occur among workers, and as a result, the number of daily worker vehicle trips may be lower.

Construction equipment required during different phases of the pump station replacement includes one crane, two excavators, one bulldozer, and one front loader. Additionally, construction of the retaining wall would require the installation of approximately 20 drilled piles. A truck-mounted drill rig with 24-inch auger and a 30-ton crane would be used for pile installation, which would occur over an approximate 3-week period.

Recurrent deliveries would include the transport of material and components (including concrete and fill soil) required for the pump station construction. Deliveries would be made using dump trucks, concrete trucks, and flatbed trucks.

Grading and excavation activities during the construction would also create truck trips for transporting spoil material for off-site disposal. Peak construction vehicle movement is anticipated to occur during excavation activities, when two haul trucks may need to travel to and from the site up to six times a day each (12 roundtrips or 24 one-way trips). It is anticipated that this frequency of heavy vehicle movement to and from the site would be limited to approximately 14 intermittent days throughout the site excavation period.

Excavation activities would be required at various stages of construction to allow for site preparation, construction of the new pump station building, and the construction of retaining walls. Table 1-1 below describes each construction activity requiring excavation and provides an estimate of the anticipated volume of excavated material that would be removed.

Table 1-1 Approximate Volume of Excavated Material per Construction Activity	
Construction activity	**Quantity of excavated material (cubic yards)**
Site earthwork to lower the site prior to the commencement of construction work (site grading).	165
Soil removed to allow for piles to support to retaining walls required on the northern side of the pump station building.	56
Excavation to bottom of the pump station building footing.	265
Soil removed to allow for the installation of perimeter wall footings.	23
Over excavation of 3 feet below pump station building footing to comply with Geotechnical requirements.	152
Total	**661**

In addition to excavated material requiring removal, some material would be imported to replace that which is being removed to comply with geotechnical requirements. The excavated material would be replaced with approximately 152 cubic yards of suitable material to allow for the safe and stable construction of the new pump station building.

The anticipated construction sequence for the proposed pump station replacement is as follows:

- Establishment of construction laydown area, including the erection of temporary fencing, barricades, and applicable traffic detour measures.
- Site preparation including removal of vegetation, grading of the site, and installation of temporary fencing.
- Construction of retaining walls (including associated excavation and piling activities).
- Construction of the new pump station building.
- Installation of the new pump station equipment.
- Connection of new pump station equipment to mainline water system.
- Removal of existing aboveground pump station equipment and backfilling of existing pump station site.
- Construction of permanent fencing.
- Construction of access driveway.
- Paving of site surrounding the new pump station building.
- Removal of staging area, including barriers, and restoration and restriping of roadway.

Pipeline Installation

Construction activities associated with the proposed pipeline installation would take place within the existing ROW of Calvert Street between Pat Avenue and Sylvan Street. Pipeline installation would require closing a portion of the roadway width to accommodate equipment, pipeline supplies and materials, excavated material, and construction operations. Depending on the exact alignment of the pipeline, this may involve a majority of the 36-foot-wide paved ROW. It is anticipated that at least one travel lane would remain open in the section of Calvert Street under construction. However, this would result in a one-way flow of traffic, which would require the management of traffic moving in opposite directions by flag persons. Access to driveways and side streets that have singular access off of Calvert Street would be maintained at all times. In addition, detour plans to side streets that have alternative access routes would be implemented. A “rolling construction” process would be employed, in which a zone of several hundred feet in length would be involved in various phases of the pipeline installation at a given time. These construction zones would typically be established between intersections to minimize traffic disruptions. In this manner, only a portion of the 1,800-foot pipeline alignment would be under construction at once.

The new pipeline would be installed using an open trenching method. The excavated trench would be 5 feet wide by 7 feet deep. The majority of the excavated material would be used to backfill the trench following pipe installation. As such, only a minimal amount of material, such as pavement, would be generated for disposal. Construction equipment would remain at the project site within the designated construction zone for the duration of its use.

Where pipeline replacement is proposed between Pat Avenue and Valley Circle Boulevard, a new 12-inch-diameter earthquake resistant ductile iron pipe would be installed adjacent to the existing pipeline, and the existing pipeline would be severed from the water distribution system and abandoned in place. To cross Valley Circle Boulevard, travel lanes would be corralled to one side of the intersection at a time so that vehicles could continue to travel on Valley Circle Boulevard during construction.

Between Valley Circle Boulevard and Sylvan Street, a new 8-inch-diameter earthquake resistant ductile iron pipe would be installed, but the existing 8-inch pipeline would remain functioning in place to continue providing water service to support the pump station operations. Trenching would also be used to install the new 8-inch diameter pipeline within the road over the existing storm drain channel on the eastern end of the pipeline alignment near Sylvan Street. However, the pipeline in this length would be a welded steel pipe encased in concrete.

The typical anticipated daily work force for the pipeline installation would be approximately 10 construction workers. This would result in an average of approximately 20 one-way construction worker trips per day. This, however, does not account for any car pooling that may occur among workers, and as a result, the number of daily worker vehicle trips may be lower. Construction equipment required for the pipeline installation includes 2 pickup trucks, 3 dump trucks, 1 Pittman hoist, 1 backhoe with carrier, 1 flatbed truck, 2 weld trucks, 1 utility truck, and 1 gang truck. Other than the dump trucks and flatbed truck, this equipment would be delivered to the site at the beginning of construction and remain for the duration. Construction vehicle access (including dump trucks and flatbed trucks) for the pipeline installation would be provided via the existing road network around and including Calvert Street.

The estimated construction sequence for the proposed pipeline installation is as follows:

- Establishment of a construction zone at an appropriate location along the alignment, including safety barriers, as necessary (this would be relocated several times during the construction period).
- Establishment of erosion and sediment control measures.
- Provision of temporary access to properties where the trench route may impact driveways.
- Site preparation, including pavement removal along trench.
- Trench excavation, including stockpiling of spoil material along the side of trench.
- Trench shoring.
- Spreading of granular bedding material such as sand or gravel along the bottom of the trench prior to pipe laying.
- Installation and testing of the pipeline and appurtenances.
- Construction of maintenance holes.
- Backfilling of the trench with excavated soil.
- Compacting of trench fill material and restoring pavement within the construction zone.
- Removal of construction zone barriers.
- Transfer domestic services and fire hydrants to the new 12” mainline. (No services or taps to be connected to the new parallel 8” mainline.)

1.8 Best Management Practices

An appropriate combination of monitoring and resource impact avoidance would be employed during all phases of the proposed project, including implementation of the following Best Management Practices (BMPs):

1. 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.
    - All haul 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.
- Ground cover in disturbed areas shall be replaced in a timely fashion when work is completed in the area.
- A community liaison shall be identified to address concerns regarding 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.

2. LADWP would develop and implement an erosion control plan and Storm Water Pollution Prevention Plan for construction activities. Erosion control and grading plans 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 measures may include the following:
     a. Temporary desilting basins;
     b. Silt fences;
     c. Gravel bag barriers;
     d. Temporary soil stabilization with mattresses and mulching;
     e. Temporary drainage inlet protection; and
     f. Diversion dikes and interceptor swales.

3. 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.

4. LADWP shall coordinate with all applicable agencies regarding construction schedules and worksite traffic control and detour plans, including but not limited to LADOT, 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.

5. LADWP would conduct pre-construction surveys for nesting birds and provide a biological monitor as necessary should project activities be initiated during the nesting bird season (February 1 through September 15 for songbirds, and as early as January 15 through September 15 for raptors). Should active nests be observed, a qualified biologist would monitor the nest on a weekly basis and, if deemed necessary, construction activity would be postponed until the biologist determines that the nest is no longer active.

6. 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.

1.9 Required Permits and Approvals

Numerous approvals and/or permits would be required to implement the proposed project. The environmental documentation for the 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 Water and Power

- Adoption by the City of Los Angeles Board of Water and Power Commissioners of the IS/MND with a finding that it complies with CEQA and other applicable codes and guidelines.

- Approval by the City of Los Angeles Board of Water and Power Commissioners of the proposed project.

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

- Excavation permits.

- Sewer connection permit.

- Driveway permit.

City of Los Angeles, Department of Public Works, Street Lighting

- Street Light Relocation.

City of Los Angeles, Department of Transportation

- Traffic Control Plan.

Los Angeles Regional Water Quality Control Board

- Storm Water Pollution Prevention Plan for storm water management during construction.

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

- Standard Urban Stormwater Mitigation Plan (SUSMP).

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:
Victory Pump Station Replacement 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:
Nadia Parker
Environmental Planning and Assessment
Los Angeles Department of Water and Power
(213) 367-1745

Project Location:
The project site is located at 24661 Victory Boulevard in the community of West Hills and along portions of Calvert Street in the community of Woodland Hills in the City of Los Angeles, California. LADWP possesses a permanent easement for the proposed pump station site that was granted in 1966. The proposed pipeline would be located entirely with public road ROW.

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

General Plan Designation:
Under the General Plan, the pump station replacement site and the properties along the pipeline alignment are designated Low to Very Low Residential.

Zoning:
The pump station replacement site is zoned RE (Residential Estate), while the properties along the pipeline alignment are zoned RE, RS (Residential Suburban), and A1 (Agriculture).

Description of Project:
A new pump station facility is required to replace the aged, temporary underground Victory Pump Station. To support the new pump station, approximately 1,800 feet of 8- and 12-inch-diameter pipeline would also be installed within public roadways. These two

components (pump station replacement and pipeline installation) would allow the station to meet current building, plumbing, mechanical, electrical, green and geological standards; reduce maintenance and access concerns; and more efficiently provide for present and projected system demands for domestic water supply and fire flow requirements in the project area.

Surrounding Land Uses and Setting:
The surrounding area can be generally described as low/medium density residential, typically characterized by stand-alone dwellings on moderately-sized, landscaped lots, serviced by a network of local roads and sidewalks.

Other Public Agencies whose Approval is Required:

- City of Los Angeles, Department of Water and Power
- City of Los Angeles, Department of Public Works, Bureau of Engineering
- City of Los Angeles, Department of Public Works, Street Lighting
- City of Los Angeles, Department of Transportation
- Los Angeles Regional Water Quality Control Board
- City of Los Angeles, Department of Public Works, Bureau of Sanitation

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, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

As discussed in Section XVIII below, a Sacred Land File search conducted by the Native American Heritage Commission did not result in the identification of any documented sacred lands within 0.5 miles of the proposed project. however, Assembly Bill 52 consultation with the Native American Heritage Commission and Native American contacts in the project area is ongoing. In September 2019, letters were sent to 13 Native American governmental representatives identified by the Native American Heritage Commission as potential sources of information related to cultural resources in the vicinity of the project area. The letters advised the tribes and specific individuals of the proposed project and requested information regarding cultural resources in the immediate area, as well as feedback or concerns related to the proposed project. To date, LADWP has received a request from the Gabrieleno Band of Mission Indians – Kizh Nation for consultation on the project and consultation is underway.

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 and Forestry 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.

FOR

11/28/2022

Signature

Date

Charles C. Holloway
Manager of Environmental Assessment and Planning
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 nonurbanized 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 standard?			**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 Division of Mines and Geology 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 a stream or river or through the addition of impervious surfaces, in a manner which would:				
	i) Result in substantial erosion or siltation on- or off-site?				**X**
	ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				**X**

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	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?				**X**
	iv) Impede 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.	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.				
a. 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:				

	Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or				**X**
ii) 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 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?				**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 wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				**X**

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
c.	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts 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**	
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**		

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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?

No Impact. Scenic vistas are generally defined as panoramic public views to various natural features, including large water bodies, 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 rights-of-way.

New aboveground elements would be included with the proposed project on the proposed pump station replacement site. The new aboveground pump station facility is required to replace the aged, temporary underground Victory Boulevard pump station, which is located adjacent to the rear yards of surrounding single-family residential properties. The proposed new pump station building would be approximately 25 feet tall by 31 feet wide, consisting of concrete walls, windows, wood plank finishing, and metal roofing. In addition, two retaining walls to the east and the west of the proposed new pump station building would be required to offset the difference between the existing ground elevation and the pump station building floor. The Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan does not identify any official scenic vistas or viewpoints at or near the proposed location for the pump station.[3]

The new pump station would front onto the north side of Victory Boulevard and would be directly visible from public viewpoints within the Victory Boulevard right-of-way, including the adjacent sidewalks, bike lanes, and vehicle traffic lanes. Although the new pump station would be visible from the public ROW, it would not be part of a scenic vista. Therefore, there would be no impact to a scenic vista.

The proposed project would also include the installation of approximately 1,800 linear feet of pipeline below-grade along Calvert Street from Sylvan Street to Pat Avenue. No permanent aboveground structures would be included with the new pipeline, and the street ROW would be returned to existing conditions following construction. The new pipeline construction would not be a part of a scenic vista. Therefore, no impact to the scenic vistas would occur.

[3] City of Los Angeles Department of City Planning, *Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan Update*, adopted August 17, 1999.

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

No Impact. There are no state-designated Scenic Highways in the vicinity of the proposed project.[4] However, Valley Circle Boulevard is a City-designated Scenic Highway that intersects with the proposed pipeline alignment. This local Scenic Highway extends from Mulholland Drive north to Plummer Street.[5] The pipeline installation along Calvert Street would intersect with Valley Circle Boulevard, but it would be installed beneath the paved roadway. No permanent aboveground structures would be included with the new pipeline. As such, the proposed project would not substantially damage any scenic resources such as trees, rock outcroppings, or historic buildings. Therefore, the proposed project would not have the potential to damage scenic resources within a designated scenic highway, and no impact would occur.

c) In nonurbanized 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 form 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?

No Impact. The project site is located in the urbanized West Hills and Woodland Hills communities of the San Fernando Valley region of the City of Los Angeles and is surrounded by primarily single-family residential uses. As discussed in Section I(a) above, new aboveground elements would be included with the proposed project on the proposed pump station replacement site. The proposed new 25-foot-tall pump station building would be visible from the Victory Boulevard ROW. Based on a review of zoning requirements, the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan, and other planning documents, there are no regulations that govern visual character or scenic quality that apply to the project site. Therefore, the proposed project would not substantially degrade the visual character or quality of the site, and would not conflict with applicable regulations governing scenic quality. No impact would occur.

The proposed pipeline does not involve the construction of any permanent above-ground structures. Following installation of the water pipeline, the existing roadway would be returned to its existing condition. Therefore, no impact would occur.

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

No Impact. Implementation of the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views. The pump station site is currently illuminated by existing adjacent standard street lights along Victory Boulevard, as well as some existing security lighting on site. Construction activity for the new pump station and pipeline would occur during

[4] State of California Department of Transportation. *State Scenic Highway Program – Scenic Highway System Map*. Website: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa, accessed July 2022.

[5] City of Los Angeles Department of City Planning, *Mobility Plan 2035 – An Element of the General Plan, Transportation Element*, adopted September 7, 2016.

daylight hours and, therefore, would not require temporary nighttime lighting. The new pump station would include installation of new security lighting around the new building. The nighttime security lighting that would be installed to direct the light to within the pump station site, and would not adversely affect nighttime views. The new pump station building does include some glass and metal features as part of the structure. These features would be constructed in compliance with City regulations governing the use of such materials. As such, daytime glare effects are not anticipated. Compliance with applicable City regulations related to light and glare would ensure less than significant impacts. As such, the proposed project would not create a substantial source of light or glare that would result in adverse effects to day/nighttime views of the area. No impact would occur.

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. There is no designated Farmland in the area of the proposed project.[6] Both project components (i.e., the proposed new pump station and the underground pipeline) are located in areas designated as Urban and Built-Up Land on the "Los Angeles County Important Farmland" map prepared by the California Resources Agency pursuant to the Farmland Mapping and Monitoring Program.[7] Therefore, the project would not convert Farmland to a non-agricultural use, and no impact would occur.

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

No Impact. The pump station replacement site is zoned Residential Estate (RE). The proposed new pump station building would be located entirely within the permanent LADWP easement granted in 1966. The areas adjacent to the proposed pipeline alignment are zoned RE, Residential Suburban (RS), and Agriculture (A1).[8] The A1 parcel has been occupied by a school since the mid-1960s. Furthermore, the pipeline would be located entirely within the Calvert Street ROW, which would be returned to preconstruction conditions after the pipeline installation is complete. The City of Los Angeles does not offer Williamson Act contracts.[9] 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, Farmland Mapping and Monitoring Program, *Important Farmland in California, 2016* map. Published July 2017. Website: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/los16.pdf, accessed July 2022.

7 State of California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, Los Angeles County, *Los Angeles County Important Farmland 2016* map, available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/los16.pdf, accessed July 2022.

8 ZIMAS, available at: http://zimas.lacity.org/.

9 State of California Department of Conservation, Division of Land Resource Protection, Current and Historic Data About Land Conservation (Williamson) Act Status. Website: http://www.conservation.ca.gov/dlrp/lca/Pages/stats_reports.aspx, accessed July 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 project site is not located in an area zoned for forest land, timberland, or Timberland Production as defined in Public Resources Code Section 12220(g) and Government Code Section 4526.[10] Therefore, the proposed project would not conflict with existing zoning for or cause a rezoning of forest land or timberland. No impact would occur.

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

No Impact. No portion of the project site is developed for forest land use or located adjacent to forest lands.[11] Therefore, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. 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. As stated in Section II(a), no portion of the project site or surrounding area is identified as Farmland. As stated in Section II(d), no portion of the project site or surrounding area is designated as forest land. 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. No impact would occur.

III. AIR QUALITY

Potential air quality impacts associated with the proposed project were determined from the results presented in the Air Quality Assessment Technical Memorandum prepared for the proposed project (see Appendix A).

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 SCAQMD and Southern California Association of Governments (SCAG) policies, including the SCAQMD's 2016 Air Quality Management Plan (AQMP) and growth projections within the SCAG's 2016–2040 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:

[10] ZIMAS, available at: http://zimas.lacity.org/.
[11] ZIMAS, available at: http://zimas.lacity.org/.

- 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 first indicator is assessed by comparing emissions of air pollutants that would be produced by construction and operation of the proposed project to the SCAQMD significance thresholds, both on regional and localized scales. The regional and localized air quality significance thresholds were designed to prevent the occurrence and exacerbation of air quality violations resulting from construction and operation of individual CEQA projects in the context of existing ambient air quality conditions. The second indicator is assessed by determining consistency of permanent operations with population, housing, and employment assumptions that were used in the development of the AQMP and the RTP/SCS.

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 trucks traveling to and from the project site. Fugitive dust emissions would primarily result from site preparation (e.g., clearing, grading, excavation, and loading) activities. Nitrogen oxide (NO_X) emissions would predominantly result from the use of construction equipment and truck trips. The assessment of construction air quality impacts considers all of these emissions sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

It is mandatory for all construction projects in the South Coast Air Basin (Basin) to comply with SCAQMD Rule 403 for Fugitive Dust (refer to BMP 1 in Section 1.8, above). Rule 403 control requirements include measures to prevent the generation of visible dust plumes. Measures include, but are not limited to, applying water or soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system or other control measures to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas. Compliance with the provisions and practices propagated by Rule 403 would reduce regional fugitive dust particulate matter (PM_{10} and $PM_{2.5}$) emissions associated with construction activities by approximately 61 percent.

Daily emissions of volatile organic compounds (VOC), NO_X, carbon monoxide (CO), sulfur oxide (SO_X), PM_{10}, and $PM_{2.5}$ were estimated for the pipeline installation and each of the five phases of pump station construction for the proposed project using CalEEMod. Table 3-1 shows the maximum unmitigated daily regional emissions for each activity, including emissions from sources located both on- and off-site. As stated above, the unmitigated emissions account for the provisions of SCAQMD Rule 403, which requires fugitive dust control that achieves a 61 percent reduction from on-site fugitive dust sources, including disturbed ground surface and material stockpiles. Maximum daily emissions of all air pollutants would remain below all applicable regional SCAQMD thresholds during construction of the proposed project, and air quality impacts would be less than significant.

In addition to maximum daily regional emissions, maximum localized (on-site) emissions were quantified for each construction activity. Sources of emissions located on the project site include heavy-duty equipment exhaust and fugitive dust. Localized Significance Threshold (LST) values have only been derived for the pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The LST values selected for the screening analysis are applicable to a one-acre daily disturbance area within 25 meters of sensitive receptors in SCAQMD Source Receptor Area 6, within which the proposed project is located. Table 3-1 also presents the results of emissions modeling from on-site construction sources and analysis in the context of the LST methodology, which is designed to prevent the occurrence of substantially elevated small-scale concentrations in close proximity to construction sites.

Maximum on-site emissions during project construction would not exceed the applicable LST values, therefore construction of the proposed project would not result in a significant localized air quality impact related to the frequency or severity of air quality violations. With respect to the first criterion, localized concentrations of nitrogen dioxide as NO_X, CO, PM_{10}, and $PM_{2.5}$ have been analyzed for the proposed project. Sulfur dioxide (SO_2) emissions, assessed as SO_X within the SCAQMD thresholds, would be negligible during construction, and, therefore, would not have the potential to cause or affect a violation of the SO_2 ambient air quality standard. Since VOCs are not a criteria pollutant, there is no ambient standard or localized threshold for VOCs. Due to the role VOCs play in ozone formation, it is classified as a precursor pollutant, and only a regional emissions threshold has been established. The impact would be less than significant.

Table 3-1
Estimated Daily Construction Emissions

Phase	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Pipeline Trenching						
On-Site Emissions	0.6	4.8	4.3	<0.1	0.3	0.2
Off-Site Emissions	0.2	2.9	1.5	<0.1	0.4	0.1
Total	***0.8***	***7.6***	***5.8***	***<0.1***	***0.7***	***0.4***
Site Preparation						
On-Site Emissions	0.9	8.7	8.9	<0.1	1.6	1.0
Off-Site Emissions	0.3	1.9	2.2	<0.1	0.7	0.2
Total	***1.2***	***10.6***	***11.1***	***<0.1***	***2.3***	***1.2***
Excavation/Grading						
On-Site Emissions	0.9	9.2	10.0	<0.1	1.6	1.1
Off-Site Emissions	0.4	4.9	3.0	<0.1	6.2	1.6
Total	***1.3***	***14.1***	***12.9***	***<0.1***	***7.8***	***2.6***
Shoring						
On-Site Emissions	1.5	14.4	12.7	<0.1	3.0	1.9
Off-Site Emissions	0.3	1.4	2.0	<0.1	0.7	0.2
Total	***1.7***	***15.8***	***14.7***	***<0.1***	***3.7***	***2.1***
Station Construction						
On-Site Emissions	0.8	8.2	8.0	<0.1	0.4	0.3
Off-Site Emissions	0.2	0.7	1.6	<0.1	0.6	0.2
Total	***1.1***	***8.8***	***9.6***	***<0.1***	***1.0***	***0.5***
Site Finalization						
On-Site Emissions	0.5	4.8	7.7	<0.1	0.2	0.2
Off-Site Emissions	0.2	0.7	1.6	<0.1	0.6	0.2
Total	***0.7***	***5.5***	***9.4***	***<0.1***	***0.8***	***0.4***
Regional Analysis						
Maximum Regional Daily Emissions	**1.7**	**15.8**	**14.7**	**<0.1**	**7.8**	**2.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Localized Analysis						
Maximum Localized Daily Emissions	**--**	**14.4**	**12.7**	**--**	**3.0**	**1.9**
Localized Significance Threshold	--	103	426	--	4	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

Note: Emissions modeling files can be found in Appendix A.
Source: TAHA, 2019.

Operations

Operational activities associated with the proposed project would be minimal. Implementation of the proposed project would not introduce any new trip-generating land uses to the project area, nor would it introduce new residences or jobs. The pipeline component of the proposed project would require infrequent maintenance, and any intermittent vehicle trips would result in negligible regional emissions on a daily basis. The pump station building would house a control room and restroom, as well as three new pumps, and be equipped with exterior security lighting. Two of the new pumps would be electrically powered and, along with the security lighting, wired

into the existing LADWP grid. The energy consumed by these functions would result in indirect, although not precisely calculable, air pollutant emissions. However, although the replacement pumps would have a greater capacity, they would consume approximately 45 percent less energy annually than the existing 50-year-old pumps (see Section VI, Energy). The facility lighting and other uses requiring energy at the pump station would be negligible compared to the pumps. Therefore, operation of the replacement pump station would result in an overall reduction in air pollutant emissions. The third pump would be powered by an internal combustion engine, which would provide the fire flow capacity required by the Los Angeles Fire Department. The fire pump would be tested annually but would not be operating continuously. Assuming a six-hour pump test duration, single-day operation of the fire pump would emit approximately 4.9 pounds of VOC, 13.8 pounds of NO_X, 12.6 pounds of CO, less than 0.1 pounds of SO_2, 0.7 pounds of PM_{10} and 0.7 pounds of $PM_{2.5}$. Fire pump testing emissions would not exceed any SCAQMD operational thresholds. 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 or 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 2016–2040 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 General Plan Air Quality Element. Therefore, the impact would be less than significant.

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 Basin is currently designated nonattainment for ozone (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. 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 guidance indicates that if an individual project would not exceed the regional mass daily thresholds or LST values, then it is generally not considered to be cumulatively significant. This method of impact determination allows for the screening of individual projects that would not represent substantial

new sources of emissions in the Basin. 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. As shown in Table 3-1, above, implementation of the proposed project would not exceed any applicable SCAQMD regional mass daily thresholds or LST values during construction. The operation of the replacement pumps would require approximately 45 percent less energy annually than the existing pump facility, reducing indirect facility emissions. In addition, operation of the fire pump during annual testing activities would not exceed any operational threshold. Therefore, the proposed project would not generate cumulatively considerable emissions of ozone precursors or particulate matter, and impacts would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Operation of the project is not expected to create substantial pollution. Furthermore, maximum daily on-site emissions of criteria pollutants would remain substantially below applicable SCAQMD localized thresholds during all activities associated with construction of the proposed project. To address emissions of toxic air contaminants (TACs), a Health Risk Assessment (HRA) was completed to assess student and faculty exposures to diesel PM at the Saint Bernardine of Siena Children's Center during installation of the pipeline, which will occur between 7:00 a.m. and 3:00 p.m. Monday through Friday for approximately 60 working days (about three months). The HRA was prepared assuming year-long equipment activity on the described schedule to calculate an annual average diesel PM concentration at school receptor locations, which was then multiplied by the adjustment factor of 4.2 to account for the concurrence of equipment activity and school operations, as described in the Methodology of the Assessment in Appendix A.

Table 3-2 presents the results of the school receptor HRA, which is expressed in terms of excess cancer risk per million population and conservatively assumes that the receptor remains in the location of highest concentration throughout the exposure duration.

Table 3-2
SCAQMD Air Quality Significance Thresholds – Mass Daily Emissions

Receptor	Maximum Annual Average Concentration ($\mu g/m^3$)	Daily Dose (mg/kg-day)	Carcinogenic Risk (per million)
Student (Child)	0.662	2.12×10^{-5}	1.05
Faculty (Adult)	0.0662	3.31×10^{-6}	0.05
		SCAQMD CEQA Threshold	10.00
		Exceed Threshold?	**No**

Source: TAHA, 2019.

As shown in Table 3-2, installation of the proposed project pipeline would result in a maximum student risk of 1.05 in one million and a maximum faculty risk of approximately 0.05 in one million. Detailed HRA modeling files can be found in

Appendix A. The maximum carcinogenic risk would be substantially less than the SCAQMD significance threshold of 10 in a million even when assuming continuous exposure at the location of the maximum modeled concentration. Therefore, construction of the proposed project would result in a less than significant impact related to TAC emissions and pollutant concentrations at sensitive receptors.

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 interior and exterior 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

The proposed project would not include an operational source of direct emissions. 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 Memorandum Report prepared for the proposed project (see Appendix B).

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?

No 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 California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS).

Sensitive 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 the California Native Plant Society (CNPS).[12,13,14] 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.

No special-status plant species were observed in the study area during the field survey. Vegetation within the fenced-in pump station site consists of non-native plant species. Brazilian pepper (*Schinus terebinthifolius*), Tree-of-heaven (*Ailanthus altissima*), cedar (*Cedrus* sp.), and bottlebrush (*Callistemon citrinus*) trees occur within the pump station. A large Italian stone pine (*Pinus pinea*) occurs on the residential property immediately north of the pump station, growing over and covering a portion of the pump station site. Most of the pump station replacement site consists of structures/equipment associated with the existing pump station and bare ground. Herbaceous vegetation occurring within the pump station includes ruderal species such as prickly lettuce (*Lactuca serriola*), cheeseweed (*Malva parviflora*), wild oat (*Avena barbata*), and brome grasses (*Bromus* spp.).

The parcel east of the existing pump station parcel, which would become part of the pump station site, includes a large native but non-special status velvet ash (*Fraxinus velutina*), with non-native shrub and herbaceous species covering the remainder of the parcel, including golden wattle (*Acacia longifolia*) shrubs, cheeseweed, wild oat, brome grass, Coppery mesembryanthemum (*Malephora crocea*), yellow clover (*Melilotus indicus*), field bindweed (*Convolvulus arvensis*), and red stemmed filaree (*Erodium cicutarium*). The area around the pump station site includes Victory Boulevard and residential lots. Large mature pine, eucalyptus, and palm trees occur along Victory Boulevard, with additional ornamental trees and other landscape species occurring in residential lots within the study area.

Vegetation along the proposed pipeline alignment includes a mix of ornamental tree, shrub, and herbaceous species typical on residential lots in the area. Large mature palm, pine, eucalyptus, cedar, and other ornamental trees occur along the proposed pipeline alignment.

No records of special-status plant species were found during the database reviews to coincide with the study area. The nearest occurrences of special-status plants are of Braunton's milk-vetch (*Astragalus brauntonii*) (from 2002) and San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) (from 1998), located from 0.50 to 1.0 mile southwest of the project, within the Upper Las Virgenes Canyon

[12] 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).

[13] 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).

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

Open Space Preserve (Preserve). The study area does not provide natural habitats potentially suitable for special-status plants. Records of special-status plant species identified during database reviews are primarily from native habitats in the Preserve, from the Santa Monica Mountains to the south, and Simi Hills and Santa Susanna Mountains to the north.

No USFWS-designated critical habitat for any special-status plant species coincides with the study area. The nearest critical habitat areas are for Braunton's milk-vetch located 2-5 miles to the northwest and west of the project within the Preserve.

Since no special-status plants were observed during the field survey and the study area is not suitable for them, none are expected to occur. As a result, direct effects on special-status plants are not anticipated.

Indirect impacts to special-status plant species occurring outside the project site from construction-related habitat loss and modification of sensitive natural communities related to dust, noise, stormwater runoff, and through the potential spread of noxious and invasive plant species into these communities would not occur because of the distance from the project site.

Implementation of the proposed project would result in the removal of non-native trees and herbaceous species at the pump station site. One native but non-special status tree, velvet ash, occurring on the parcel adjoining the east side of the current pump station site, would also be trimmed or removed under the project. No vegetation would be removed along the pipeline alignment. The removal of non-native vegetation and single native tree at the pump station site do not constitute a significant direct impact.

Indirect impacts to vegetation during project construction could include an increase in the amount of compacted or modified surfaces that, if not controlled, could increase the potential for surface runoff, increased erosion, and sediment deposition beyond the project's footprint. Implementation of BMPs 1 and 2 (Section 1.8), regarding dust and erosion control, would reduce such indirect impacts. However, indirect impacts to ornamental trees surrounding the pump station and pipeline alignment would not constitute a significant impact.

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) and the Migratory Bird Treaty Act (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 California Fish and Game Code (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 California Natural Diversity Database (CNDDB) tracks

species within California for which there is conservation concern, including many that are not formally listed, and assigns them a CNDDB Rank.[15] 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.

Wildlife species observed during the field survey of the project and surrounding areas included bird species that are common in and adapted to urban environments, including American crow (*Corvus brachyrhynchos*), Eurasian collared dove (*Streptopelia decaocto*), and song sparrow (*Melospiza melodia*). Two raptors also not uncommon in urban areas, turkey vulture (*Cathartes aura*) and red-tailed hawk (*Buteo jamaicensis*) were also observed, although not within the project site. Overall bird activity was low, no active or old nests were detected, and no other wildlife (i.e. mammals, reptiles) were observed on the project site during the field survey. No special-status wildlife species were detected at either the pump station replacement site or along the proposed pipeline alignment during the site visit.

Elements of project construction could potentially affect common terrestrial wildlife. Vegetation removal and ground disturbance activities could result in the mortality of individual wildlife species, and species with limited mobility or that occupy burrows within the construction zone could be crushed during proposed project activities. Additionally, short-term indirect effects on wildlife would occur due to noise disturbances, increased human activity, and vibrations caused by heavy equipment. However, terrestrial wildlife mortality is unlikely, and impacts are not anticipated.

Ornamental vegetation in the study area provides potentially suitable nesting habitat for common urban bird species protected by the MBTA and by CFGC, including raptors such as Cooper's hawk (*Accipter cooperii*), a CDFW WL species (see Appendix B). As such raptors become more common in urban areas, large mature trees provide potentially suitable nesting habitat for them. By avoiding vegetation removal during the nesting bird season (February 1 to September 15 for songbirds, and as early as January 15 for raptors), or by implementing and adhering to BMP 5 listed in Section 1.8 related to pre-construction surveys for nesting birds and providing a qualified biological monitor should nesting birds be present, direct impacts from vegetation removal on nesting birds and the associated nesting habitat are not anticipated.

Indirect impacts to nesting birds within the study area could occur during construction as a result of noise, dust, increased human presence, and vibrations resulting from construction activities. Such disturbances could result in increased nestling mortality due to nest abandonment or decreased feeding frequency. With

[15] California Department of Fish and Wildlife. 2022. California Natural Diversity Database (CNDDB). Special Animals List. October.

implementation and adherence to BMP 5 listed in Section 1.8, indirect impacts to nesting birds protected under the MBTA and by CFGC are not anticipated.

No federal or State-listed wildlife species have been identified at the project site, and potentially suitable habitat for such species is absent from the study area. As a result, direct and indirect impacts to special-status wildlife are not anticipated, and no impact would occur.

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 sensitive plant or wildlife species, and/or receive regulatory protection (e.g., Section 404 of the Clean Water Act [CWA] and/or Sections 1600 et seq. of the CFGC).

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. No native plant communities occur within or adjacent to the project site. Common non-native weedy species dominate the pump station site, and ornamental vegetation common on urban and residential properties occur along the pipeline alignment. The nearest native plant communities occur 0.50 mile west of the project, where native grassland, coastal sage scrub, chaparral, oak woodland, and riparian woodlands habitats occur within the Preserve, just over the county line in Ventura County.

No sensitive natural communities occur within or adjacent to the project site. Vegetation in the project area consists of ornamental trees and shrubs that are common in urban environments. Additionally, no USFWS-designated critical habitat or aquatic features (i.e., wetlands or other waters) under regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE), CDFW, and/or the Regional Water Quality Control Board (RWQCB) coincide with the study area. Due to the distance between the project site and the nearest natural communities in the Preserve, no impact would occur.

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. Under Executive Order (EO) 11990, issued May 24, 1977, and amended by EO 12608, federal agencies must provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands (42 CFR 26961; 3 CFR 1977 Comp., p. 121). Each agency, to the extent permitted by law, must avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds there is no practical alternative to such construction and the proposed action includes all practical measures to minimize harm to wetlands that may result from such use. In making this finding, the head of the agency may take into account economic, environmental and other pertinent factors. Each agency must also provide opportunity for early public review of any plans or proposals for new

construction in wetlands.[16] Wetlands, as defined under this EO, do not occur within or adjacent to the project site and, as a result, would not be affected by the project. Therefore, no impact to wetlands would occur.

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 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 project occurs within an urbanized area of the San Fernando Valley and the project site does not occur within or intersect a recognized/established regional wildlife corridor. Ornamental trees within and adjacent to the project 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. The project site does not serve as a regional wildlife corridor and as a result, direct impacts to a regional wildlife movement corridor would not occur.

Project construction activities (i.e., increased noise, human presence, vibration) would likely result in bird species traveling through the area avoiding the immediate project vicinity. Such indirect effects would be temporary in nature, restricted to the project construction time period. The Preserve, located 0.50 mile west of the project site, provides native vegetation habitats that facilitate wildlife movement; however, project activities are not anticipated to affect biological resources in the Preserve due to its distance from the project. As such, there would be no impacts to a wildlife movement corridor.

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

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 (*Juglans californica*), western sycamore (*Platanus racemosa*), and California bay (*Umbellularia californica*) (Section 17.02 of City Municipal Code). Trees must be four inches or greater in diameter at 4.5 feet above ground 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

[16] FedCenter.gov. 2017. Executive Order 11990. Protection of Wetlands. Available at: https://www.fedcenter.gov/Bookmarks/index.cfm?id=585

permit and must comply with the pruning standards set forth by the Western Chapter of the International Society of Arboriculture.

As previously discussed, implementation of the proposed project would result in the removal of non-native trees such as Brazilian pepper tree (*Schinus terebinthifolius)* and Italian stone pine (*Pinus pinea)*, and herbaceous species such as prickly lettuce (*Lactuca serriola*), cheeseweed (*Malva parviflora*), wild oat (*Avena barbata*), and brome grasses (*Bromus* spp.) at the pump station site. One native but non-protected tree, velvet ash (*Fraxinus velutina)*, occurring on the parcel adjoining the east side of the current pump station site, would also be trimmed or removed under the project. No vegetation will be removed along the pipeline alignment. No protected trees occur within the boundaries of the project site and, as a result, there would be no conflict with the oak tree ordinance. No impact would occur.

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 project site does not fall within the area of an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Los Angeles County 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 Los Angeles County deems it important to facilitate a balance between development and resource conservation.

The project site does not coincide with a SEA. The Chatsworth Reservoir and Simi Hills SEAs lie approximately 2.5 miles north of the study area, and the Palo Comado Canyon SEA lies approximately the same distance to the south. Implementation of the proposed project is not anticipated to affect resources within these SEAs, and as a result the project would not conflict with the SEA program. As previously mentioned, the project site is located approximately 0.5 miles east of the Preserve. Based on this distance and the scope of project construction, there would be no conflicts with the Preserve created by the project. Therefore, no impact would occur.

V. CULTURAL RESOURCES

Potential impacts to historical and archaeological resources associated with the proposed project were determined from the results presented in the Phase I Cultural Resources Assessment prepared for the proposed project (see Appendix C).

Would the project:

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

No Impact. Archival research for this project was conducted on February 27, 2019, at the South Central Coastal Information Center (SCCIC) housed at California State

University, Fullerton. The SCCIC is the Information Center of the California Historical Resources Information System (CHRIS) which maintains information about Ventura and Los Angeles Counties. The research focused on the identification of previously recorded cultural resources within a 0.5-mile radius of the project site (Study Area). The archival research included review of previously recorded archaeological site records and reports, historic site and property inventories and historic maps. Inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California State Historic Resources Inventory, California Historical Landmarks and Points of Interest, and the list of Los Angeles Historic-Cultural Monuments (LAHCM) were also reviewed to identify cultural resources within the Study Area. The records search indicated that a total of two cultural resources have been previously recorded within the Study Area. One is a prehistoric site, and the other is a historic site. Neither is located within the project site.

One historic architectural resource that is 45 years old or older, the Victory Pump Station at the project site, was identified as a result of the site survey. The Victory Pump Station was originally commissioned in 1967 and has been altered and upgraded since then. The resource was evaluated against the criteria for listing in the CRHR or local listing.

The Victory Pump Station does not meet the criteria to be eligible for the CRHR. The facility was built during the development of the Woodland Hills and West Hills neighborhoods of the City of Los Angeles. It currently serves as a station within the LADWP's potable water supply system. The facility has had numerous alterations for functional reasons in the past.

The structures and their utilitarian functions have not had an important or specific historic role, nor are they 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 United States (Criterion 1). Research has not revealed an association between the facility and any specific historical figures or any person whose life was important to local, California, or national history (Criterion 2). The facility, including the pumping station, the electrical boxes, and the ancillary pipelines, are utilitarian in construction, and typical of their types dating from the 1960s. The complex, including all its individual structures, uses standard engineering equipment and does not embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic values (Criterion 3). It is unlikely to yield information important in the prehistory or history of the local area, California, or the nation (Criterion 4). The resource does not meet the level of significance to meet CRHR criteria 1 through 4, therefore it is not eligible for the CRHR.

For similar reasons, the Victory Pump Station is not eligible for listing as a LAHCM. The pump station does not have particular historic or cultural significance to the City of Los Angeles. It does not exemplify the broad cultural, economic, or social history of the nation, State, or community; it is not identified with historic personages or with important events; and it does not embody the distinguishing characteristics of an architectural type specimen, nor is it, inherently valuable for a study of a period style or method of construction, nor as a notable work of an individual genius. Therefore,

the proposed project would not cause a substantial adverse change in the significance of an historical resource, and no impact would occur.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Less Than Significant with Mitigation Incorporated. Archival research, review of previous investigations in the vicinity of the project, and review of the prehistoric context for the area provides an understanding of the potential for encountering buried archaeological sites in the project area. The important factors to consider in constructing such a model include elevation, soil conditions, proximity to water sources, and proximity to raw materials. In addition, subsequent land use is an essential factor in whether archaeological remains have been preserved.

The Victory Pump Station property itself appears to have low potential for the presence of archaeological resources. The property has been extensively impacted by ground disturbance activities beginning in the 1960s when Victory Boulevard was constructed and the project vicinity was developed as a residential neighborhood. Construction of the existing pump station necessitated grading of the property, including cutting into the bedrock at the west end of the property and adding fill at the east end of the property. In addition, excavations were required for the construction of the pump station, including the pipelines and the pump facility.

The majority of the Calvert Street pipeline alignment may be considered to have low to moderate sensitivity for cultural resources, but the alignment has two areas of moderate to high archaeological sensitivity. The project is located within the traditional territory of the Gabrielino, and may be expected to have been utilized by human beings since prehistoric times. Moreover, the proposed pipeline alignment is located within a depositional environment, where alluvial and colluvial deposits may obscure intact cultural resources. It is possible that archaeological resources could be buried beneath the ground surface, especially in areas where development has included only minimal ground disturbance where the roadway may have effectively capped buried prehistoric or historic resources.

However, only two resources have been recorded within 0.5-mile of the Calvert Street alignment, the location of one of which is documented extensively on historic maps. The proposed pipeline alignment has also been extensively impacted to unknown depths by construction activities associated with construction of the surrounding residential district. This work has included road grading, which has required cutting and, in the vicinity of Valley Circle Boulevard, the introduction of artificial fill. Excavations within the roadway were required to install existing utilities, including storm drains and gas, sewer, fiber optic, and electrical lines.

Near the eastern end of the pipeline alignment, within 200 feet of Bell Creek South Fork, the project area is considered to have moderate to high sensitivity for cultural resources because of its close proximity to the current bed of Bell Creek South Fork. Although the drainage is ephemeral, it contained water during the site survey. The water source, despite being ephemeral, may have been important both prehistorically and historically. The immediate area around the drainage is considered to have an elevated sensitivity for cultural resources. However, the pipeline in this location would be installed at shallow depths above the existing

concrete box culvert. Thus, the pipeline installation at this location would result in only shallow excavations in an area that has been previously disturbed by construction of the culvert and the roadway.

The west end of the pipeline alignment, within 200 feet of Pat Avenue, is considered to have moderate to high sensitivity for cultural resources because of its close proximity to a previously recorded cultural resource. The vicinity was used intensively as a homestead and the headquarters for the Goodall ranch beginning in 1891 and continuing until the 1960s, when the ranch was subdivided for residential development. Although no evidence of the Goodall ranch was observed on the surface within or adjacent to the project area, buried features such as building foundations, wells and privies, and refuse deposits may exist within the vicinity. As such, mitigation measure CUL-1, requiring the implementation of an archaeological monitoring program, would be required. BMP 6 (Section 1.8), requiring all field supervisors and construction workers to participate in training on cultural resources awareness prior to project construction, would also be implemented. With implementation of mitigation measure CUL-1 and BMP 6, impacts to previously unknown archaeological resources would be less than significant.

Mitigation Measure

CUL-1 An archaeological monitoring program shall be implemented within the segment identified as having cultural resources sensitivity: the Calvert Street alignment within approximately 200 feet of the intersection with Pat Avenue (i.e., approximately between the intersection of Calvert Street and Pat Avenue and the west vehicle entrance of the property of Saint Bernardine of Siena Catholic Church).

A qualified archaeologist shall be present to monitor project-related ground-disturbing activities that have a reasonable likelihood of encountering archaeological resources. The archaeological monitor shall work under the direction of a qualified principal investigator (i.e., an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards). A qualified archaeologist shall prepare a cultural resources monitoring plan (CRMP) for the project prior to construction mobilization. The plan shall outline areas of high sensitivity for the project, define monitoring locations, describe monitoring procedures, outline notification procedures, establish key staff, and identify treatment measures for potential discoveries. The CRMP shall be written to ensure compliance with appropriate state and federal laws. Before initiating ground-disturbing activities, the archaeological monitor or principal investigator shall conduct a brief awareness training session for the benefit of all construction workers and supervisory personnel. The training, which could be held in conjunction with the project's initial on-site safety meeting, shall explain the importance of and legal basis for the protection of significant archaeological resources. Each worker shall be notified of the proper procedures to follow in the event that cultural resources or human remains are uncovered during ground-disturbing activities. These procedures include work curtailment or redirection, and immediately contacting the site supervisor and archaeological monitor.

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

Less Than Significant Impact. A Sacred Lands File search and Native American contact program were conducted for the proposed project, and no dedicated cemeteries or other places of human internment are known to exist within the project area. No evidence of human remains was observed on the surface during the field survey. Although not expected, human remains could be encountered during construction. In the event that any human remains or related resources are discovered, such resources would be treated in accordance with state and local regulations and guidelines for disclosure, recovery, relocation, and preservation, as appropriate, including CEQA Guidelines Section 15064.5(e). If human remains are discovered, work in the immediate vicinity of the discovery will be suspended and the Los Angeles County Coroner contacted. If the remains are deemed Native American in origin, the Coroner will contact the NAHC and identify a Most Likely Descendant pursuant to Public Resources Code Section 5097.98 and California Code of Regulations (CEQA Guidelines) 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. Compliance with existing regulations would ensure that impacts related to the discovery of human remains would be less than significant.

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?

Less Than Significant Impact. Energy, primarily as diesel fuel for equipment and trucks and gasoline for equipment and vehicle trips, would be used during construction of the proposed project. Energy expenditures related to construction would be temporary. Limitations on idling of vehicles and equipment and requirements that equipment be properly maintained would result in fuel savings. California regulations (California Code of Regulations Title 13, Sections 2449(d)(2) and 2485) limit idling from both on-road and off-road diesel-powered equipment and are enforced by the California Air Resources Board (CARB). Also, given the cost of fuel, contractors and owners have a financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction. On-site construction activities would occur during daytime hours, so it is anticipated that the use of construction lighting would be minimal. Due to the temporary nature of construction and the financial incentives for developers and contractors to use energy-consuming resources in an efficient manner, the construction phase of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy. The impact would be less than significant.

The proposed new pumps installed at the replacement pump station would consume energy during operations. Additionally, the proposed new pump station would include internal and external lighting, as well as other electrical equipment that would consume energy. The existing pump station currently operates with an annual

energy consumption of 148.6 megawatt hours. The proposed new pump station would include upgraded pumps and equipment that operate more efficiently than the existing, outdated equipment. The new pump station is projected to consume 82.2 megawatts of energy annually, resulting in an approximate 45 percent reduction in energy consumption. Operation of the proposed new 8-inch pipeline and 12-inch pipeline replacement would not require additional energy consumption. As such, operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy. There would be no impact.

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

No Impact. The proposed project would follow applicable energy standards and regulations during construction. During operation, energy would be required for the pumps, ancillary equipment, and lighting at the new pump station. As discussed in Section VI(a), operation of the proposed new pump station would result in an approximate 45 percent reduction in energy consumption when compared to operation of the existing pump station. Operation of the proposed new 8-inch pipeline and 12-inch pipeline replacement would not require additional energy consumption. As such, the proposed project would not conflict with or obstruct any plans related to renewable energy or energy efficiency. No impact would occur.

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 Division of Mines and Geology Special Publication 42.

No Impact. Similar to all regions in Southern California, the project site is subject to ground shaking from seismic events. However, the project site is not located on a known earthquake fault as depicted on the California Geologic Survey map containing the project area.[17] The closest known fault zones to the site are the Simi-Santa Rosa Fault Zone, located approximately 9 miles to the northwest; the Sierra Madre Fault Zone, located approximately 10 miles to the northeast; and the Santa Monica Fault Zone, located approximately 13 miles to the southeast. The pump station building would be constructed in accordance with all applicable federal, state, and local codes related to seismic criteria. The proposed pipeline would likewise be designed to withstand the applicable seismic loads, including the use of earthquake resistant ductile iron pipe. Therefore, the proposed project would not expose people or structures to potential adverse effects from the rupture of a known earthquake fault, and no impact would occur.

[17] California Geologic Survey, Earthquake Zones of Required Investigation (Fault Zones and Traces). Website: https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed July 2022.

ii) Strong seismic ground shaking?

Less Than Significant Impact. As discussed above, similar to all regions in Southern California, the project site is subject to ground shaking from seismic events. However, the pump station building would be constructed in accordance with all applicable federal, state, and local codes related to seismic criteria. The proposed pipeline would likewise be designed to withstand the applicable seismic loads, including the use of earthquake resistant ductile iron pipe. Therefore, the proposed project would not expose people or structures to potential adverse effects from strong seismic ground shaking, and impacts would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. The proposed pump station site is not located in a known liquefaction zone. A portion of the pipeline alignment is located within a known liquefaction zone.[18] However, the pipeline, would be designed and constructed to withstand localized ground failure from seismic-related liquefaction, including with the use of earthquake resistant ductile iron pipe. Therefore, the impact would be less than significant.

iv) Landslides?

Less Than Significant Impact. A small section in the northwest corner of the proposed pump station site may be located within a landslide zone as identified by the California Geologic Survey.[19] However, the site will be excavated and graded, and retaining walls, including, drilled piles as required, will be installed surrounding the site. Therefore, substantial adverse effects, including the risk of loss, injury, or death involving landslides would be less than significant.

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

Less Than Significant Impact. Construction activities would expose soils at the pump station site and along the pipeline alignment to potential erosion. However, as a component of the project BMPs, both a Storm Water Pollution Prevention Plan and an erosion control plan would be implemented to prevent off-site erosion and top soil loss during construction (see Section 1.8, above). During post-construction operation, the pump station site as well as the adjacent slope would be stabilized with pavement, landscaping, and retaining walls, as required. The pipeline alignment would be restored to its preconstruction paved condition. Therefore, there would be no substantial soil erosion or the loss of topsoil, and the impact 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. See Section VII(a)(iii) regarding liquefaction and Section VII(a)(iv) regarding landslides. Lateral spreading is the movement of soil

[18] California Geologic Survey, Earthquake Zones of Required Investigation (Liquefaction Zones). Website: https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed July 2022.

[19] California Geologic Survey, Earthquake Zones of Required Investigation (Landslide Zones). Website: https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed July 2022.

laterally caused by liquefaction. As discussed above, the proposed pump station site is not located in a known liquefaction zone. A portion of the pipeline alignment is located within a known liquefaction zone. However, the pipeline would be designed and constructed to withstand localized ground failure from seismic-related liquefaction, including with the use of earthquake resistant ductile iron pipe. Subsidence generally occurs as a result of extraction of groundwater beneath an area, causing the overlying soils to settle. There are no groundwater extraction wells in the area of the proposed project, and no subsidence is expected. Collapse occurs in loose, low density materials that become oversaturated. The preliminary geotechnical report for the proposed project recommends over excavation at the pump station site to a depth of 3 feet below the building footings and backfilling the excavated area with structurally suitable foundation soil for the building. The pipeline would likewise be backfilled with bedding material of appropriate structure capacity to support the pipeline sections. Therefore, the impact related to unstable soil 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. The soils at the pump station site and within the pipeline alignment have been identified as moderately expansive. However, the preliminary geotechnical report for the proposed project recommends over excavation at the pump station site to a depth of 3 feet below the building footings and backfilling the excavated area with structurally suitable foundation soil for the building. In addition, the use of geotextiles would be considered in order to improve soil conditions for the building. The pipeline would likewise be backfilled with bedding material of appropriate structure capacity to support the pipeline sections. There would be no impact related to expansive soils.

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 pump station building would include a restroom facility for employees. The restroom would be connected to the local sewer system located in Victory Boulevard. No septic tank or alternative wastewater disposal system would be required, and there would be no impact.

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

No Impact. The subsurface materials underlying the proposed pump station replacement site and pipeline alignment are tertiary and quaternary bedrock formations.[20] No unique paleontological resources have been or are anticipated to be identified at the proposed pump station site or the pipeline alignment, both of which would require relatively shallow excavation in previously disturbed and developed areas. Therefore, there would be no impact.

[20] California Geological Survey, Maps and Data, Quaternary Surficial Deposits of Southern California, available at: https://maps.conservation.ca.gov/cgs/qsd/app/, accessed July 2022.

VIII. GREENHOUSE GAS EMISSIONS

Potential greenhouse gas emissions impacts associated with the proposed project were determined from the results presented in the Greenhouse Gas Emissions Assessment Technical Memorandum prepared for the proposed project (see Appendix D).

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 greenhouse gas (GHG) emissions primarily from construction activities and electricity to operate the pump station. Table 3-3 presents the estimated emissions of GHGs that would be released to the atmosphere on an annual basis. Construction of the proposed project would produce approximately 44.1 metric tons of carbon dioxide equivalent ($MTCO_2e$) GHGs during pipeline construction and approximately 722.4 $MTCO_2e$ during pump station construction, which equates to approximately 25.5 $MTCO_2e$ annually when amortized over a 30-year period in accordance with SCAQMD recommended methodology. The total annual operating emissions would be approximately 6.8 $MTCO_2e$ per year, including 5.7 $MTCO_2e$ attributed to electricity use and approximately 1.1 $MTCO_2e$ for fire pump testing. The total annual amortized mass rate of 32.3 $MTCO_2e$, including both construction and operations, is substantially below the most applicable quantitative draft interim threshold of 3,000 $MTCO_2e$ per year as recommended by the SCAQMD. Therefore, implementation of the proposed project will result in a less than significant impact related to GHG emissions.

Table 3-3
Estimated Annual Greenhouse Gas Emissions

Scenario and Source	Annual GHG Emissions ($MTCO_2e$ per Year)
Pipeline Construction Emissions (Direct)	44.1
Pump Station Construction Emissions (Direct)	722.4
Total Construction GHG Emissions (Direct)	766.5
30-Year Amortized Annual Construction Emissions (Direct)[a]	25.5
Energy Source Emissions – Electricity (Indirect)	5.7
Stationary Source Emissions – Fire Pump Testing (Direct)	1.1
Total Annual GHG Emissions	**32.3**
SCAQMD Draft Interim Significance Threshold	3,000
Exceed Threshold?	**No**

[a.] Based on SCAQMD guidance, the emissions summary also includes construction emissions amortized over a 30-year span.

Source: TAHA, 2019.

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

No Impact. There is no potential for the water pipeline to conflict with GHG reduction plans. The pump station replacement would involve the construction of a new pump station building and the decommissioning of the existing, temporary underground pump station. As previously discussed, the proposed project would not permanently

increase emissions. 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 construction of the proposed project would not conflict with GHG emissions reductions efforts. In addition, the operation of the proposed new pump station would result in a 45 percent reduction in energy consumption when compared to operation of the existing pump station, with a parallel reduction in GHGs. Therefore, no impact would occur.

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 machinery and equipment that may require fueling or maintenance/servicing with petroleum-based products (e.g., grease, oil). In addition, during construction of the proposed project, paints, solvents, and other potentially hazardous materials may be used. These types of materials are not acutely hazardous, and all storage, handling, and disposal of these materials would comply with regulations of the California Department of Toxic Substances Control, the Environmental Protection Agency, and the Los Angeles Fire Department. All construction activities involving the transportation, use, and disposal of such hazardous materials would be subject to federal, state, and local health and safety requirements. This would include the prevention of spills or leaks related to construction equipment and vehicles as well as other construction-related fluids. With adherence to applicable regulations, the impact related to the routine use and handling of hazardous materials during construction would be less than significant.

Operation of the new pump station would require on-site storage of diesel fuel, similar to existing conditions. Therefore, there would be no increased hazard associated with the proposed project. In addition, the handling and storage of such fuels would occur in compliance with all applicable regulations regarding such materials. Operation of the pipelines would not require the use of hazardous materials. With adherence to existing regulations, impacts during project operation 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 of the project would not involve the use of any acutely hazardous materials that would pose a

significant hazard to the public or environment in the event of a foreseeable upset or accident. Construction of the project would include the preparation and implementation of a Storm Water Pollution Prevention Plan, which would limit the effect of accidental leaks or spills of construction materials such as fuels and lubricants. Therefore, the impact related to the upset and accidents involving hazardous materials during construction would be less than significant.

As discussed above, operation of the project would require on-site storage of diesel fuel, similar to existing conditions, and there would be no increased hazard associated with the proposed project. The operation of the pipeline would not require the use of hazardous materials. Therefore, there would be no impact related to project operation.

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. The proposed pump station site is located approximately 0.25 miles northwest of Saint Bernardine of Siena elementary and middle school. The proposed pipeline alignment runs adjacent to the school at Calvert Street and Valley Circle Boulevard. As discussed above, the construction of the project would not involve the use of any acutely hazardous materials. Additionally, construction activities are temporary in nature and the handling of minor amounts of materials, such as petroleum-based products for vehicles and equipment, would be in compliance with applicable regulations. As discussed in Section IX(a), the proposed project would not pose a substantial risk involving the routine transport, use, and disposal of hazardous materials. Therefore, the potential impact associated with the emission of hazardous materials near an existing or proposed school during construction would be less than significant.

Operation of the project would involve the transmission of potable water and would not require the use of hazardous materials. The proposed pumps would operate with power from the local grid and would, therefore, not create potentially hazardous emissions adjacent to Saint Bernardine of Siena School. Therefore, there would be no impact related to project operation.

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. No hazardous materials sites are located within the proposed pump station or pipeline sites. The California Department of Toxic Substances Control's EnviroStor and State Water Resources Control Board's GeoTracker databases indicate that the nearest hazardous material site is located approximately 0.3 miles east of the pump station site and 0.1 miles north of the pipeline alignment. However, the cleanup at this site (a gas station) has been completed and the case has been closed.[21, 22] The project site is not listed on the California EPA's Cortese List or the

[21] California Department of Toxic Substances Control, EnviroStor Database, Search by Map Location, available online at https://www.envirostor.dtsc.ca.gov/public/, accessed July 2022.

[22] California State Water Resources Control Board, GeoTracker Database, Search by Map Location, available online at https://geotracker.waterboards.ca.gov/, accessed July 2022.

EPA's National Priorities List.[23, 24] These lists are compiled pursuant to Section 65962.5 of the Government Code. Therefore, the proposed project would not create a significant hazard to the public or the environment related to an existing hazardous materials site. 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 proposed project site is not located within an airport land use plan or within 2 miles of a public airport. Therefore, no impact would occur.

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

Less Than Significant. The construction of the proposed pump station would require the closure of one westbound traffic lane on Victory Boulevard to accommodate the construction laydown area. This laydown area would be limited to about 200 feet in length. Victory Boulevard in this area is not a designated secondary or primary Disaster Route. Furthermore, Victory Boulevard in the area of the pump station is an 80-foot wide roadway consisting of two westbound lanes, two eastbound lanes, a center turning lane, as well as bike lanes and parking lanes on both the north and south sides of the street. During construction, traffic control would be provided, primarily with signage and restriping of the roadway, to direct traffic around the staging area. At least three travel lanes would remain on Victory Boulevard fronting the staging area throughout construction.

Calvert Street is a 36-foot-wide local road with one travel lane in each direction. It is not a designated Disaster Route. However, Valley Circle Boulevard is a designated secondary Disaster Route where it is crossed by Calvert Street, within which the proposed project pipeline would be installed. The installation across Valley Circle Boulevard would be accomplished corralling travel lanes to one side of the intersection at a time so that vehicles could continue to travel on Valley Circle Boulevard during construction. This installation across Valley Circle Boulevard is anticipated to take approximately 1 week. In the event of an emergency requiring the use of Valley Circle Boulevard during this period, the pipeline trench would be temporarily covered with steel plates to open up all traffic lanes. Based on the short duration of construction across Valley Circle Boulevard and the ability to reopen lanes, the impact to emergency evacuation would be less than significant.

In addition, as listed in the construction BMPs in Section 1.8, LADWP would coordinate with emergency responders, including the Los Angeles Fire Department and Los Angeles Police Department, regarding construction schedule and traffic control plans so as to coordinate emergency response routing during construction

[23] California Environmental Protection Agency, Cortese List Data Resources, available online at https://calepa.ca.gov/SiteCleanup/CorteseList/, accessed July 2022.

[24] United States Environmental Protection Agency, Superfund National Priorities List (NPL) Where You Live Map, available online at https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=33cebcdfdd1b4c3a8b51d416956c41f1, accessed July 2022.

work. Coordination with emergency response agencies would ensure a less than significant impact to emergency response during construction activities.

During project operation, the pump station would be located entirely off the roadway, and Victory Boulevard would be restored to its preconstruction configuration. Calvert Street would likewise be restored to its preconstruction configuration when pipeline installation is complete. Therefore, there would be no impact related to emergency response or evacuation during project operation.

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

No Impact. The proposed new pump station building would be located within a very high fire hazard safety zone (VHFHSZ) as designated by the City of Los Angeles Fire Department. The proposed pipeline alignment is not located with a VHFHSZ. The pump station building would be composed of concrete walls with a standing seam metal roof, and would be at reduced risk of ignition from fire and would therefore, not contribute to the uncontrolled spread of a wildfire. Furthermore, the building would not generally be occupied. It would include a Supervisory Control and Data Acquisition system to permit remote monitoring of the station functions. Personnel would periodically be on site to conduct both scheduled and unscheduled maintenance. Therefore, the risk of loss, injury or death involving wildland fires would be minimal. In addition, the pump station replacement project would include a new fire pump rated at 4,000 gpm to replace the existing 300 gpm fire pump on the site, and thereby increase firefighting capability in the area. No impact would occur.

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?

No Impact. The proposed project would replace an existing temporary and undersized potable water pumping facility. The existing pump station property is primarily undeveloped pervious land. Construction activities would expose soils at the pump station site and along the pipeline alignment to potential erosion and runoff. However, as discussed above, a Storm Water Pollution Prevention Plan and an erosion control plan would be implemented during project construction to prevent off-site polluted runoff. Under the proposed project, the property would be primarily paved or occupied by the new pump station building, creating impervious surfaces and increasing surface runoff. However, the proposed project would comply with the City of Los Angeles Low Impact Development Ordinance, which requires management of storm water on site, including measures to capture, treat as necessary, and infiltrate storm water into pervious surfaces. This would include the use of pervious concrete pavement for the driveway surface. The infiltration of stormwater would not be expected to substantially degrade groundwater quality in the area. There would be no impact.

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 existing pump station easement property is primarily undeveloped pervious land. Under the proposed project, the property would be primarily paved or occupied by the new pump station building, creating impervious surfaces. Based on its size and location, the pump station property is not considered an important groundwater recharge site. Nonetheless, the proposed project would comply with the City of Los Angeles Low Impact Development Ordinance, which requires management of storm water on site, including measures to capture, treat as necessary, and infiltrate storm water into pervious surfaces. This would include the use of pervious concrete pavement for the driveway surface. The project would not involve the pumping of local groundwater supplies. After completion, the proposed pipeline alignment would be restored to preconstruction paved conditions, which would not alter existing drainage conditions, including groundwater recharge. Therefore, the proposed project would not substantially decrease groundwater supplies or substantially interfere with groundwater recharge, and 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 off-site?

No Impact. As discussed above in VII(b), construction activities would expose soils at the pump station site and along the pipeline alignment to potential erosion. However, as a component of the project BMPs, both a Storm Water Pollution Prevention Plan and an erosion control plan would be implemented to prevent erosion during construction. Therefore, there would be no substantial soil erosion or siltation from construction activities. During post-construction operation, the pump station site as well as the adjacent slope would be stabilized with pavement, landscaping, and retaining walls, as required. The pipeline alignment would be restored to its preconstruction paved condition. As discussed above in X(b), the pump station site, which currently consists mainly of pervious surfaces, would be primarily paved or occupied by the pump station building, which has the potential to increase runoff that could contribute to off-site erosion. However, the proposed project would comply with the City of Los Angeles Low Impact Development Ordinance, which requires management of storm water on site, including measures to capture, treat as necessary, and infiltrate storm water into pervious surfaces. This would include a driveway constructed with pervious material, which would help reduce runoff from the site. Therefore, there would be no substantial soil erosion or siltation during project operations, and no impact would occur.

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

No Impact. As discussed above in X(b), the pump station site, which currently consists mainly of pervious surfaces, would be primarily paved or occupied by the pump station building, which has the potential to increase runoff. The amount of runoff anticipated from the approximately 0.1-acre site would not be

expected to result in substantial on- or off-site flooding. In addition, the proposed project would comply with the City of Los Angeles Low Impact Development Ordinance, which requires management of storm water on site, including measures to capture, treat as necessary, and infiltrate storm water into pervious surfaces. This would include a driveway constructed with pervious material, which would help reduce runoff from the site. The proposed pipeline alignment would be repaved after pipeline installation, and would not contribute runoff in excess of existing conditions. Therefore, there would be no impact related to increased runoff resulting in flooding.

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?

No Impact. As discussed above, a Storm Water Pollution Prevention Plan and an erosion control plan would be implemented during project construction to prevent off-site polluted runoff. As discussed above in X(b), the pump station site, which currently consists mainly of pervious surfaces, would be primarily paved or occupied by the pump station building, which has the potential to increase runoff. The amount of runoff anticipated from the approximately 0.1-acre site would not be expected to exceed the capacity of the local storm water drainage system. However, the proposed project would comply with the City of Los Angeles Low Impact Development Ordinance, which requires management of storm water on site, including measures to capture, treat as necessary, and infiltrate storm water into pervious surfaces. This would include a driveway constructed with pervious material, which would help reduce runoff from the site. The proposed pipeline alignment would be repaved after pipeline installation, and would not contribute runoff in excess of or of varying quality to existing conditions. Therefore, there would be no impact related to increased runoff exceeding the capacity of existing or planned storm water drainage systems or providing substantial additional sources of polluted runoff.

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 is not located within a 100-year flood hazard zone.[25] 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. The proposed project is not located within a flood zone nor, as discussed in X(c)(iii), would it contribute to flooding in the area.[26] Tsunamis are large ocean waves caused by the sudden water displacement that results from an underwater earthquake, landslide, or volcanic eruption. Tsunamis affect low-lying areas along the coastline. The project site is located in the San Fernando Valley region of Los Angeles, approximately 10 miles from the ocean and is not located within a

[25] Federal Emergency Management Agency, FEMA Flood Map Service Center. Available at: https://msc.fema.gov/portal/home, accessed October 18, 2022.

[26] ZIMAS. 2022. Available at: http://zimas.lacity.org/, accessed July 2022.

designated Tsunamic Hazard Area.[27] Seiches are oscillations generated in enclosed bodies of water usually as a result of earthquake related ground shaking. There are no such bodies of water in the area surrounding the proposed project site. The project site is not at risk of inundation from the rupture of a dam.[28] No impact would occur.

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

No Impact. The proposed project would replace an existing temporary and undersized potable water pumping facility. It would be located with an approximately 0.1-acre easement along Victory Boulevard in the West Hills community of Los Angeles. During construction, a Storm Water Pollution Prevention Plan and an erosion control plan would be implemented to prevent erosion and sources of polluted runoff. Under the proposed project, the property would be primarily paved or occupied by the new pump station building, creating impervious surfaces and increasing surface runoff. However, the proposed project would comply with the City of Los Angeles Low Impact Development Ordinance, which requires management of storm water on site, including measures to capture, treat as necessary, and infiltrate storm water into pervious surfaces. This would include a driveway constructed with pervious material, which would help reduce runoff from the site. This would not be expected to substantially degrade groundwater quality in the area. Based on its size and location, the pump station property is not considered an important groundwater recharge site. The proposed pipeline alignment would be repaved after pipeline installation, and would not contribute runoff in excess of or of varying quality to existing conditions. Therefore, the project would not obstruct implementation of a water quality control plan or sustainable groundwater management plan, and there would be no impact.

XI. LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. The proposed pump station would be located within an existing LADWP easement. The site is currently fenced and contains pumping facilities that preceded surrounding development. It would not divide an established community. The proposed pipeline alignment in Calvert Street would be returned to preconstruction conditions after completion of the pipeline installation, which is anticipated to last approximately 60 working days (approximately 3 months). No streets or sidewalks would be permanently closed as a result of the proposed project, and no separation of existing uses or disruption of existing access between land use types would occur. Following completion of pipeline installation activities along Calvert Street, the trench would be backfilled and the ROW would be restored to its existing condition as a roadway. It would, therefore, not divide an established community. No impact would occur.

[27] City of Los Angeles, Department of City Planning. *City of Los Angeles General Plan – Safety Element*. Available at: https://planning.lacity.org/cwd/gnlpln/saftyelt.pdf, accessed July 2022.

[28] City of Los Angeles, Department of City Planning. *City of Los Angeles General Plan – Safety Element*. Available at: https://planning.lacity.org/cwd/gnlpln/saftyelt.pdf, accessed July 2022.

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?

No Impact. The replacement pump station building would be located entirely within a permanent easement that was granted to LADWP in 1966 for the purposes of water lines and a pumping station to support the development of the surrounding housing tracts. Therefore, the project would not cause a significant environmental impact due to a conflict with any land use designated to avoid or mitigate an environmental effect. The new water pipelines would be located entirely within the existing ROW of Calvert Street, where water lines currently exist. All the lines and appurtenant facilities would be located below grade and would not conflict with any land use designated to avoid or mitigate an environmental effect. Therefore, there would be no impact.

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. No mineral resources of value to the region and the residents of the state are identified within the project site.[29] The surrounding area has been fully developed since the late 1960s. Therefore, 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 project site is not delineated as a locally-important mineral resource recovery site in the City of Los Angeles General Plan.[30] Therefore, implementation of the proposed project would not result in the loss of availability of a locally important mineral resource recovery site, and no impact would occur.

XIII. NOISE

Potential noise impacts associated with the proposed project were determined from the results presented in the Noise and Vibration Assessment Technical Memorandum prepared for the proposed project (see Appendix E).

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

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29 California Department of Conservation, Mineral Lands Classification. *Update of Mineral Land Classification of Portland Cement Concrete Aggregate in Ventura, Los Angeles, and Orange Counties, California, Part II - Los Angeles County*, *Map Plate1b*. 1994. Available at: https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc, accessed July 2022.

30 City of Los Angeles, Department of City Planning. *City of Los Angeles General Plan – Conservation Element*. Available at: https://planning.lacity.org/cwd/gnlpln/consvelt.pdf, accessed July 2022.

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 Los Angeles Municipal Code (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 A-weighted decibels (dBA) equivalent continuous sound level (L_{eq}) at 50 feet from the source unless technically infeasible. For permanent operational noise, a significant impact would result if the proposed project would increase noise levels at sensitive receptors by 5 dBA.

Existing Setting

The project site is located in a developed environment surrounded by residential and institutional uses. Sensitive receptors are located within 500 feet of both the pump installation site and the pipeline installation site. Sensitive receptors include residences, Saint Bernardine of Siena Children's Center Pre-School, Saint Bernardine of Siena Catholic Church, and Saint Bernardine of Siena School.

To characterize the existing noise environment around the project site, short-term noise measurements were taken using a SoundPro DL Sound Level Meter on Tuesday, October 15, 2019, between 9:30 a.m. and 1:00 p.m. Hourly noise levels within the project area ranged from 48.4 to 70.1 dBA L_{eq}. Roadway noise was the most significant source of noise in the project area. Existing noise levels at selected monitoring locations are shown in Table 3-4.

Table 3-4
Existing Ambient Noise Levels

Noise Monitoring Location	Sound Level (dBA, L_{eq})
Residence (24106 Calvert St.)	51.8
Residence (24300 Bessemer St.)	48.4
Valley Circle Blvd. at Calvert St.	70.1
Saint Bernardine of Siena Catholic Church (24110 Calvert St.)	55.3
Residence (6126 Pat Ave.)	51.9
Victory Pump Station Project Site (Victory Blvd.)	58.7
Residence (6216 Ellenview Ave.)	49.1
Residence (24666 Gilmore St.)	51.7

Source: TAHA, 2019.

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?

Less Than Significant Impact after Mitigation Incorporated.

Construction

Noise impacts from construction of the proposed project would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. Construction activities typically require the use of numerous pieces of noise-generating equipment. Typical noise levels from various types of equipment that would be used during construction are listed in Table 3-5. Noise levels from individual pieces of equipment typically are between 70.3 and 80.0 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 indicate the typical overall noise levels that would be expected for each phase of construction during pump station installation. Table 3-7 shows equipment anticipated to be used during each phase of pipeline installation. When considered as an entire process with multiple pieces of equipment, site preparation would generate the loudest noise level of approximately 84.1 dBA L_{eq} at 50 feet during pump station construction. The pipeline installation would typically only have two pieces of equipment operating at a time and the loudest noise level is anticipated to be 76.1 dBA L_{eq} at 50 feet.

Table 3-5
Noise Level Ranges of Typical Construction Equipment

Construction Equipment	Noise Level at 50 feet (dBA)
Auger Drill Rig	77.4
Backhoe	73.6
Crane	72.6
Tractor	80.0
Dozer	77.7
Dump Truck	72.5
Excavator	76.7
Flat Bed Truck	70.3
Pickup Truck	71.0
Paver	74.2
Roller	73.0
Welder	70.0

Source: Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, 2008.

Table 3-6
Phased Construction Noise Levels - Pump Station Construction

Construction Method	Noise Level at 50 feet (dBA, L_{eq})
Site Preparation	
Backhoe	73.6
Tractor	80.0
Dozer	77.7
Dump Truck	72.5
Excavator	76.7
Pickup Truck	71.0
Site Preparation Combined	*84.1*
Retaining Wall Installation	
Auger Drill Rig	77.4
Dump Truck	72.5
Excavator	76.7
Backhoe	73.6
Flat Bed Truck	70.3
Crane	72.6
Pickup Truck	71.0
Retaining Wall Installation Combined	*82.6*
Building Construction	
Crane	72.6
Backhoe	73.6
Flat Bed Truck	70.3
Crane	72.6
Pickup Truck	71.0
Building Construction Combined	*79.2*
Paving	
Paver	74.2
Roller	73.0
Paving Combined	*76.7*

Source: Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, 2008.

Table 3-7
Phased Construction Noise Levels - Pipeline Installation

Construction Method	Noise Level at 50 feet (dBA, L_{eq})
Site Preparation	
Backhoe	73.6
Crane	72.6
Dump Truck	72.5
Flat Bed Truck	70.3
Pickup Truck	71.0
Site Preparation Combined	*76.1*[a]
Pipe Installation	
Backhoe	73.6
Crane	72.6
Dump Truck	72.5
Flat Bed Truck	70.3
Pickup Truck	71.0
Welder Truck	70.0
Pipe Installation Combined	*76.1*[a]

[a.] Based on two pieces of equipment operating (Backhoe and Crane)

Source: Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, 2008.

Table 3-8 presents the estimated noise levels at the sensitive receptors nearest to the project site. The impact analysis is based on the construction limits in the LAMC. Construction activities would occur Monday through Friday, and workers would typically be on site for eight hours per day from 7:00 a.m. to 3:00 p.m. No work outside of these general hours, or work on weekends or national holidays, is anticipated. Construction activity would therefore comply with the allowable hours of construction in the LAMC. The LAMC limits equipment noise levels to 75 dBA L_{eq} at 50 feet unless technically infeasible. Unmitigated noise levels would typically exceed the allowable noise level stated in the LAMC. Therefore, without mitigation, the proposed project would result in a significant impact related to on-site construction noise.

In addition to on-site construction activities, noise would be generated off-site by construction-related trucks. The proposed project would require the export of 1,036 cubic yards of soil and the import of 152 cubic yards of suitable material for the pump installation site. Pipeline installation would not require significant amounts of material export. It is not anticipated that there would be more than 24 one-way truck trips per day or approximately three trucks per hour needed at the pump installation site. A doubling of traffic volume is typically needed to audibly increase noise levels along a roadway segment. According to the City of Los Angeles Department of Transportation, Victory Boulevard within the vicinity of the development site experiences approximately 2,500 trips a day.[31] Valley Circle Boulevard experiences approximately 10,500 trips per day.[32] An additional 24 one-way truck trips per day would not double the volume on any roadway segment. It is not anticipated that off-site vehicle activity would audibly change average daily noise levels due to the low

[31] Counts Unlimited, *Victory Boulevard W/ Pat Avenue, 24 Hour Directional Count*, June 5, 2019 (Appendix F).

[32] City of Los Angeles Department of Transportation, *Manual Traffic Count Summary for Valley Circle Boulevard and Calvert Street*, April 29, 2015.

volume of truck trips per day. The proposed project would not result in a short-term and temporary noise impact from construction trucks.

Table 3-8
Typical Construction Noise Levels at Receptors

Sensitive Receptor	Distance (feet)[a]	Existing Noise Level (dBA)	Noise Level with Construction (dBA)
Pump Installation			
Residences to the north along Ellenview Avenue	50	49.1	84.1
Residences to the south along Victory Boulevard	175	70.1	74.9
Residences to the northwest along Gilmore Street	200	51.7	72.1
Residences to the south along Calvert Street	330	55.3	63.9[b]
Residences to the north along Ellenview Avenue	400	49.1	61.8[b]
Residences to the east along Pat Avenue	400	55.3	66.4
Pipe Installation			
Residences adjacent to the north and south along Calvert Street east of Valley Circle Boulevard	50	51.8	76.1
Residences adjacent to the north and south along Calvert Street west of Valley Circle Boulevard	50	55.3	76.1
Residences adjacent to the north and south along Valley Circle Boulevard	50	70.1	77.1
Saint Bernardine of Siena Catholic Church	50	55.3	76.1
Saint Bernardine of Siena Dorms	50	55.3	76.1
Saint Bernardine of Siena Children's Center	60	55.3	74.6
Residences to the south along Pat Avenue	140	51.9	67.3
Residences adjacent to the north and south along Valley Circle Boulevard	170	70.1	70.6[b]
Residences to the south along Bessemer Street	180	48.4	60.7[b]
Saint Bernardine of Siena School	230	70.1	70.8

[a] Measured from the project site to the nearest structure.
[b] Includes a 4.5 dB reduction for intervening rows of buildings.
Source: TAHA, 2019.

Operations

Operational sources of noise would include mechanical equipment and periodic maintenance activities. Pump noise would not be audible as the pump would be enclosed in a new pump station building consisting of concrete walls, windows, and metal roofing. The pipeline would be underground and would not produce audible operational noise. Therefore, the proposed project would result in a less than significant impact related to operational noise.

Mitigation Measures

NOI-1 For construction activities lasting more than one month in one location and within 500 feet of a sensitive receptor, temporary barriers (e.g., noise blankets) shall be placed between the equipment and sensitive receptor.

NOI-2 Construction equipment shall be properly maintained and equipped with mufflers.

NOI-3 Rubber-tired equipment shall be used rather than tracked equipment when feasible.

NOI-4 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-5 A public liaison shall be appointed for project construction and shall 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-6 Prior to initiating construction activity, LADWP shall coordinate with the site administrator for the Saint Bernardine of Siena Children's Center to discuss construction activities that generate high noise levels. Coordination between the site administrator and LADWP shall continue on an as-needed basis throughout the construction phase of the project to mitigate potential disruption of classroom activities.

NOI-7 The public shall be notified in advance of the location and dates of construction hours and activities.

NOI-8 Truck routes shall be limited to major arterial roads located within non-residential areas when feasible.

Significance After Mitigation

Mitigation Measures NOI-1 through NOI-8 are designed to reduce construction noise levels. When the line-of-sight would be blocked from the equipment to the receptor, the barriers associated with Mitigation Measure NOI-1 would reduce construction noise levels by approximately 10 dBA. The equipment mufflers associated with Mitigation Measure NOI-2 would reduce construction noise levels by approximately 5 dBA. Mitigation Measures NOI-3 through NOI-8, although difficult to quantify, would also reduce and/or control construction noise levels. While temporary noise barriers are feasible at a relatively small, stationary site, such as the pump station, such barriers were not considered for placement along the pipe installation work zone for multiple reasons, including safety at intersections and cost effectiveness given the transient and short-term nature of the proposed construction activity in any one location. Table 3-9 shows mitigated noise levels by project component.

Based on compliance with the LAMC, construction equipment noise would be mitigated to the greatest extent feasible. The implementation of Mitigation Measures NOI-1 through NOI-8 would reduce noise impacts associated with the proposed project to a less than significant level. Therefore, the proposed project would result in a less than significant impact related to construction noise with mitigation incorporated.

Table 3-9
Mitigated Construction Noise Levels at Receptors

Sensitive Receptor	Distance (feet)[a]	Existing Noise Level (dBA)	Attenuation [b, c]	Noise Level with Construction (dBA)
Pump Installation				
Residences to the north along Ellenview Avenue	50	49.1	15	69.1
Residences to the south along Victory Boulevard	175	70.1	5	72.3
Residences to the northwest along Gilmore Street	200	51.7	5	67.2
Residences to the south along Calvert Street	330	55.3	5	60.0[d]
Residences to the north along Ellenview Avenue	400	49.1	5	57.3[d]
Residences to the east along Pat Avenue	400	55.3	5	62.1
Pipe Installation				
Residences adjacent to the north and south along Calvert Street east of Valley Circle Boulevard	50	51.8	5	71.2
Residences adjacent to the north and south along Calvert Street west of Valley Circle Boulevard	50	55.3	5	71.2
Residences adjacent to the north and south along Valley Circle Boulevard	50	70.1	5	73.6
Saint Bernardine Catholic Church	50	55.3	5	71.2
Saint Bernardine of Siena Dorms	50	55.3	5	71.2
Saint Bernardine of Siena Children's Center	60	55.3	5	69.7
Residences to the south along Pat Avenue	140	51.9	5	62.5
Residences adjacent to the north and south along Valley Circle Boulevard	170	70.1	5	70.3[d]
Residences to the south along Bessemer Street	180	48.4	5	56.3[d]
Saint Bernardine of Siena School	230	70.1	5	70.4

a. Measured from the project site to the nearest structure.
b. Includes a 10-dB reduction for temporary noise barrier or blankets.
c. Includes a 5-dB reduction for equipment mufflers.
d. Includes a 4.5-dB reduction for intervening rows of buildings.

Source: TAHA, 2019.

b) 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 buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, and to slight damage at the highest levels. In most cases, the primary concern regarding construction vibration relates to damage.

The Federal Transportation Administration provides vibration levels for various types of construction equipment with an average source level reported in terms of velocity.[33] Typical equipment anticipated to be used during construction and their associated vibration levels are shown in Table 3-10. The most vibration intensive equipment that would be utilized at the pump installation site would be an auger drill, which is most similar to caisson drilling. Caisson drilling generates a vibration level of 0.089 inches per second at 25 feet from the source. Pipe installation would utilize equipment similar to a large bulldozer, which also generates a vibration level of 0.089 inches per second at 25 feet. During pump station construction the nearest structure would be located approximately 50 feet to the north. At this distance, an auger drill would generate a vibration level of approximately 0.031 inches per second. This would be below the 0.2 inches per second that may create building damage. Pipeline installation would occur within the existing road ROW, and structures would typically be located approximately 50 feet away. At this distance a large bulldozer would generate a vibration level of approximately 0.031 inches per second, which would be below the 0.2 inches per second building damage criterion. Therefore, the proposed project would result in a less than significant impact related to on-site construction vibration.

Table 3-10
Vibration Levels for Construction Equipment

Equipment	Vibration Level at 25 feet (Inches/Second)
Caisson Drilling	0.089
Loaded Trucks	0.076
Large Bulldozer	0.089
Small Bulldozer	0.003

Source: Federal Transportation Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

Operation

The proposed project would not include significant sources of vibration. Mechanical equipment and associated maintenance activities would not generate perceptible vibration beyond the project site. Therefore, the proposed project would result in a less than significant impact related to operational vibration.

[33] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

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

No Impact. The project site is not located within an airport land use plan nor is it located 2 miles of a public airport or private airstrip. 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. The proposed project would replace an existing temporary and undersized potable water pumping facility. It would not include any new housing or businesses that would directly induce population growth in the area. As discussed above, the new pump station building would house a total of three new pumps, two of which would be 1,100-gpm capacity electrical pumps to supply potable water to the surrounding service areas. While the existing pumps have a nameplate capacity of 500 gpm, they were installed in 1967 when the size of planned development in the surrounding service area was considerably smaller than existing areas of development currently served by the pump station. Furthermore, as mentioned above, the existing pumps have been operating above their nameplate capacity (in the range of 850 to 1,000 gpm) due to higher suction grades from the adjacent 1,305-foot elevation service zone. Therefore, the replacement pumps would have a capacity that reflects the actual current and projected demand for water in the service areas, increasing reliability and efficiency, and reducing wear on the new pumping facilities. As possible, depending on actual demand, these pumps may be cycled, idling one pump at a time, to further extend their lifetime. Therefore, although the proposed pumps are larger in capacity than the existing pumps, they would accommodate the growth that has occurred in the area since 1967 rather than indirectly induce growth.

The third pump at the Victory Pump Station would be a 4,000-gpm fire pump, which would replace the existing 300-gpm fire pump to provide the fire flow capacity currently required by the Los Angeles Fire Department, given the expanded area of development since the pump was first installed. The fire pump run would be powered by an internal combustion engine to run independently of the electric power system, which may not be reliable during a fire event. Therefore, the proposed project would not induce substantial unplanned growth either directly or indirectly, and there would be no impact.

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

No Impact. The replacement pump station would be located entirely within an existing 0.1-acre LADWP easement that is fenced and contains existing pump station facilities. There is no housing on the site. The new pipeline would be located within the paved area of Calvert Street. Therefore, no people or housing would be displaced by the project, and there would be no impact.

XV. PUBLIC SERVICES

Would the project:

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

i) Fire protection?

No Impact. The proposed project would improve reliability and reduce maintenance and access concerns related to existing Victory Pump Station, which was installed in 1967 and was originally intended as a temporary facility. It would also replace an existing dedicated fire pump to provide the flow capacity currently required by the Los Angeles Fire Department. As discussed in XIV(a), above, the project would not induce population growth or increase other types of development in the area such that a new or altered facility for fire protection would be required to maintain adequate response times and other performance objectives. No impact would occur.

ii) Police protection?

No Impact. The City of Los Angeles Police Department is the local law enforcement agency responsible for providing police protection services in the City. As previously stated, the proposed project does not include new housing or non-residential development that would increase the residential or employee populations in the area; thus, the proposed project would not generate population growth, and the demand for police services would not substantially increase. Therefore, construction and operation of the proposed project would not require the construction of additional police protection facilities or expansion of existing police services or facilities, and no impact would occur.

iii) Schools?

No Impact. The proposed project would not induce population growth, either directly or indirectly, and would therefore not increase the demand for schools in the area. 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 to parks would occur.

v) Other public facilities?

No Impact. The proposed project does not include development of residential or commercial uses, which may increase the demand for other public facilities. Additionally, the proposed project would not indirectly induce population growth,

which may also 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 demand for parks and recreational services is generally associated with an increase in housing or population. As previously stated in Section XIV(a), the proposed project does not include housing and would not induce population growth. Therefore, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated. 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 is the replacement of an existing pump station, including the installation of new and replacement supply pipelines. It would not include recreational facilities or generate the need for new or expanded recreational facilities. Therefore, 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. Existing transit facilities in the project area include several bus stops operated by the Los Angeles County Metropolitan Transportation Authority. Victory Boulevard and Calvert Street are identified as Collector roads within the project area, and Valley Circle Boulevard is identified as a Scenic Avenue in the Canoga Park – Winnetka – Woodland Hills – West Community Plan.[34] Valley Circle Boulevard is also identified as a Tier 2 Bicycle Lane in the General Plan Mobility Element.[35] Pedestrian facilities in the project area include sidewalks and crosswalks on local roadways serving the project area.

The proposed project would create minor, temporary disruptions to traffic during construction activities for the pipeline installation and pump station construction, as described below.

[34] City of Los Angeles Department of City Planning, Canoga Park – Winnetka – Woodland Hills – West Hills, Circulation Map, 2017, available at: https://planning.lacity.org/odocument/d47d273f-cf20-46ce-94fe-839d6392ac3f/gencircmap.CPK.pdf, accessed July 2022.

[35] City of Los Angeles Department of City Planning, Mobility Plan 2035, Adopted August 2015; available at: https://planning.lacity.org/odocument/523f2a95-9d72-41d7-aba5-1972f84c1d36/Mobility_Plan_2035.pdf, accessed July 2022.

Calvert Street along the proposed project pipeline alignment is a 36-foot wide roadway consisting of two unstriped travel lanes and two parking lanes. There are also sidewalks on both the north and south sides of the street throughout the pipeline alignment. There are no designated bike lanes or bus routes on Calvert Street. There are no posted speed limits along Calvert Street; therefore, the assumed speed limit is 25 miles per hour, consistent with California law. Calvert Street is classified as a two-lane collector roadway with a design capacity of 10,000 vehicles per day (5,000 vehicles per travel lane). However, because Calvert Street is surrounded primarily by single family residences, the actual average daily traffic is approximately 2,000 vehicles between Pat Avenue and Valley Circle Boulevard[36] and approximately 1,200 vehicles between Valley Circle Boulevard and Sylvan Street/El Escorpion Road.[37] Traffic along Calvert Street is controlled by stop signs at its crossing with Valley Circle Boulevard. There are otherwise no controls within the pipeline alignment between Pat Avenue and Sylvan Street/El Escorpion Road.

As discussed above, construction activities associated with the proposed pipeline installation would take place entirely within the existing ROW of Calvert Street between Pat Avenue and Sylvan Street. Pipeline installation would require closing a portion of the roadway width to accommodate construction storage and operations. This may involve a majority of the 36-foot-wide paved ROW. It is anticipated that at least one travel lane would remain open in the section of Calvert Street under construction. This would result in a one-way flow of traffic, which would require the management of traffic moving in opposite directions by flag persons. Access to driveways and side streets that have singular access off of Calvert Street would be maintained at all times. In addition, detour plans to side streets that have alternative access routes would be implemented. Sidewalks along Calvert Street would generally remain open during construction.

A “rolling construction” process would be employed during pipeline installation, in which a zone of several hundred feet in length would be involved in various phases of the installation at a given time. These construction zones would typically be established between intersections to minimize traffic disruptions and would average approximately 500 feet in length. In this manner, only a portion of the 1,800-foot pipeline alignment would be under construction at once. It is anticipated that construction in an individual zone would last from about 3 to 5 weeks, and the entire installation would be complete in approximately 15 weeks.

The typical anticipated daily work force for the pipeline installation would be approximately 10 construction workers. The trips associated with this relatively small number of workers driving to and from the site would not be significant in the context of the capacity of Calvert Street and the surrounding road network. Since material excavated from the pipeline trench would be placed next to the trench to be used later as backfill, few truck trips beyond the hauling of demolished pavement and delivery of pipe sections and other material are expected on a daily basis, and these truck trips would not be significant in the context of Calvert Street and the surrounding road network.

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36 Counts Unlimited, *Calvert Street E/ Valley Circle Boulevard, 24 Hour Directional Count*, June 5, 2019. Traffic counts are included as Appendix F to the IS/MND.

37 Counts Unlimited, *Calvert Street W/ Valley Circle Boulevard, 24 Hour Directional Count*, June 5, 2019. Traffic counts are included as Appendix F to the IS/MND.

Due to the short-term nature of the pipeline installation in any given location and the short duration of the overall construction effort; the relatively low volume of existing traffic on Calvert Street due to its residential character; and the relatively low volume of temporary traffic associated with the pipeline installation, the proposed project pipeline installation would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. There would be no impact.

Victory Boulevard in the area of the pump station site is an 80-foot wide roadway consisting of two westbound lanes, two eastbound lanes, a center turning lane, as well as parking lanes and sidewalks on both the north and south sides of the street. There are also Class II designated bike lanes on both the north and south side of the roadway. The posted speed limit is 40 miles per hour. No Los Angeles County Metropolitan Transportation Authority (Metro) or other municipal bus routes are located along Valley Boulevard in the area of the proposed pump station. There are no driveways or other turning opportunities on Victory Boulevard between Pat Avenue, approximately 500 feet east of the pump station site, and Gilmore Street/County Oak Road, approximately 1,700 feet west of the site. Victory Boulevard in this area is classified as a four-lane collector roadway with a design capacity of 30,000 vehicles per day (7,500 vehicles per travel lane). However, the actual average daily traffic on Victory Boulevard between Pat Avenue and Gilmore Street/County Oak Road is currently under 2,500 vehicles.[38] The primary reason for this low volume of traffic is that in this area Victory Boulevard serves only adjacent residential neighborhoods; has no commercial, residential, or other uses fronting the roadway; and terminates at the entry gate to the Las Virgenes Canyon Open Space Preserve, approximately 1,850 feet west of the pump station site.

As discussed above, the installation of the proposed project pipeline would involve the establishment of a construction staging area along an approximately 200-foot frontage on the north side of Victory Boulevard, adjacent to the pump station site. This staging area would occupy the northernmost westbound travel lane as well as the bike lane and parking lane. Barriers would be placed around the perimeter of the staging area to cordon it off from traffic. During construction, traffic control would be provided, primarily with signage and restriping of the roadway, to direct vehicle and bicycle traffic around the staging area. At least three vehicle travel lanes (two eastbound and one westbound) would remain open on Victory Boulevard fronting the staging area throughout construction. The parking lane along the north side of Victory Boulevard adjacent to the staging area would be temporarily closed during construction. However, because no direct property access is provided from Victory Boulevard, vehicles do not generally park along the roadway except near Gilmore Street/County Oak Road, approximately 1,700 feet west of the pump station, near the entrance to Las Virgenes Canyon Open Space Preserve. The sidewalk along the north side of Victory Boulevard adjacent to the staging area would also be closed during construction, but because of the lack of direct access to properties from the street, there is minimal pedestrian activity in the area.

During construction of the pump station, there would be a peak of 25 workers on site. The trips associated with this relatively small number of workers driving to and

[38] Counts Unlimited, *Calvert Street W/ Valley Circle Boulevard, 24 Hour Directional Count*, June 5, 2019. Traffic counts are included as Appendix F to the IS/MND.

from the site would not be significant in the context of the capacity of Victory Boulevard and the surrounding road network. The pump station construction would also require a peak of approximately 24 daily one-way truck to haul excavated material from the site. This number of trips would only occur over a relatively brief period of project construction (approximately 14 intermittent days). Unlike worker trips, which would be concentrated in the morning and the afternoon, these truck trips would be distributed throughout the day. This relatively small number of truck trips distributed throughout the day would not be significant in the context of the capacity of Victory Boulevard and the surrounding road network.

Due to the temporary nature of the pump station construction; the relatively limited extent of traffic lane disruption; the relatively low volume of existing traffic on this portion of Victory Boulevard in relation to its design capacity; and the relatively low volume of temporary traffic associated with the pump station construction, the proposed project pump station construction would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The impact would be less than significant.

During post-construction project operations, local roads would be returned to pre-construction conditions, and the operation of the pump station and pipeline would not generate additional traffic beyond the minor level of traffic associated with current operations. Therefore, project operations would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. There would be no impact.

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 City of Los Angeles Department of Transportation (LADOT) Transportation Assessment Guidelines (LADOT Guidelines) establishes instructions and standards for preparation of transportation assessment in the City of Los Angeles.[39] 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 a project's construction, VMT assessments are not relevant for construction activities, especially if a project creates negligible post-construction operational trips, as is the case with the proposed project. Therefore, LADOT has not established significance thresholds for construction-related VMT. As such, neither construction nor operation of the proposed project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). No impact would occur.

[39] City of Los Angeles Department of Transportation, Transportation Assessment Guidelines, July 2019, available at: https://ladot.lacity.org/sites/g/files/wph266/f/LADOT_TA_Guidelines_DRAFT%2020190708.pdf.

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 both Victory Boulevard and Calvert Street. Potential conflicts associated with these lane closures would be addressed in the traffic control plan required by LADOT, which would include such measures 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, Victory Boulevard and Calvert Street would be returned to pre-construction configuration, and no conflicts would occur. The impact would be less than significant.

d) Result in inadequate emergency access?

Less Than Significant Impact. The proposed project would require partial roadway closures during construction activities associated with the new pump station and the pipeline installation. As such, construction could potentially hinder emergency access along the pipeline alignment and in the area adjacent to the pump station site. However, as listed in the construction BMPs in Section 1.8, LADWP would coordinate with emergency responders, including the Los Angeles Fire Department and Los Angeles Police Department, regarding construction schedule and traffic control plans so as to coordinate 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 Native American consultation by LADWP in accordance with Assembly Bill 52 (AB 52), which requires that a lead agency must consult with interested California Native American tribes who request formal consultation regarding impacts to tribal cultural resources. Additional information on these consultation efforts are provided in the Cultural Resources Assessment, which is included as Appendix C to this Initial Study/MND.

Would the project:

a) 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:

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

No Impact. As discussed in Section V(a), no resources eligible for listing were identified within the project area. A records search identified no resources which are listed or eligible for listing in the California Register of Historical Resources or a local register which could be identified as tribal cultural resources associated with the project site. A Sacred Land File search conducted by the Native American Heritage Commission did not result in the identification of any documented sacred lands within 0.5 miles of the proposed project. Therefore, 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.

ii) 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.

Less Than Significant Impact with Mitigation Incorporated. As discussed in Section XVIII(a) above, no tribal cultural resources were identified within the project area; however, Assembly Bill 52 consultation with the Native American Heritage Commission and Native American contacts in the project area is ongoing. In September 2019, letters were sent to 13 Native American governmental representatives identified by the Native American Heritage Commission as potential sources of information related to cultural resources in the vicinity of the project area. The letters advised the tribes and specific individuals of the proposed project and requested information regarding cultural resources in the immediate area, as well as feedback or concerns related to the proposed project. To date, LADWP has received a request from the Gabrieleno Band of Mission Indians – Kizh Nation for consultation on the project and consultation is underway

No specific tribal cultural resources have been identified, but the project area is identified as being potentially sensitive for tribal cultural resources. During the construction of the proposed project, unknown tribal cultural resources could potentially be encountered, particularly during ground-disturbing activities. Therefore, BMP 6 (Section 1.8), which requires all field supervisors and construction works to participate in training on cultural resources awareness, would be implemented prior to construction, and Mitigation Measure TCR-1, would be implemented during construction. With implementation of Mitigation Measure TCR-1 and BMP 6, and ongoing consultation with Native American representatives, impacts to tribal cultural resources would be less than significant.

Mitigation Measure

TCR-1 A tribal monitor shall be invited to monitor project-related ground-disturbing activities that have a reasonable likelihood of encountering tribal cultural resources. The tribal monitor shall be ancestrally affiliated with the project area and qualified by their tribe to monitor tribal cultural resources. Before initiating ground-disturbing activities, the tribal monitor shall conduct a brief awareness training session for the benefit of all construction workers and supervisory personnel. The training, which could be held in conjunction with the project's initial on-site safety meeting, shall explain the importance of and legal basis for the protection of significant tribal cultural resources. Each worker shall be notified of the proper procedures to follow in the event that tribal cultural resources or human remains are uncovered during ground-disturbing activities. These procedures include work curtailment or redirection, and immediately contacting the site supervisor and archaeological and tribal monitors.

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 replace an existing temporary and undersized potable water pumping facility entirely within an existing LADWP easement. It would not result in the relocation or construction of a new or expanded water treatment facility. Likewise, no new or expanded wastewater treatment, storm drainage, electric power, natural gas, or telecommunications facilities would be required, and there would be no impact.

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

No Impact. The proposed project would replace an existing temporary and undersized potable water pumping facility. The replacement pumps would have a capacity that reflects the actual current and projected demand for water in the service areas, increasing reliability and efficiency, and reducing wear on the new pumping facilities. Sufficient water supplies would be available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. 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. The proposed project would replace an existing temporary and undersized potable water pumping facility. It would not increase the demand for wastewater treatment such that the local wastewater treatment provider would determine inadequate capacity existed to serve the project. 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. During project construction, solid waste would be generated in the form of excavated material and general construction debris. As discussed above, the excavated material, which would be generated during different periods of the pump station construction, is estimated at approximately 1,036 cubic yards, which would represent approximately 1,450 tons of material. The project construction would not be expected to generate a substantial amount of general construction debris, which would include cleared vegetation, pavement, packing material, scrap, and minor demolition debris. No hazardous waste is anticipated to be generated. The Calabasas Landfill Facility currently has a maximum throughput of 7,901 tons of waste per day and a total remaining capacity of 9.7 million cubic yards. It accepts dirt, construction/demolition debris, asphalt, and green waste, as well as mixed municipal waste.[40] The type, volume, and tonnage of waste generated during project construction would be spread across many months, and would not exceed the standards, daily limits, or total limits of the Calabasas Landfill Facility. In addition, in accordance with BMP 3 in Section 1.8, LADWP would employ source reduction techniques and recycling measures in accordance with the Citywide Construction and Demolition Debris Recycling Ordinance, which would reduce the amount of construction-generated solid waste that would require disposal in the landfill. The pump station would not generate solid waste during post-construction operation. The impact would be less than significant.

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

No Impact. As described above, the construction waste generated by the proposed project would be properly disposed of in existing solid waste facilities. Construction materials and excavated soils will be disposed of in accordance with federal, state, and local statutes and regulations. LADWP would comply with the City's Construction and Demolition Ordinance and would also comply with the County-wide Integrated Waste Management Plan. Therefore, there would be no impact.

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 new pump station building would be located within a very high fire hazard safety zone (VHFHSZ) as designated by the City of Los Angeles Fire Department. The proposed pipeline alignment is not located within a VHFHSZ. The construction of the proposed pump station would require the closure of one westbound traffic lane on Victory Boulevard to accommodate the construction laydown area. This laydown area would be approximately 200 feet in length. Victory Boulevard in this area is not a designated secondary or primary

[40] 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 July 2022.

Disaster Route. Furthermore, Victory Boulevard in the area of the pump station is an 80-foot-wide roadway consisting of two westbound lanes, two eastbound lanes, a center turning lane, as well bike lanes and parking lanes on both the north and south sides of the street. During construction, traffic control would be provided, primarily with signage and restriping of the roadway, to direct traffic around the staging area. At least three travel lanes would remain on Victory Boulevard fronting the staging area throughout construction. Therefore, project construction would not substantially interfere with traffic during an emergency response or evacuation. The impact would be less than significant.

During project operation, the pump station would be located entirely off the roadway, and Victory Boulevard would be restored to its preconstruction configuration. Therefore, there would be no impact related to emergency response or evacuation during project operation. In addition, the pump station replacement project would include a new fire pump rated at 4,000 gpm to replace the existing 300 gpm fire pump on the site, and thereby increase firefighting capability in the area.

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

No Impact. As discussed above, the proposed pump station would be located within a Los Angeles Fire Department designated VHFHSZ, along the toe of the slope adjacent to Victory Boulevard. The pump station building would be composed of concrete walls with a standing seam metal roof, and, therefore, would be at reduced risk of ignition from fire and would, therefore, not contribute to the uncontrolled spread of a wildfire. Furthermore, the building would not generally be occupied. It would include a Supervisory Control and Data Acquisition system to permit remote monitoring of the station functions. Personnel would periodically be on site to conduct both scheduled and unscheduled maintenance. Therefore, exposure to pollutant concentrations from a wildfire would be minimal. In addition, the pump station replacement project would include a new fire pump rated at 4,000 gpm to replace the existing 300 gpm fire pump on the site, and thereby increase firefighting capability in the area. Therefore, no impact would occur.

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

No Impact. The proposed project would not involve the installation of infrastructure, such as roads, fuel breaks, or power lines, that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. It would include a replacement pump station building containing pumps to supply potable water to adjacent service areas and a dedicated fire pump, which would provide increased capacity for firefighting operations in the area. The new and replacement below-grade pipeline segments would be installed within existing road ROWs and would not exacerbate fire risk. There would be no impact.

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. While the proposed project pump station could potentially be exposed to downstream flooding or landslides resulting from post-fire runoff or slope instability, the risk would be no greater than presently exists for the current pump station. Therefore, the impact 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 with Mitigation Incorporated. As discussed in Section IV(a), ornamental vegetation in the study area provides potentially suitable nesting habitat for common urban bird species protected by the MBTA and by CFGC, including raptors such as Cooper's hawk, a CDFW WL species. By avoiding vegetation removal during the nesting bird season (generally February 1 to September 15, and as early as January 15 for raptors), or by implementing and adhering to BMP 5 (Section 1.8), related to pre-construction surveys for nesting birds and providing a qualified biological monitor should nesting birds be present, direct impacts from vegetation removal on nesting birds and the associated nesting habitat are not anticipated.

Indirect impacts to nesting birds within the study area could occur during construction as a result of noise, dust, increased human presence, and vibrations resulting from construction activities. Such disturbances could result in increased nestling mortality due to nest abandonment or decreased feeding frequency. With implementation and adherence to BMP 5, indirect impacts to nesting birds protected under the MBTA and by CFGC would be reduced to less than significant.

No federal or State-listed plant or wildlife species have been identified in the study area, and potentially suitable habitat for such species is absent from the study area. As a result, direct and indirect impacts to special-status plant and wildlife are not anticipated.

As discussed in Section V(a) above, one cultural resource, the existing Victory Pump Station, was identified within the project area. However, this resource has been altered since its original construction and does not meet the criteria to be eligible for the CRHR. Due to the potential to encounter previously unknown archaeological or tribal cultural resources during ground disturbing activities, mitigation measures CUL-1, which requires implementation of an archaeological monitoring program, and TCR-1, which requires consultation with Native American representatives, would be required. BMP 6 (Section 1.8), which requires all field supervisors and construction works to participate in training on cultural resources awareness prior to construction, would also be implemented. With implementation of these mitigation measures and

BMP 6, impacts to archaeological and tribal cultural resources would be less than significant.

b) Does the project have impacts 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.)

No Impact. A cumulatively 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 region) and in time (i.e., recently completed projects, projects currently under construction, and/or projects anticipated in the near-term future). The analysis of cumulative impacts 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 cumulative significant impact could result even when the individual impacts of the related projects are each less than significant. The combined effects of several related projects with individually less then significant impacts may also be determined to less than significant on a cumulative basis. In addition, even if the combined effects of several related projects are determined to be cumulatively significant, a single project's incremental contribution to those effects may be determined to be less than cumulatively considerable and, therefore, less than significant.

If a project creates no impact related to a particular environmental resource, it would have no potential to make a cumulatively considerable contribution to a wider environmental effect created by geographically or temporally related projects. No impacts were identified for the post-construction operational phase of the proposed project. Furthermore, no impacts would occur during project construction in relation to Aesthetics, Agricultural and Forestry Resources, Biological Resources, Energy, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Utilities and Service Systems, and Wildfire.

For certain resources, the assessment of environmental impacts is inherently cumulative in nature. Threshold of significance for impacts to Air Quality have been established by federal, state, and local agencies based upon whether a project would make cumulatively considerable contribution of air pollutant emissions to areas, such as the Basin, that are currently in nonattainment in relation to state and federal standards for certain criteria pollutants. While the proposed project construction activities would create air pollutant emissions from the operation of equipment and vehicles and the creation of dust during construction, these emissions would remain generally substantially below the established cumulative thresholds of significance, and, therefore, the project would not make a cumulatively considerable contribution to a wider environmental effect.

Likewise, the determination of significance for GHG emissions is by its very nature cumulative since the effect is global in scope. Therefore, CARB has established thresholds of significance to establish if an individual project would generate GHG emissions that would be cumulatively considerable. While the proposed project construction activities would create GHG emissions from the operation of equipment

and vehicles during construction, these emissions would remain substantially below the established cumulative thresholds of significance, and, therefore, the project would not make a cumulatively considerable contribution to a wider environmental effect.

Less than significant impacts from project construction activities to certain other resources would be localized to the project site or the immediate surroundings and, therefore, would not tend to contribute to a wider environmental effect resulting from the combined effects of the project and another project(s) unless that other project(s) was located in close proximity to the proposed project and occurring in the same timeframe. No such closely related projects, either geographically or temporally, have been identified. Impacts localized to the project site and immediate surroundings, and therefore not cumulatively considerable, would include those to Cultural Resources, Hazards and Hazardous Materials, Noise, Transportation, and Tribal Cultural Resources.

Less than significant impacts created by the proposed project related to Geology and Soils generally pertain to the impact of various geological factors on the project rather than the impact of the project on the environment. In this sense, these impacts would not be cumulatively considerable.

Therefore, the proposed project would not have environmental effects that are individually limited but cumulatively considerable.

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. Numerous factors discussed above in the CEQA Initial Study Checklist pertain to the quality of the human environment. These potentially include Aesthetics, Air Quality, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services, Recreation, Transportation, and Wildfire. 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. With the incorporation of appropriate mitigation measures, as described above, significant impacts related to Noise would be reduced to less than significant. Therefore, the project would not create environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. The impact is less than significant.

SECTION 4
LIST OF PREPARERS

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TECHNICAL APPENDICES

TECHNICAL APPENDICES
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APPENDIX A
Air Quality Assessment Technical Memorandum

Technical Memorandum

TO: AECOM

FROM: Terry A. Hayes Associates Inc.

DATE: November 19, 2019

RE: Victory Pump Station Replacement Project – Air Quality Assessment

INTRODUCTION

Terry A. Hayes Associates Inc. (TAHA) has completed an Air Quality Assessment for the Victory Pump Station Replacement Project (proposed project) in accordance with the provisions of the California Environmental Quality Act (CEQA) Statutes and Guidelines. The project site is located in the City of Los Angeles and the South Coast Air Basin (Basin), which falls under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Air Quality Assessment is organized as follows:

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

PROJECT DESCRIPTION

The Los Angeles Department of Water and Power (LADWP) proposes to implement the proposed project, which involves the construction of a new pump station to replace the existing aged, temporary underground pumping facility (the existing facility) at 24661 Victory Boulevard in West Hills. **Figure 1** illustrates the regional location of the proposed project and **Figure 2** shows the project components. To allow for optimum performance of the proposed new pump station, approximately 1,800 linear feet of pipeline would be installed along Calvert Street from Sylvan Street to Valley Circle Boulevard as part of the proposed project.

The proposed new pump station would be located on a 75-foot long by 50-foot wide permanent easement granted to LADWP in 1966 and on which the existing pump station is located. LADWP also proposes to acquire an additional undeveloped property in fee along Victory Boulevard to the east of the existing easement to provide room for an access drive to the pump station. The total pump station property would be located on two residential parcels on the northern side of Victory Boulevard, approximately 550 feet west of Pat Avenue in the West Hills community of the San Fernando Valley region of Los Angeles.

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Source: Esri Maps & Data, 2019.

Miles
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Figure 1
Regional Map

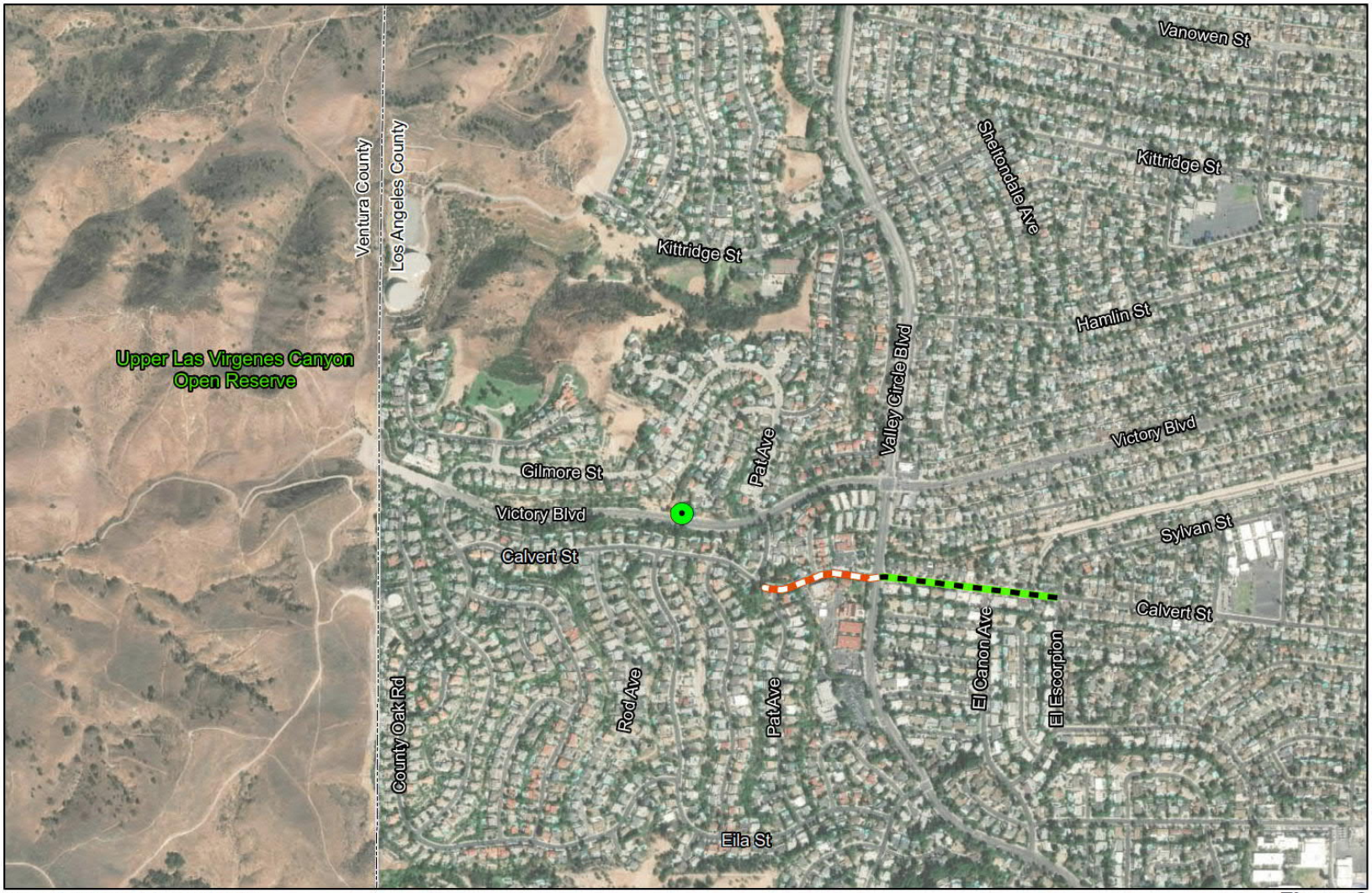


Figure 2
Project Vicinity Map

The pump station replacement would involve the construction of a new, permanent pump station building and the decommissioning of the existing, temporary underground pump station. The proposed new pump station building would be approximately 25 feet tall by 30.5 feet wide, consisting of concrete walls, windows, wood plank finishing, and metal roofing. The new pump station building would house a total of three new pumps. Construction of retaining walls surrounding the proposed new pump station building would be required to offset the difference between the existing ground elevation and the pump station building floor. Additionally, a new exterior concrete pad would be installed in the northwest corner of the pump station replacement site to accommodate a new transformer.

Pump Station Replacement Construction

Construction of the proposed pump station is anticipated to begin in October 2022 and take approximately 25 months to complete, concluding in November 2024. Construction activities would occur within the boundaries of the LADWP easement, except the construction staging and laydown area for the pump station replacement, which would be established immediately adjacent to the construction site, requiring the temporary occupation of one vehicular travel lane, the existing bicycle lane, and the existing parking lane, as well as the existing sidewalk on Victory Boulevard. The general location and extent of this construction site and associated laydown area is shown in **Figure 3**.

Construction vehicle access for the new pump station would be available via the existing driveway at 24661 Victory Boulevard. Any material that would be exported from the project site would follow a designated haul route for the proposed project, which commences at the proposed pump station site, travels eastbound to Valley Circle Boulevard, and southbound on Valley Circle Boulevard to US-101. For hauling of debris and excavated material, the route then continues along the freeway for approximately 17 miles before exiting to Lost Hills Road, Calabasas, toward the Calabasas Landfill Facility. Materials deliveries may come from either the westbound or eastbound 101, exiting at Valley Circle Boulevard. Peak construction vehicle movement is anticipated to occur during excavation activities, when two haul trucks may need to travel to and from the project site up to six times a day, resulting in approximately 24 haul truck trips a day.

At the peak of construction, the typical anticipated work force for the pump station replacement would comprise 15 construction workers a day. However, during peak construction, as many as 25 construction workers may be present. This would result in a maximum of approximately 50 construction worker trips per day, with an average of approximately 30 trips per day, accounting for one inbound and one outbound trip per worker. However, this does not account for any car pooling that may occur among workers, and as a result the number of daily worker vehicle trips may be lower. Construction equipment required for the pump station replacement includes two dirt haul trucks, one crane, two excavators, one bulldozer, one flatbed truck, and one front loader. Additionally, construction of the retaining wall would require the installation of approximately 12 drilled piles. A truck-mounted drill rig with 24-inch auger and a 30-ton crane would be used for pile installation.

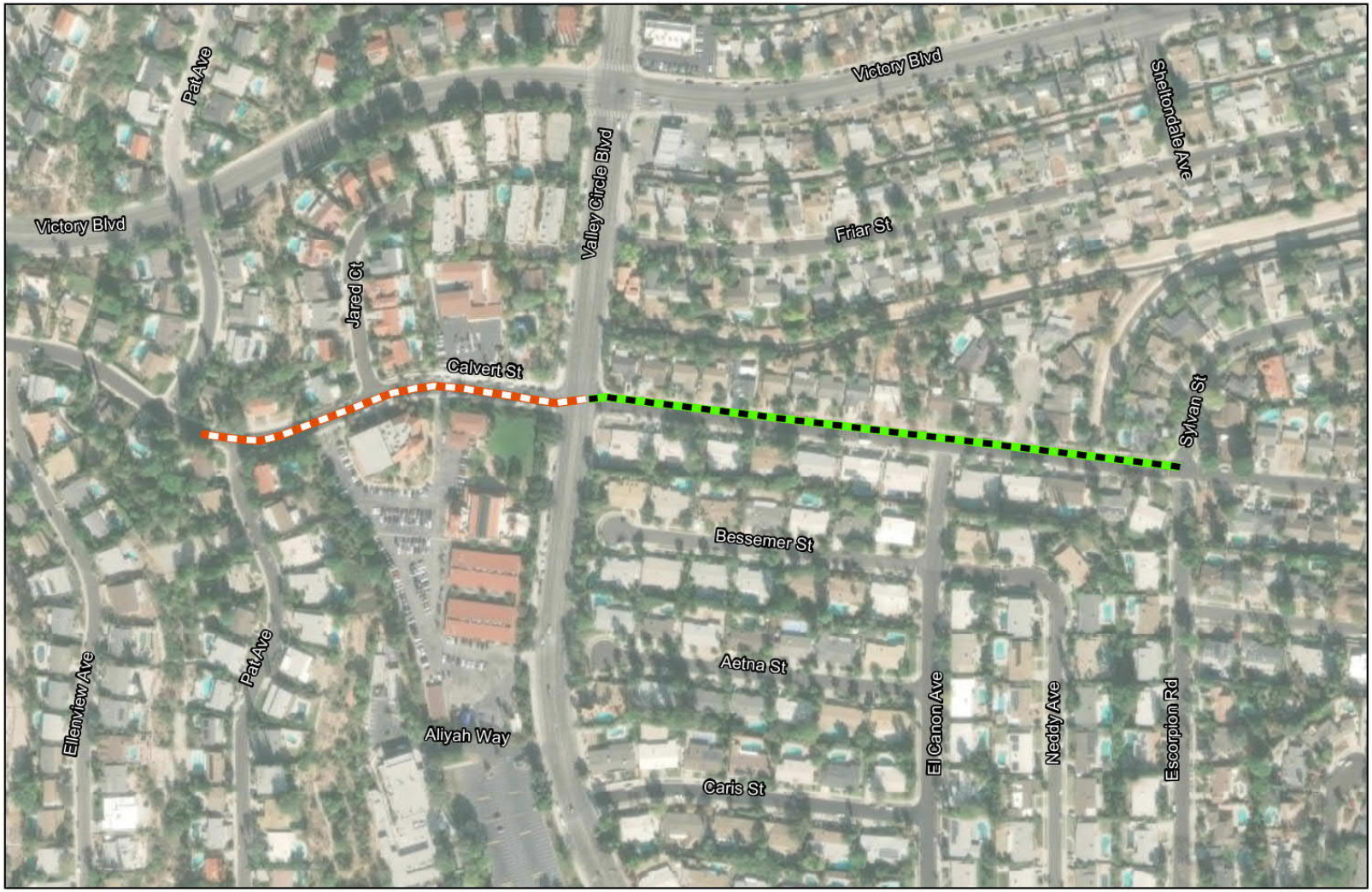
Pipeline Installation

Installation of the proposed pipeline would begin in late 2020 and would be installed at a rate of approximately 30 linear feet per day, taking a total of approximately 60 working days to complete. Construction activities associated with the proposed pipeline installation would take place within the existing right-of-way (ROW) of Calvert Street between Pat Avenue and Sylvan Street (**Figure 4**). A construction laydown area would be established for this project component and would occupy an area of approximately 50 feet by 10 feet. The new pipeline would be installed underground using an open trenching method. The excavated trench would be five feet wide by seven feet deep and would span the approximately 1,800 feet length of the proposed pipeline alignment. The majority of this excavated material would be used to backfill the trench following pipe installation. As such, only a minimal amount of excavated material would be generated for disposal.

Source: Esri 2019; Created by: AECOM, 2019.

Figure 3

Proposed Pump Station Replacement Site



Source: Esri 2019; Created by: AECOM, 2019.

Figure 4

Proposed Pipeline Alignment

An appropriate combination of monitoring and resource impact avoidance would be employed during all the construction activities, including implementation of the following best management practices:

- The proposed project would implement Rule 403 dust control measures required by the 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.
    - All haul 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.
    - Ground cover in disturbed areas shall be replaced in a timely fashion when work is completed in the area.
    - A community liaison shall be identified to address concerns regarding on-site construction activity including resolution of issues related to dust generation.
    - Apply non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).
    - Sweep streets at the end of the day if visible soil is carried onto adjacent public paved roads. If feasible, use water sweepers with reclaimed water.

AIR QUALITY TOPICAL INFORMATION

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. In addition to the federal criteria pollutants, the state regulates visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

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**.

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 attainment status designations for the Los Angeles County portion of the Basin.

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 Basin—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 neighborhoods of West Hills and Woodland Hills, which are situated in the Basin portion of Los Angeles County and are within the jurisdiction of the SCAQMD.

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)	Pending – Nonattainment
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)	Pending – 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*, February 2016.

The SCAQMD is tasked with preparing regional programs and policies designed to improve air quality within the Basin, 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 8-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 Basin is the reduction of nitrogen oxides (NO_X) emissions sufficient to meet the upcoming ozone 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 2016 AQMP 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)—the Metropolitan Planning Organization (MPO) for Southern California—has the responsibility of preparing and approving the portions of the 2016 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). Land use strategies outlined in the 2016–2040 RTP/SCS that will contribute to regional air quality improvements include: focusing new growth around transit/high quality transit areas (HQTAs), planning for growth around livable corridors, providing more options for short trips/neighborhood mobility areas, and supporting local sustainability planning.

The SCAQMD has also established various rules to manage and improve air quality in the Basin. The 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 Basin 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 Basin 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 Basin 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 Basin through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. The vertical dispersion of air pollutants in the Basin 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 no 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 Basin region is characterized by concentrations of air pollutants measured at 37 monitoring stations located throughout the SCAQMD jurisdiction. The Basin is divided geographically into 38 source receptors areas (SRAs), each of which contains an air quality monitoring station excluding SRA 7. The SRA boundaries were drawn based on proximity to the nearest air monitoring station, the local emission inventories, and surrounding topography. The proposed project site is located in SRA 6 (West San Fernando Valley). Ambient concentrations of O_3 and $PM_{2.5}$ exceed the associated NAAQS and CAAQS numerous times over the three-year period. Additionally, concentrations of PM_{10} exceeded the CAAQS in all three years. The data demonstrate the ongoing challenges that the region faces with regards to improving air quality and bringing the Basin into attainment of the federal and State standards.

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. The CARB has identified the following groups who are most likely 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 include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The SCAQMD has established 500 meters, or 1,640 feet, as the distance for assessing localized air quality impacts. The project is located in an urban environment and many sensitive receptors are located near construction zones. The project area is densely populated with residences. The Saint Bernardine of Siena Children's Center is also within 500 meters of the construction activities. **Figure 4** shows sensitive receptors.

SIGNIFICANCE THRESHOLDS

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

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

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is 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 SCAQMD published a CEQA Air Quality Handbook to guide air quality assessments for CEQA projects within its jurisdiction. SCAQMD methodologies recommend that air pollutant emissions be analyzed in both regional and local contexts. Regional emissions refer to all emissions that would be associated with construction and operation of a project, while localized emissions refer to only those emissions that would be produced by sources located on the project site. To assist in the assessment of air pollutant emissions under impact criteria a), b), and c) above, the SCAQMD established maximum daily threshold values for air pollutant emissions from CEQA projects within the Basin. The mass daily thresholds were derived using regional emissions modeling techniques to prevent the occurrence of air quality violations that would obstruct implementation of the regional AQMP and hinder efforts to improve regional air quality.

Table 2 shows regional and localized significance thresholds for volatile organic compounds (VOC), NO_X, CO, sulfur oxides (SO_X), and particulate matter (PM_{10} and $PM_{2.5}$). The localized air quality significance thresholds are specific to SRA 6 for a one-acre construction site with sensitive receptors within 80 feet (approximately 25 meters) and were obtained from the SCAQMD Localized Significance Threshold (LST) guidance document. The LST methodology document contains SRA-specific values for maximum allowable on-site emissions (i.e., construction equipment and fugitive dust) during construction based on locally monitored air quality, the size of maximum daily disturbed area, and the proximity of sensitive receptors. Maximum on-site emissions resulting from construction activities were quantified and assessed against the applicable LST values for a one-acre project site having sensitive receptors within 80 feet (approximately 25 meters) of the project site boundary in SRA 6.

TABLE 2: 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)	--	103	426	--	4	3
OPERATIONS						
Regional Threshold (lbs/day)	55	55	550	150	150	55
Localized Threshold (lbs/day)	--	103	426	--	1	1

Note: LST values selected for one-acre daily disturbance based on equipment inventory and 25-meter receptor distance in SRA 6.
SOURCE: SCAQMD, 2019.

Regarding substantial pollutant concentrations, a significant air quality impact would occur if the proposed project resulted in a residential carcinogenic risk above 10 excess cancers per million, or an acute hazard index (HI) equal to or greater than 1.0.

METHODOLOGY

The air quality analysis conducted for the proposed project is consistent with the methods described in the SCAQMD CEQA Air Quality Handbook (1993 edition), as well as the updates to the CEQA Air Quality Handbook, as provided on the SCAQMD website. The SCAQMD recommends the use of the California Emissions Estimator Model (CalEEMod, version 2016.3.1) as a tool for quantifying emissions of air pollutants that will be generated by constructing and operating development projects under CEQA. The detailed CalEEMod output files disclosing estimated air pollutant emissions can be found in the Appendix.

The SCAQMD recommends that air pollutant emissions generated by construction activities be assessed for potentially significant air quality impacts at regional and local scales. Regional emissions include air pollutant emissions from all sources associated with construction activities, while localized emissions refer specifically to those emissions generated by sources on the project site. Maximum daily emissions were quantified for each construction activity based on the number and type of equipment required and daily hours of use, in addition to vehicle trips to and from the project site. The CalEEMod model provides regionally-specific default values for daily equipment usage rates and worker 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 were used in conjunction with project-specific information to determine reasonable estimates of daily construction activities.

Separate emissions modeling exercises were prepared for construction of the pipeline (November 2020 through January 2021) and construction of the replacement pump station (October 2022 through November 2024). Installation of the 1,800-foot pipeline along Calvert Street is anticipated to last approximately 60 working days beginning in November 2020, with 30 linear feet of pipeline installed per day. Trenching activities would require the use of up to four pieces of off-road equipment, including a backhoe, two welders, and a hoist, as well as pickup trucks, dump trucks, a flatbed truck, a utility truck, and a gang truck. Up to 10 construction workers would be present during trenching activities. Pump station replacement is anticipated to take approximately 25 months beginning in October 2022, and would include Site Preparation, Excavation/Grading, Shoring, Station Construction, and Site Finalization activities. Detailed activity emissions modeling files can be found in the Appendix.

Localized air pollutant emissions from construction activities were analyzed in accordance with the SCAQMD LST methodology. The LST methodology was devised to prevent small-scale hot spot concentrations of air pollutants from exceeding ambient air quality standards at nearby sensitive receptors. The LST methodology document contains SRA-specific values for maximum allowable on-site emissions (i.e., construction equipment and fugitive dust) during construction based on locally monitored air quality, the size of maximum daily disturbed area, and the proximity of sensitive receptors. Maximum on-site emissions resulting from construction activities were quantified and assessed against the applicable LST values for a one-acre project site having sensitive receptors within 50 feet (approximately 25 meters) of the project site boundary in SRA 6.

Construction of the pipeline component of the proposed project will take place near the St. Bernardine of Siena Children's Center, which is situated to the north and south of Calvert Street on the western side of the intersection with Valley Circle Boulevard. Construction equipment utilized for pipeline installation would be operating within approximately 50 feet of sensitive receptors at the school property. Pipeline construction will last for approximately 60 working days in total along an 1,800-foot segment of Calvert Street between Pat Avenue at the western terminus and Sylvan Street at the eastern terminus. A Health Risk Assessment (HRA) was completed to assess potential exposures of child students and adult staff at the school to toxic air contaminants (TAC) concentrations resulting from construction activities during the three-month pipeline construction period.

The HRA is developed by simulating releases of emissions into the atmosphere and estimating the resulting pollutant concentrations at sensitive receptor locations, which relies on the use of air dispersion modeling software. AERMOD (version 19191) is the preferred USEPA regulatory Gaussian-plume atmospheric dispersion model. The model simulates air pollutant emissions from various types of sources in simple and complex terrain and estimates concentrations at desired receptor locations using meteorological and topographical data input to the model from nearby data stations. Construction equipment emissions along the linear pipeline alignment were characterized using a line volume source. Appropriate model settings were employed according to California Air Pollution Control Officers Association (CAPCOA) and SCAQMD guidance documents to characterize vertical and horizontal dispersion parameters.

The AERMOD software requires terrain elevation data and local meteorology data files to estimate pollutant concentrations. The AERMOD software requires five years of meteorological data to generate long-term average conditions for chronic pollutant exposures. Meteorological data from the Van Nuys Airport [KVNY] Station (years 2012–2016) located approximately 9.5 miles east of the project site were used to characterize local weather conditions and prevailing winds. Data from this meteorological station are the most representative of conditions at the site of the proposed project due to surrounding topography. The AERMOD software contains links to National Elevation Dataset (NED) GEOTIFF files at a resolution of approximately 10 meters. The NED GEOTIFF for the project area was selected as topographical dataset.

Exposure to TACs has both carcinogenic and non-carcinogenic public health implications. Carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below which there are no risks). Any exposure, therefore, will have some associated risk. As a result, the State of California has established a threshold of 10 in a million as a level posing no significant risk for exposures to carcinogens regulated under the Safe Drinking Water and Toxic Enforcement Act (Proposition 65). Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. Exhaust from construction equipment contains diesel particulate matter (diesel PM), which is a known carcinogen. Carcinogenic risks to which school students and staff would be exposed during construction of the proposed project pipeline were estimated based on the OEHHA *Guidance Manual for Preparation of Health Risk Assessments* using the following equations:[1]

$$Dose_{air} = (C_{air} \times AF) \times \{BR/BW\} \times A \times EF \times 10^{-6}$$

Where:

$Dose_{air}$	=	*Daily inhalation dose (mg/kg/day)*
C_{air}	=	*Annual average concentration in air ($\mu g/m^3$)*
AF	=	*Adjustment Factor [4.2, accounts for 8-hour weekday exposure during source activity]*
{BR/BW}	=	*Eight-hour breathing rate normalized to body weight (L/kg-day)*
A	=	*Inhalation absorption factor (unitless) [1.0]*
EF	=	*Exposure frequency (unitless), days/365 days [180/365 ≈ 0.5 for school days]*

And,

[1]OEHHA, *Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, 2015.*

$$\textit{Cancer Risk} = \textit{Dose}_{air} \times \textit{CPF} \times \textit{ASF} \times \textit{ED/AT}$$

Where:

Cancer Risk	=	*Incremental increase in excess cancer risk (per million)*
$Dose_{air}$	=	*Daily inhalation dose (mg/kg/day)*
CPF	=	*Inhalation cancer potency factor (mg/kg-day^{-1}) [Diesel exhaust = 1.1]*
ASF	=	*Age sensitivity factor for a specified age group (unitless) [3.0 for children age 2–16, and 1.0 for adults]*
ED	=	*Exposure duration for a specified age group (years) [0.25 years]*
AT	=	*Averaging time for lifetime cancer risk (years) [70 years]*

OEHHA has developed Age Sensitivity Factors (ASF) to account for the increased sensitivity to carcinogens during early-in-life exposure. ASF values of 3.0 and 1.0 were applied to characterize child (student) and adult (teachers/staff) exposures at the school receptor locations, respectively. The ASFs were obtained from Table 8.3 of the OEHHA Air Toxics Hotspot Program Guidance Manual. Human health risk assessments traditionally estimate the risk associated with long term exposures of sensitive receptors, typically either residents or workers, that would be consistently or regularly spending time in environments near permanent sources of toxic air contaminant emissions. **Table 3** displays the parameters used to estimate the three-month carcinogenic risk at school receptors surrounding the pipeline installation component of the proposed project.

TABLE 3: HEALTH RISK ASSESSMENT PARAMETERS – SCHOOL RECEPTORS

Parameter	Description	Unit	Child	Adult
EF	Exposure Frequency	180 days/365 days	0.5	0.5
ED	Exposure Duration	years	0.25	0.25
AT	Averaging Time	years	70	70
A	Absorption Coefficient	Unitless	1.0	1.0
{BR/BW}	Daily Breathing Rate	L/kg-day	640	100
ASF	Age Sensitivity Factor	unitless	3	1
CPF	Cancer Potency Factor	1/(mg/kg-day)	1.1	1.1

SOURCE: OEHHA, 2015; TAHA, 2019.

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 consistency with applicable SCAQMD and SCAG policies, including the SCAQMD's 2016 AQMP and growth projections within the SCAG's 2016–2040 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 first indicator is assessed by comparing emissions of air pollutants that would be produced by construction and operation of the proposed project to the SCAQMD significance thresholds, both on regional and localized scales. The regional and localized air quality significance thresholds were designed to prevent the occurrence and exacerbation of air quality violations resulting from construction and operation of individual CEQA projects in the context of existing ambient air quality conditions. The second indicator is assessed by determining consistency of permanent operations with population, housing, and employment assumptions that were used in the development of the AQMP and the RTP/SCS.

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 trucks traveling to and from the project site. Fugitive dust emissions would primarily result from site preparation (e.g., clearing, grading, excavation, and loading) activities. NO_X emissions would predominantly result from the use of construction equipment and haul truck trips. The assessment of construction air quality impacts considers all of these emissions sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

It is mandatory for all construction projects in the Basin to comply with SCAQMD Rule 403 for Fugitive Dust. Rule 403 control requirements include measures to prevent the generation of visible dust plumes. Measures include, but are not limited to, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system or other control measures to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas. Compliance with the provisions and best management practices propagated by Rule 403—such as the application of water as a dust suppressant to exposed stockpiles and disturbed ground surfaces—would reduce regional 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 $PM_{2.5}$ were estimated for the pipeline installation and each of the five phases of pump station construction comprising the proposed project using CalEEMod. **Table 4** shows the maximum unmitigated daily regional emissions for each activity, including emissions from sources located both on- and off-site. As stated above, the unmitigated emissions account for the provisions of SCAQMD Rule 403, which requires best management practice in fugitive dust control that achieve a 61 percent reduction from on-site fugitive dust sources including disturbed ground surface and material stockpiles. Maximum daily emissions of all air pollutants would remain below all applicable regional SCAQMD thresholds during construction of the proposed project, and air quality impacts would be less than significant.

TABLE 4: ESTIMATED DAILY CONSTRUCTION EMISSIONS

Phase	Daily Emissions (Pounds Per Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
PIPELINE TRENCHING						
On-Site Emissions	0.6	4.8	4.3	<0.1	0.3	0.2
Off-Site Emissions	0.2	2.9	1.5	<0.1	0.4	0.1
Total	***0.8***	***7.6***	***5.8***	***<0.1***	***0.7***	***0.4***
SITE PREPARATION						
On-Site Emissions	0.9	8.7	8.9	<0.1	1.6	1.0
Off-Site Emissions	0.3	1.9	2.2	<0.1	0.7	0.2
Total	***1.2***	***10.6***	***11.1***	***<0.1***	***2.3***	***1.2***
EXCAVATION/GRADING						
On-Site Emissions	0.9	9.2	10.0	<0.1	1.6	1.1
Off-Site Emissions	0.4	4.9	3.0	<0.1	6.2	1.6
Total	***1.3***	***14.1***	***12.9***	***<0.1***	***7.8***	***2.6***
SHORING						
On-Site Emissions	1.5	14.4	12.7	<0.1	3.0	1.9
Off-Site Emissions	0.3	1.4	2.0	<0.1	0.7	0.2
Total	***1.7***	***15.8***	***14.7***	***<0.1***	***3.7***	***2.1***
STATION CONSTRUCTION						
On-Site Emissions	0.8	8.2	8.0	<0.1	0.4	0.3
Off-Site Emissions	0.2	0.7	1.6	<0.1	0.6	0.2
Total	***1.1***	***8.8***	***9.6***	***<0.1***	***1.0***	***0.5***
SITE FINALIZATION						
On-Site Emissions	0.5	4.8	7.7	<0.1	0.2	0.2
Off-Site Emissions	0.2	0.7	1.6	<0.1	0.6	0.2
Total	***0.7***	***5.5***	***9.4***	***<0.1***	***0.8***	***0.4***
REGIONAL ANALYSIS						
Maximum Regional Daily Emissions	**1.7**	**15.8**	**14.7**	**<0.1**	**7.8**	**2.6**
Regional Significance Threshold	75	100	550	150	150	55
Exceed Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED ANALYSIS						
Maximum Localized Daily Emissions	**--**	**14.4**	**12.7**	**--**	**3.0**	**1.9**
Localized Significance Threshold	--	103	426	--	4	3
Exceed Localized Threshold?	**--**	**No**	**No**	**--**	**No**	**No**

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

In addition to maximum daily regional emissions, maximum localized (on-site) emissions were quantified for each construction activity. Sources of emissions located on the project site include heavy-duty equipment exhaust and fugitive dust. As mentioned previously, LST values have only been derived for the pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$. The LST values selected for the screening analysis are applicable to a one-acre daily disturbance area in SRA 6 within 25 meters of sensitive receptors. **Table 4** presents the results of emissions modeling from on-site construction sources and analysis in the context of the LST methodology, which is designed to prevent the occurrence of substantially elevated small-scale concentrations in close proximity to construction sites.

Maximum on-site emissions during project construction would not exceed the applicable LST values, therefore construction of the proposed project would not result in a significant localized air quality impact related to the frequency or severity of air quality violations. With respect to the first criterion, localized concentrations of nitrogen dioxide as NO_X, CO, PM_{10}, and $PM_{2.5}$ have been analyzed for the proposed project. Sulfur dioxide (SO_2) emissions, assessed as SO_X within the SCAQMD thresholds, would be negligible during construction, and, therefore, would not have the potential to cause or affect a violation of the SO_2 ambient air quality standard. Since VOCs are not a criteria pollutant, there is no ambient standard or localized threshold for VOCs. Due to the role VOCs play in ozone formation, it is classified as a precursor pollutant, and only a regional emissions threshold has been established.

Operations

Operational activities associated with the proposed project would be minimal. Implementation of the proposed project would not introduce any new trip-generating land uses to the project area, nor would it introduce new residences or jobs. The pipeline component of the proposed project would require infrequent maintenance, and any intermittent vehicle trips would result in negligible regional emissions on a daily basis. The pump station enclosure would house a control room and restroom, as well as three new pumps, and be equipped with exterior security lighting. Two of the new pumps would be electrically powered and—along with the security lighting—wired into the LADWP grid. The third pump would be powered by an internal combustion engine, which would provide the fire flow capacity required by the Los Angeles Fire Department. The fire pump would be tested annually but would not be operating continuously. Assuming a six-hour pump test duration, single-day operation of the fire pump would emit approximately 4.9 pounds of VOC, 13.8 pounds of NO_X, 12.6 pounds of CO, less than 0.1 pounds of SO_2, 0.7 pounds of PM_{10} and 0.7 pounds of $PM_{2.5}$. Fire pump testing emissions would not exceed any SCAQMD operational threshold presented in **Table 2**. 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 2016–2040 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 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 Basin 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. 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 propagates the guidance that if an individual project would not exceed the regional mass daily thresholds or LST values, then it is generally not considered to be cumulatively significant. This method of impact determination allows for the screening of individual projects that would not represent substantial new sources of emissions in the Basin; 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. As shown in **Table 5**, above, implementation of the proposed project would not exceed any applicable SCAQMD regional mass daily thresholds or LST values during construction. In addition, operation of the fire pump during annual testing activities would not exceed any operational threshold. Therefore, the proposed project would not generate cumulatively considerable emissions of ozone precursors or particulate matter 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)

Operation of the project is not expected to create substantial pollution. Furthermore, maximum daily on-site emissions of criteria pollutants would remain below applicable SCAQMD localized thresholds during all activities associated with construction of the proposed project. To address emissions of TACs, an HRA was completed to assess student and faculty exposures to diesel PM at the Saint Bernardine of Siena Children's Center during installation of the pipeline, which will occur between 7:00 a.m. and 3:00 p.m. Monday through Friday for approximately 60 working days (about three months) beginning in November 2020. The HRA was prepared assuming year-long equipment activity on the described schedule to calculate an annual average diesel PM concentration at school receptor locations, that was then multiplied by the adjustment factor of 4.2 to account for the concurrence of equipment activity and school operations, as described in the Methodology of this Assessment.

Table 5 presents the results of the school receptor HRA, which is expressed in terms of excess cancer risk per million population and conservatively assumes that the receptor remains in the location of highest concentration throughout the exposure duration.

TABLE 5: CARCINOGENIC RISK – SAINT BERNARDINE OF SIENA SCHOOL

Receptor	Maximum Annual Average Concentration ($\mu g/m^3$)	Daily Dose (mg/kg-day)	Carcinogenic Risk (per million)
Student (Child)	0.0662	2.12×10^{-5}	1.05
Faculty (Adult)	0.0662	3.31×10^{-6}	0.05
		SCAQMD CEQA Threshold	10.00
		Exceed Threshold?	**No**

SOURCE: TAHA, 2019.

As shown in **Table 5**, installation of the proposed project pipeline would result in a maximum student risk of 1.05 in one million, and a maximum faculty risk of approximately 0.05 in one million. Detailed HRA modeling files can be found in the Appendix to this Assessment. The maximum carcinogenic risk would be substantially less than the SCAQMD significance threshold of 10 in a million even when assuming continuous exposure at the location of the maximum modeled concentration. Therefore, construction of the proposed project would result in a less-than-significant impact related to TAC emissions and pollutant concentrations at sensitive receptors.

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 interior and exterior 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. The proposed project would utilize standard construction techniques, and the odors would be typical of most construction sites and temporary in nature. 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. Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding.[2] The operations would comply with SCAQMD Rule 402, which would prohibit any air quality discharge that would be a nuisance or pose any harm to individuals of the public. The proposed project would not include an operational source of emissions. 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.

[2]SCAQMD, *CEQA Air Quality Handbook*, 1993.

REFERENCES

California Air Pollution Control Officers Association, *California Emissions Estimator Model (CalEEMod v2016.3.2) User's Guide*, November 2017.

California Air Resources Board, *Ambient Air Quality Standards*, May 2016.

South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

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South Coast Air Quality Management District, *SCAQMD Air Quality Significance Thresholds*, March 2015.

Southern California Association of Governments, *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*, April 2016.

United States Environmental Protection Agency, *The Green Book Nonattainment Areas for Criteria Pollutants*, https://www.epa.gov/green-book, October 2019.

Appendix

- CalEEMod Output – Pipeline Construction Daily Emissions
- CalEEMod Output – Pump Station Construction Daily Emissions
- AERMOD Output – Diesel PM Concentration Contour Map
- AERMOD Reports – Results Summary
- AERMOD Reports – Source Inputs
- AERMOD Reports – Source Variable Emissions
- AERMOD Reports – Receptors Ap

LADWP Victory Pump Station Pipeline Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.00	1000sqft	0.21	9,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Construction Only

Land Use - Approximately 1,800 feet long by 5 feet wide.

Construction Phase - Trenching and re-paving activities will be occuring simulatenously along the pipeline corridor.

Off-road Equipment - Inventory from Project Description

Off-road Equipment - Inventory from Project Description

Trips and VMT - Inventory from Project Description

Energy Use -

Construction Off-road Equipment Mitigation -

LADWP Victory Pump Station Pipeline Project - Los Angeles-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	360.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00

2.0 Emissions Summary

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					
2020	0.8410	7.6448	5.8063	0.0161	0.4213	0.2715	0.6928	0.1136	0.2571	0.3707	0.0000	1,605.9372	1,605.9372	0.2222	0.0000	1,611.4918
2021	0.7574	7.0434	5.6097	0.0160	0.6106	0.2300	0.8406	0.1600	0.2178	0.3778	0.0000	1,591.3156	1,591.3156	0.2166	0.0000	1,596.7305
Maximum	**0.8410**	**7.6448**	**5.8063**	**0.0161**	**0.6106**	**0.2715**	**0.8406**	**0.1600**	**0.2571**	**0.3778**	**0.0000**	**1,605.9372**	**1,605.9372**	**0.2222**	**0.0000**	**1,611.4918**

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					
2020	0.8410	7.6448	5.8063	0.0161	0.4213	0.2715	0.6928	0.1136	0.2571	0.3707	0.0000	1,605.9372	1,605.9372	0.2222	0.0000	1,611.4918
2021	0.7574	7.0434	5.6097	0.0160	0.6106	0.2300	0.8406	0.1600	0.2178	0.3778	0.0000	1,591.3156	1,591.3156	0.2166	0.0000	1,596.7305
Maximum	**0.8410**	**7.6448**	**5.8063**	**0.0161**	**0.6106**	**0.2715**	**0.8406**	**0.1600**	**0.2571**	**0.3778**	**0.0000**	**1,605.9372**	**1,605.9372**	**0.2222**	**0.0000**	**1,611.4918**

	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**

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	3.9600e-003	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-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
Total	**3.9600e-003**	**1.0000e-005**	**9.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.9700e-003**	**1.9700e-003**	**1.0000e-005**	**0.0000**	**2.1000e-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	3.9600e-003	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-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
Total	**3.9600e-003**	**1.0000e-005**	**9.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**1.9700e-003**	**1.9700e-003**	**1.0000e-005**	**0.0000**	**2.1000e-003**

	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	Trenching	Trenching	11/2/2020	1/22/2021	5	60	
2	Paving	Paving	11/2/2020	1/22/2021	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.21

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Cranes	1	2.00	231	0.29
Trenching	Welders	2	4.00	46	0.45
Paving	Tractors/Loaders/Backhoes	1	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
Trenching	3	10.00	10.00	360.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	1	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Trenching - 2020

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	0.4554	2.9192	2.2959	4.0000e-003		0.1425	0.1425		0.1380	0.1380		347.1751	347.1751	0.0759		349.0713
Total	**0.4554**	**2.9192**	**2.2959**	**4.0000e-003**		**0.1425**	**0.1425**		**0.1380**	**0.1380**		**347.1751**	**347.1751**	**0.0759**		**349.0713**

3.2 Trenching - 2020

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	0.0537	1.7476	0.4063	4.6600e-003	0.1338	5.5900e-003	0.1393	0.0358	5.3500e-003	0.0412		504.6564	504.6564	0.0362		505.5620
Vendor	0.0372	1.0635	0.3074	2.5200e-003	0.0640	5.0900e-003	0.0691	0.0184	4.8700e-003	0.0233		269.4491	269.4491	0.0180		269.8995
Worker	0.0511	0.0363	0.4010	1.1100e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		110.7420	110.7420	3.4900e-003		110.8293
Total	**0.1420**	**2.8473**	**1.1147**	**8.2900e-003**	**0.3096**	**0.0116**	**0.3212**	**0.0839**	**0.0111**	**0.0950**		**884.8476**	**884.8476**	**0.0577**		**886.2908**

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	0.4554	2.9192	2.2959	4.0000e-003		0.1425	0.1425		0.1380	0.1380	0.0000	347.1751	347.1751	0.0759		349.0713
Total	**0.4554**	**2.9192**	**2.2959**	**4.0000e-003**		**0.1425**	**0.1425**		**0.1380**	**0.1380**	**0.0000**	**347.1751**	**347.1751**	**0.0759**		**349.0713**

3.2 Trenching - 2020

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	0.0537	1.7476	0.4063	4.6600e-003	0.1338	5.5900e-003	0.1393	0.0358	5.3500e-003	0.0412		504.6564	504.6564	0.0362		505.5620
Vendor	0.0372	1.0635	0.3074	2.5200e-003	0.0640	5.0900e-003	0.0691	0.0184	4.8700e-003	0.0233		269.4491	269.4491	0.0180		269.8995
Worker	0.0511	0.0363	0.4010	1.1100e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		110.7420	110.7420	3.4900e-003		110.8293
Total	**0.1420**	**2.8473**	**1.1147**	**8.2900e-003**	**0.3096**	**0.0116**	**0.3212**	**0.0839**	**0.0111**	**0.0950**		**884.8476**	**884.8476**	**0.0577**		**886.2908**

3.2 Trenching - 2021

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	0.4059	2.7212	2.2145	4.0000e-003		0.1233	0.1233		0.1194	0.1194		347.1624	347.1624	0.0722		348.9673
Total	**0.4059**	**2.7212**	**2.2145**	**4.0000e-003**		**0.1233**	**0.1233**		**0.1194**	**0.1194**		**347.1624**	**347.1624**	**0.0722**		**348.9673**

3.2 Trenching - 2021

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	0.0512	1.6292	0.4002	4.6000e-003	0.3231	5.0100e-003	0.3281	0.0823	4.8000e-003	0.0871		499.0699	499.0699	0.0357		499.9619
Vendor	0.0319	0.9689	0.2808	2.5000e-003	0.0640	2.0500e-003	0.0661	0.0184	1.9600e-003	0.0204		267.3455	267.3455	0.0173		267.7770
Worker	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	**0.1308**	**2.6307**	**1.0492**	**8.1800e-003**	**0.4989**	**7.9600e-003**	**0.5068**	**0.1304**	**7.5900e-003**	**0.1380**		**873.6405**	**873.6405**	**0.0561**		**875.0429**

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	0.4059	2.7212	2.2145	4.0000e-003		0.1233	0.1233		0.1194	0.1194	0.0000	347.1624	347.1624	0.0722		348.9673
Total	**0.4059**	**2.7212**	**2.2145**	**4.0000e-003**		**0.1233**	**0.1233**		**0.1194**	**0.1194**	**0.0000**	**347.1624**	**347.1624**	**0.0722**		**348.9673**

3.2 Trenching - 2021

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	0.0512	1.6292	0.4002	4.6000e-003	0.3231	5.0100e-003	0.3281	0.0823	4.8000e-003	0.0871		499.0699	499.0699	0.0357		499.9619
Vendor	0.0319	0.9689	0.2808	2.5000e-003	0.0640	2.0500e-003	0.0661	0.0184	1.9600e-003	0.0204		267.3455	267.3455	0.0173		267.7770
Worker	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	**0.1308**	**2.6307**	**1.0492**	**8.1800e-003**	**0.4989**	**7.9600e-003**	**0.5068**	**0.1304**	**7.5900e-003**	**0.1380**		**873.6405**	**873.6405**	**0.0561**		**875.0429**

3.3 Paving - 2020

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	0.1833	1.8420	1.9947	2.7200e-003		0.1165	0.1165		0.1072	0.1072		263.1724	263.1724	0.0851		265.3003
Paving	9.1700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1925**	**1.8420**	**1.9947**	**2.7200e-003**		**0.1165**	**0.1165**		**0.1072**	**0.1072**		**263.1724**	**263.1724**	**0.0851**		**265.3003**

3.3 Paving - 2020

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
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
Worker	0.0511	0.0363	0.4010	1.1100e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		110.7420	110.7420	3.4900e-003		110.8293
Total	**0.0511**	**0.0363**	**0.4010**	**1.1100e-003**	**0.1118**	**9.3000e-004**	**0.1127**	**0.0296**	**8.6000e-004**	**0.0305**		**110.7420**	**110.7420**	**3.4900e-003**		**110.8293**

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	0.1833	1.8420	1.9947	2.7200e-003		0.1165	0.1165		0.1072	0.1072	0.0000	263.1724	263.1724	0.0851		265.3003
Paving	9.1700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1925**	**1.8420**	**1.9947**	**2.7200e-003**		**0.1165**	**0.1165**		**0.1072**	**0.1072**	**0.0000**	**263.1724**	**263.1724**	**0.0851**		**265.3003**

3.3 Paving - 2020

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
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
Worker	0.0511	0.0363	0.4010	1.1100e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		110.7420	110.7420	3.4900e-003		110.8293
Total	**0.0511**	**0.0363**	**0.4010**	**1.1100e-003**	**0.1118**	**9.3000e-004**	**0.1127**	**0.0296**	**8.6000e-004**	**0.0305**		**110.7420**	**110.7420**	**3.4900e-003**		**110.8293**

3.3 Paving - 2021

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	0.1639	1.6588	1.9777	2.7200e-003		0.0978	0.0978		0.0900	0.0900		263.2876	263.2876	0.0852		265.4164
Paving	9.1700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1730**	**1.6588**	**1.9777**	**2.7200e-003**		**0.0978**	**0.0978**		**0.0900**	**0.0900**		**263.2876**	**263.2876**	**0.0852**		**265.4164**

3.3 Paving - 2021

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
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
Worker	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	**0.0477**	**0.0326**	**0.3683**	**1.0800e-003**	**0.1118**	**9.0000e-004**	**0.1127**	**0.0296**	**8.3000e-004**	**0.0305**		**107.2251**	**107.2251**	**3.1600e-003**		**107.3040**

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	0.1639	1.6588	1.9777	2.7200e-003		0.0978	0.0978		0.0900	0.0900	0.0000	263.2876	263.2876	0.0852		265.4164
Paving	9.1700e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.1730**	**1.6588**	**1.9777**	**2.7200e-003**		**0.0978**	**0.0978**		**0.0900**	**0.0900**	**0.0000**	**263.2876**	**263.2876**	**0.0852**		**265.4164**

3.3 Paving - 2021

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
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
Worker	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	**0.0477**	**0.0326**	**0.3683**	**1.0800e-003**	**0.1118**	**9.0000e-004**	**0.1127**	**0.0296**	**8.3000e-004**	**0.0305**		**107.2251**	**107.2251**	**3.1600e-003**		**107.3040**

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
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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	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
Other Asphalt Surfaces	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
Other Asphalt Surfaces	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

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					
Other Asphalt Surfaces	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					
Other Asphalt Surfaces	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	3.9600e-003	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
Unmitigated	3.9600e-003	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-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	6.9000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
Total	**3.9700e-003**	**1.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.9700e-003**	**1.9700e-003**	**1.0000e-005**		**2.1000e-003**

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	6.9000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
Total	**3.9700e-003**	**1.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.9700e-003**	**1.9700e-003**	**1.0000e-005**		**2.1000e-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

LADWP Victory Pump Station Replacement Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.80	1000sqft	0.02	800.00	0
Other Non-Asphalt Surfaces	0.14	Acre	0.14	6,098.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Construction Only

Land Use - Pump Station building dimensions approximately 25 x 30.5.
Total project site area approximately 7,000 square feet (0.16 acres)

Construction Phase - Total Construction Duration: 25 months
Interpolated phase lenghts are approximated based on PD.

Off-road Equipment - PD Inventory:
Excavators (2)
Bulldozer (1)
Tractor (1)

Off-road Equipment - PD Inventory:
Excavators (2)
Bulldozer (1)

Tractor (1)
Crane (1)
Off-road Equipment - PD Inventory:
Excavators (2)
Bulldozer (1)
Tractor (1)
Crane (1)
Bore/Drill Rig (1)

Off-road Equipment - PD Inventory:
Excavators (2)
Bulldozer (1)
Tractor (1)

Off-road Equipment - PD Inventory:
Excavators (1)
Paver (1)
Roller (1)
Tractor (1)

Trips and VMT - 25 workers/day
4 material deliveries/day
Site Clearing: 1 load/truck/day = 4 one-way trips/day
Excavation: 4 loads/truck/day = 16 one-way trips/day
Shoring: 1 load/truck/day = 4 one-way trips/day

Grading - Total excavation & removal: 1,036 CY
Total import for geotech compliance: 152 CY

Construction Off-road Equipment Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Vehicle Trips - No daily trips.
Occasional maintenance trips would occur.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	110.00
tblConstructionPhase	NumDays	2.00	260.00
tblConstructionPhase	NumDays	5.00	110.00
tblConstructionPhase	NumDays	1.00	55.00
tblConstructionPhase	NumDays	1.00	15.00
tblGrading	MaterialExported	0.00	952.00

tblGrading	MaterialExported	0.00	30.00
tblGrading	MaterialExported	0.00	54.00
tblGrading	MaterialImported	0.00	152.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	1.00	4.00
tblSolidWaste	SolidWasteGenerationRate	0.99	0.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	500.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	6.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	4.00	220.00
tblTripsAndVMT	HaulingTripNumber	119.00	4,160.00
tblTripsAndVMT	HaulingTripNumber	26.00	60.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	1.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	10.00	50.00
tblTripsAndVMT	WorkerTripNumber	10.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	50.00
tblTripsAndVMT	WorkerTripNumber	3.00	50.00
tblTripsAndVMT	WorkerTripNumber	10.00	50.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00

tblWater	IndoorWaterUseRate	185,000.00	0.00

2.0 Emissions Summary

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					
2022	1.3248	14.1239	12.9423	0.0362	9.1898	0.4655	9.6553	3.1929	0.4288	3.6217	0.0000	3,683.6452	3,683.6452	0.6514	0.0000	3,699.9308
2023	1.7062	15.7765	14.6510	0.0392	6.7301	0.6458	7.3759	3.4991	0.5942	4.0933	0.0000	3,863.5064	3,863.5064	0.9663	0.0000	3,887.6627
2024	1.6721	15.1931	14.5542	0.0390	6.8095	0.6172	7.4267	3.5186	0.5679	4.0865	0.0000	3,847.7300	3,847.7300	0.9656	0.0000	3,871.8697
Maximum	**1.7062**	**15.7765**	**14.6510**	**0.0392**	**9.1898**	**0.6458**	**9.6553**	**3.5186**	**0.5942**	**4.0933**	**0.0000**	**3,863.5064**	**3,863.5064**	**0.9663**	**0.0000**	**3,887.6627**

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					
2022	1.3248	14.1239	12.9423	0.0362	7.3528	0.4655	7.8183	2.1833	0.4288	2.6120	0.0000	3,683.6452	3,683.6452	0.6514	0.0000	3,699.9308
2023	1.7062	15.7765	14.6510	0.0392	3.0557	0.6458	3.7015	1.4797	0.5942	2.0739	0.0000	3,863.5064	3,863.5064	0.9663	0.0000	3,887.6627
2024	1.6721	15.1931	14.5542	0.0390	3.1350	0.6172	3.7523	1.4992	0.5679	2.0671	0.0000	3,847.7300	3,847.7300	0.9656	0.0000	3,871.8697
Maximum	**1.7062**	**15.7765**	**14.6510**	**0.0392**	**7.3528**	**0.6458**	**7.8183**	**2.1833**	**0.5942**	**2.6120**	**0.0000**	**3,863.5064**	**3,863.5064**	**0.9663**	**0.0000**	**3,887.6627**

	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**	**40.41**	**0.00**	**37.56**	**49.44**	**0.00**	**42.78**	**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	0.0205	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.1000e-004	2.1000e-004	0.0000		2.2000e-004
Energy	4.3000e-004	3.8900e-003	3.2700e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.6672	4.6672	9.0000e-005	9.0000e-005	4.6949
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
Stationary	4.9226	13.7602	12.5531	0.0237		0.7242	0.7242		0.7242	0.7242		2,518.5424	2,518.5424	0.3531		2,527.3699
Total	**4.9435**	**13.7640**	**12.5565**	**0.0237**	**0.0000**	**0.7245**	**0.7245**	**0.0000**	**0.7245**	**0.7245**		**2,523.2098**	**2,523.2098**	**0.3532**	**9.0000e-005**	**2,532.0651**

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	lb/day										lb/day					
Area	0.0205	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.1000e-004	2.1000e-004	0.0000		2.2000e-004
Energy	4.3000e-004	3.8900e-003	3.2700e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.6672	4.6672	9.0000e-005	9.0000e-005	4.6949
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
Stationary	4.9226	13.7602	12.5531	0.0237		0.7242	0.7242		0.7242	0.7242		2,518.5424	2,518.5424	0.3531		2,527.3699
Total	**4.9435**	**13.7640**	**12.5565**	**0.0237**	**0.0000**	**0.7245**	**0.7245**	**0.0000**	**0.7245**	**0.7245**		**2,523.2098**	**2,523.2098**	**0.3532**	**9.0000e-005**	**2,532.0651**

	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

LADWP Victory Pump Station Replacement Project - Los Angeles-South Coast County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Clearing/Tree Removal	Site Preparation	10/3/2022	12/16/2022	5	55	
2	Excavation/Grading	Grading	12/19/2022	12/15/2023	5	260	
3	Shoring/Pile Driving	Site Preparation	12/18/2023	1/5/2024	5	15	
4	Pump Station Building Construction	Building Construction	1/8/2024	6/7/2024	5	110	
5	Site Finalization	Paving	6/10/2024	11/8/2024	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.14

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

OffRoad Equipment

LADWP Victory Pump Station Replacement Project - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Clearing/Tree Removal	Excavators	2	6.00	158	0.38
Site Clearing/Tree Removal	Rubber Tired Dozers	1	4.00	247	0.40
Site Clearing/Tree Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Excavation/Grading	Excavators	2	8.00	158	0.38
Excavation/Grading	Rubber Tired Dozers	1	4.00	247	0.40
Excavation/Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Shoring/Pile Driving	Bore/Drill Rigs	1	6.00	221	0.50
Shoring/Pile Driving	Cranes	1	4.00	231	0.29
Shoring/Pile Driving	Excavators	2	6.00	158	0.38
Shoring/Pile Driving	Rubber Tired Dozers	1	8.00	247	0.40
Shoring/Pile Driving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pump Station Building Construction	Cranes	1	4.00	231	0.29
Pump Station Building Construction	Excavators	2	4.00	158	0.38
Pump Station Building Construction	Rubber Tired Dozers	1	4.00	247	0.40
Pump Station Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Finalization	Excavators	1	4.00	158	0.38
Site Finalization	Pavers	1	7.00	130	0.42
Site Finalization	Rollers	1	7.00	80	0.38
Site Finalization	Tractors/Loaders/Backhoes	1	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
Site Clearing/Tree Removal	4	50.00	8.00	220.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation/Grading	4	50.00	8.00	4,160.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Shoring/Pile Driving	6	50.00	8.00	60.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station Building Construction	5	50.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Finalization	4	50.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Clearing/Tree Removal - 2022

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					3.0111	0.0000	3.0111	1.6551	0.0000	1.6551			0.0000			0.0000
Off-Road	0.8869	8.7379	8.9117	0.0151		0.4277	0.4277		0.3935	0.3935		1,464.7795	1,464.7795	0.4737		1,476.6230
Total	**0.8869**	**8.7379**	**8.9117**	**0.0151**	**3.0111**	**0.4277**	**3.4388**	**1.6551**	**0.3935**	**2.0486**		**1,464.7795**	**1,464.7795**	**0.4737**		**1,476.6230**

3.2 Site Clearing/Tree Removal - 2022

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	0.0325	1.0081	0.2635	3.0300e-003	0.0699	2.9100e-003	0.0729	0.0192	2.7800e-003	0.0220		328.7267	328.7267	0.0234		329.3118
Vendor	0.0240	0.7366	0.2126	1.9800e-003	0.0512	1.4300e-003	0.0527	0.0148	1.3700e-003	0.0161		211.9762	211.9762	0.0133		212.3093
Worker	0.2239	0.1473	1.6959	5.1900e-003	0.5589	4.3700e-003	0.5633	0.1482	4.0300e-003	0.1523		517.2847	517.2847	0.0142		517.6408
Total	**0.2804**	**1.8920**	**2.1720**	**0.0102**	**0.6800**	**8.7100e-003**	**0.6888**	**0.1821**	**8.1800e-003**	**0.1903**		**1,057.9876**	**1,057.9876**	**0.0510**		**1,059.2619**

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					1.1743	0.0000	1.1743	0.6455	0.0000	0.6455			0.0000			0.0000
Off-Road	0.8869	8.7379	8.9117	0.0151		0.4277	0.4277		0.3935	0.3935	0.0000	1,464.7795	1,464.7795	0.4737		1,476.6230
Total	**0.8869**	**8.7379**	**8.9117**	**0.0151**	**1.1743**	**0.4277**	**1.6020**	**0.6455**	**0.3935**	**1.0390**	**0.0000**	**1,464.7795**	**1,464.7795**	**0.4737**		**1,476.6230**

3.2 Site Clearing/Tree Removal - 2022

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	0.0325	1.0081	0.2635	3.0300e-003	0.0699	2.9100e-003	0.0729	0.0192	2.7800e-003	0.0220		328.7267	328.7267	0.0234		329.3118
Vendor	0.0240	0.7366	0.2126	1.9800e-003	0.0512	1.4300e-003	0.0527	0.0148	1.3700e-003	0.0161		211.9762	211.9762	0.0133		212.3093
Worker	0.2239	0.1473	1.6959	5.1900e-003	0.5589	4.3700e-003	0.5633	0.1482	4.0300e-003	0.1523		517.2847	517.2847	0.0142		517.6408
Total	**0.2804**	**1.8920**	**2.1720**	**0.0102**	**0.6800**	**8.7100e-003**	**0.6888**	**0.1821**	**8.1800e-003**	**0.1903**		**1,057.9876**	**1,057.9876**	**0.0510**		**1,059.2619**

3.3 Excavation/Grading - 2022

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					3.0115	0.0000	3.0115	1.6552	0.0000	1.6552			0.0000			0.0000
Off-Road	0.9469	9.2075	9.9797	0.0169		0.4481	0.4481		0.4123	0.4123		1,639.4774	1,639.4774	0.5302		1,652.7334
Total	**0.9469**	**9.2075**	**9.9797**	**0.0169**	**3.0115**	**0.4481**	**3.4596**	**1.6552**	**0.4123**	**2.0674**		**1,639.4774**	**1,639.4774**	**0.5302**		**1,652.7334**

3.3 Excavation/Grading - 2022

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	0.1300	4.0325	1.0540	0.0121	5.5682	0.0116	5.5799	1.3748	0.0111	1.3859		1,314.9068	1,314.9068	0.0936		1,317.2472
Vendor	0.0240	0.7366	0.2126	1.9800e-003	0.0512	1.4300e-003	0.0527	0.0148	1.3700e-003	0.0161		211.9762	211.9762	0.0133		212.3093
Worker	0.2239	0.1473	1.6959	5.1900e-003	0.5589	4.3700e-003	0.5633	0.1482	4.0300e-003	0.1523		517.2847	517.2847	0.0142		517.6408
Total	**0.3779**	**4.9164**	**2.9625**	**0.0193**	**6.1783**	**0.0174**	**6.1958**	**1.5377**	**0.0165**	**1.5543**		**2,044.1677**	**2,044.1677**	**0.1212**		**2,047.1973**

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					1.1745	0.0000	1.1745	0.6455	0.0000	0.6455			0.0000			0.0000
Off-Road	0.9469	9.2075	9.9797	0.0169		0.4481	0.4481		0.4123	0.4123	0.0000	1,639.4774	1,639.4774	0.5302		1,652.7334
Total	**0.9469**	**9.2075**	**9.9797**	**0.0169**	**1.1745**	**0.4481**	**1.6226**	**0.6455**	**0.4123**	**1.0578**	**0.0000**	**1,639.4774**	**1,639.4774**	**0.5302**		**1,652.7334**

3.3 Excavation/Grading - 2022

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	0.1300	4.0325	1.0540	0.0121	5.5682	0.0116	5.5799	1.3748	0.0111	1.3859		1,314.9068	1,314.9068	0.0936		1,317.2472
Vendor	0.0240	0.7366	0.2126	1.9800e-003	0.0512	1.4300e-003	0.0527	0.0148	1.3700e-003	0.0161		211.9762	211.9762	0.0133		212.3093
Worker	0.2239	0.1473	1.6959	5.1900e-003	0.5589	4.3700e-003	0.5633	0.1482	4.0300e-003	0.1523		517.2847	517.2847	0.0142		517.6408
Total	**0.3779**	**4.9164**	**2.9625**	**0.0193**	**6.1783**	**0.0174**	**6.1958**	**1.5377**	**0.0165**	**1.5543**		**2,044.1677**	**2,044.1677**	**0.1212**		**2,047.1973**

3.3 Excavation/Grading - 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					3.0115	0.0000	3.0115	1.6552	0.0000	1.6552			0.0000			0.0000
Off-Road	0.8332	7.8126	9.7422	0.0169		0.3689	0.3689		0.3394	0.3394		1,639.8940	1,639.8940	0.5304		1,653.1534
Total	**0.8332**	**7.8126**	**9.7422**	**0.0169**	**3.0115**	**0.3689**	**3.3804**	**1.6552**	**0.3394**	**1.9946**		**1,639.8940**	**1,639.8940**	**0.5304**		**1,653.1534**

3.3 Excavation/Grading - 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	0.0854	2.6487	0.9481	0.0116	0.2883	4.9000e-003	0.2932	0.0788	4.6900e-003	0.0835		1,260.2211	1,260.2211	0.0867		1,262.3879
Vendor	0.0178	0.5579	0.1889	1.9200e-003	0.0512	6.8000e-004	0.0519	0.0148	6.5000e-004	0.0154		205.3931	205.3931	0.0117		205.6863
Worker	0.2110	0.1332	1.5588	5.0000e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		498.3603	498.3603	0.0128		498.6809
Total	**0.3141**	**3.3398**	**2.6959**	**0.0185**	**0.8984**	**9.8300e-003**	**0.9082**	**0.2418**	**9.2500e-003**	**0.2510**		**1,963.9745**	**1,963.9745**	**0.1112**		**1,966.7551**

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					1.1745	0.0000	1.1745	0.6455	0.0000	0.6455			0.0000			0.0000
Off-Road	0.8332	7.8126	9.7422	0.0169		0.3689	0.3689		0.3394	0.3394	0.0000	1,639.8940	1,639.8940	0.5304		1,653.1534
Total	**0.8332**	**7.8126**	**9.7422**	**0.0169**	**1.1745**	**0.3689**	**1.5434**	**0.6455**	**0.3394**	**0.9849**	**0.0000**	**1,639.8940**	**1,639.8940**	**0.5304**		**1,653.1534**

3.3 Excavation/Grading - 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	0.0854	2.6487	0.9481	0.0116	0.2883	4.9000e-003	0.2932	0.0788	4.6900e-003	0.0835		1,260.2211	1,260.2211	0.0867		1,262.3879
Vendor	0.0178	0.5579	0.1889	1.9200e-003	0.0512	6.8000e-004	0.0519	0.0148	6.5000e-004	0.0154		205.3931	205.3931	0.0117		205.6863
Worker	0.2110	0.1332	1.5588	5.0000e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		498.3603	498.3603	0.0128		498.6809
Total	**0.3141**	**3.3398**	**2.6959**	**0.0185**	**0.8984**	**9.8300e-003**	**0.9082**	**0.2418**	**9.2500e-003**	**0.2510**		**1,963.9745**	**1,963.9745**	**0.1112**		**1,966.7551**

3.4 Shoring/Pile Driving - 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					6.0236	0.0000	6.0236	3.3105	0.0000	3.3105			0.0000			0.0000
Off-Road	1.4561	14.4232	12.6662	0.0294		0.6396	0.6396		0.5885	0.5885		2,844.6977	2,844.6977	0.9200		2,867.6985
Total	**1.4561**	**14.4232**	**12.6662**	**0.0294**	**6.0236**	**0.6396**	**6.6633**	**3.3105**	**0.5885**	**3.8989**		**2,844.6977**	**2,844.6977**	**0.9200**		**2,867.6985**

3.4 Shoring/Pile Driving - 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	0.0213	0.6622	0.2370	2.8900e-003	0.0964	1.2200e-003	0.0976	0.0257	1.1700e-003	0.0268		315.0553	315.0553	0.0217		315.5970
Vendor	0.0178	0.5579	0.1889	1.9200e-003	0.0512	6.8000e-004	0.0519	0.0148	6.5000e-004	0.0154		205.3931	205.3931	0.0117		205.6863
Worker	0.2110	0.1332	1.5588	5.0000e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		498.3603	498.3603	0.0128		498.6809
Total	**0.2501**	**1.3533**	**1.9848**	**9.8100e-003**	**0.7065**	**6.1500e-003**	**0.7127**	**0.1886**	**5.7300e-003**	**0.1944**		**1,018.8086**	**1,018.8086**	**0.0462**		**1,019.9641**

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					2.3492	0.0000	2.3492	1.2911	0.0000	1.2911			0.0000			0.0000
Off-Road	1.4561	14.4232	12.6662	0.0294		0.6396	0.6396		0.5885	0.5885	0.0000	2,844.6977	2,844.6977	0.9200		2,867.6985
Total	**1.4561**	**14.4232**	**12.6662**	**0.0294**	**2.3492**	**0.6396**	**2.9889**	**1.2911**	**0.5885**	**1.8795**	**0.0000**	**2,844.6977**	**2,844.6977**	**0.9200**		**2,867.6985**

3.4 Shoring/Pile Driving - 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	0.0213	0.6622	0.2370	2.8900e-003	0.0964	1.2200e-003	0.0976	0.0257	1.1700e-003	0.0268		315.0553	315.0553	0.0217		315.5970
Vendor	0.0178	0.5579	0.1889	1.9200e-003	0.0512	6.8000e-004	0.0519	0.0148	6.5000e-004	0.0154		205.3931	205.3931	0.0117		205.6863
Worker	0.2110	0.1332	1.5588	5.0000e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		498.3603	498.3603	0.0128		498.6809
Total	**0.2501**	**1.3533**	**1.9848**	**9.8100e-003**	**0.7065**	**6.1500e-003**	**0.7127**	**0.1886**	**5.7300e-003**	**0.1944**		**1,018.8086**	**1,018.8086**	**0.0462**		**1,019.9641**

3.4 Shoring/Pile Driving - 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					6.0236	0.0000	6.0236	3.3105	0.0000	3.3105			0.0000			0.0000
Off-Road	1.4331	13.8581	12.6804	0.0294		0.6112	0.6112		0.5623	0.5623		2,846.5720	2,846.5720	0.9206		2,869.5879
Total	**1.4331**	**13.8581**	**12.6804**	**0.0294**	**6.0236**	**0.6112**	**6.6348**	**3.3105**	**0.5623**	**3.8727**		**2,846.5720**	**2,846.5720**	**0.9206**		**2,869.5879**

3.4 Shoring/Pile Driving - 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	0.0214	0.6577	0.2394	2.8800e-003	0.1757	1.2100e-003	0.1769	0.0451	1.1600e-003	0.0463		313.6597	313.6597	0.0217		314.2009
Vendor	0.0174	0.5559	0.1832	1.9100e-003	0.0512	6.7000e-004	0.0519	0.0148	6.4000e-004	0.0154		204.5965	204.5965	0.0116		204.8852
Worker	0.2002	0.1214	1.4512	4.8400e-003	0.5589	4.1900e-003	0.5631	0.1482	3.8600e-003	0.1521		482.9019	482.9019	0.0118		483.1957
Total	**0.2389**	**1.3350**	**1.8738**	**9.6300e-003**	**0.7858**	**6.0700e-003**	**0.7919**	**0.2081**	**5.6600e-003**	**0.2138**		**1,001.1581**	**1,001.1581**	**0.0450**		**1,002.2818**

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					2.3492	0.0000	2.3492	1.2911	0.0000	1.2911			0.0000			0.0000
Off-Road	1.4331	13.8581	12.6804	0.0294		0.6112	0.6112		0.5623	0.5623	0.0000	2,846.5720	2,846.5720	0.9206		2,869.5879
Total	**1.4331**	**13.8581**	**12.6804**	**0.0294**	**2.3492**	**0.6112**	**2.9604**	**1.2911**	**0.5623**	**1.8534**	**0.0000**	**2,846.5720**	**2,846.5720**	**0.9206**		**2,869.5879**

3.4 Shoring/Pile Driving - 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	0.0214	0.6577	0.2394	2.8800e-003	0.1757	1.2100e-003	0.1769	0.0451	1.1600e-003	0.0463		313.6597	313.6597	0.0217		314.2009
Vendor	0.0174	0.5559	0.1832	1.9100e-003	0.0512	6.7000e-004	0.0519	0.0148	6.4000e-004	0.0154		204.5965	204.5965	0.0116		204.8852
Worker	0.2002	0.1214	1.4512	4.8400e-003	0.5589	4.1900e-003	0.5631	0.1482	3.8600e-003	0.1521		482.9019	482.9019	0.0118		483.1957
Total	**0.2389**	**1.3350**	**1.8738**	**9.6300e-003**	**0.7858**	**6.0700e-003**	**0.7919**	**0.2081**	**5.6600e-003**	**0.2138**		**1,001.1581**	**1,001.1581**	**0.0450**		**1,002.2818**

3.5 Pump Station Building Construction - 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	0.8376	8.1671	7.9535	0.0154		0.3691	0.3691		0.3395	0.3395		1,494.9263	1,494.9263	0.4835		1,507.0135
Total	**0.8376**	**8.1671**	**7.9535**	**0.0154**		**0.3691**	**0.3691**		**0.3395**	**0.3395**		**1,494.9263**	**1,494.9263**	**0.4835**		**1,507.0135**

3.5 Pump Station Building Construction - 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
Vendor	0.0174	0.5559	0.1832	1.9100e-003	0.0512	6.7000e-004	0.0519	0.0148	6.4000e-004	0.0154		204.5965	204.5965	0.0116		204.8852
Worker	0.2002	0.1214	1.4512	4.8400e-003	0.5589	4.1900e-003	0.5631	0.1482	3.8600e-003	0.1521		482.9019	482.9019	0.0118		483.1957
Total	**0.2176**	**0.6774**	**1.6344**	**6.7500e-003**	**0.6101**	**4.8600e-003**	**0.6150**	**0.1630**	**4.5000e-003**	**0.1675**		**687.4984**	**687.4984**	**0.0233**		**688.0809**

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	0.8376	8.1671	7.9535	0.0154		0.3691	0.3691		0.3395	0.3395	0.0000	1,494.9263	1,494.9263	0.4835		1,507.0135
Total	**0.8376**	**8.1671**	**7.9535**	**0.0154**		**0.3691**	**0.3691**		**0.3395**	**0.3395**	**0.0000**	**1,494.9263**	**1,494.9263**	**0.4835**		**1,507.0135**

3.5 Pump Station Building Construction - 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
Vendor	0.0174	0.5559	0.1832	1.9100e-003	0.0512	6.7000e-004	0.0519	0.0148	6.4000e-004	0.0154		204.5965	204.5965	0.0116		204.8852
Worker	0.2002	0.1214	1.4512	4.8400e-003	0.5589	4.1900e-003	0.5631	0.1482	3.8600e-003	0.1521		482.9019	482.9019	0.0118		483.1957
Total	**0.2176**	**0.6774**	**1.6344**	**6.7500e-003**	**0.6101**	**4.8600e-003**	**0.6150**	**0.1630**	**4.5000e-003**	**0.1675**		**687.4984**	**687.4984**	**0.0233**		**688.0809**

3.6 Site Finalization - 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	0.5042	4.8265	7.7388	0.0117		0.2345	0.2345		0.2157	0.2157		1,134.8230	1,134.8230	0.3670		1,143.9986
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5042**	**4.8265**	**7.7388**	**0.0117**		**0.2345**	**0.2345**		**0.2157**	**0.2157**		**1,134.8230**	**1,134.8230**	**0.3670**		**1,143.9986**

3.6 Site Finalization - 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
Vendor	0.0174	0.5559	0.1832	1.9100e-003	0.0512	6.7000e-004	0.0519	0.0148	6.4000e-004	0.0154		204.5965	204.5965	0.0116		204.8852
Worker	0.2002	0.1214	1.4512	4.8400e-003	0.5589	4.1900e-003	0.5631	0.1482	3.8600e-003	0.1521		482.9019	482.9019	0.0118		483.1957
Total	**0.2176**	**0.6774**	**1.6344**	**6.7500e-003**	**0.6101**	**4.8600e-003**	**0.6150**	**0.1630**	**4.5000e-003**	**0.1675**		**687.4984**	**687.4984**	**0.0233**		**688.0809**

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	0.5042	4.8265	7.7388	0.0117		0.2345	0.2345		0.2157	0.2157	0.0000	1,134.8230	1,134.8230	0.3670		1,143.9986
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5042**	**4.8265**	**7.7388**	**0.0117**		**0.2345**	**0.2345**		**0.2157**	**0.2157**	**0.0000**	**1,134.8230**	**1,134.8230**	**0.3670**		**1,143.9986**

3.6 Site Finalization - 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
Vendor	0.0174	0.5559	0.1832	1.9100e-003	0.0512	6.7000e-004	0.0519	0.0148	6.4000e-004	0.0154		204.5965	204.5965	0.0116		204.8852
Worker	0.2002	0.1214	1.4512	4.8400e-003	0.5589	4.1900e-003	0.5631	0.1482	3.8600e-003	0.1521		482.9019	482.9019	0.0118		483.1957
Total	**0.2176**	**0.6774**	**1.6344**	**6.7500e-003**	**0.6101**	**4.8600e-003**	**0.6150**	**0.1630**	**4.5000e-003**	**0.1675**		**687.4984**	**687.4984**	**0.0233**		**688.0809**

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
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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Non-Asphalt Surfaces	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
General Light Industry	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Non-Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

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	4.3000e-004	3.8900e-003	3.2700e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.6672	4.6672	9.0000e-005	9.0000e-005	4.6949
NaturalGas Unmitigated	4.3000e-004	3.8900e-003	3.2700e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.6672	4.6672	9.0000e-005	9.0000e-005	4.6949

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					
General Light Industry	39.6712	4.3000e-004	3.8900e-003	3.2700e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.6672	4.6672	9.0000e-005	9.0000e-005	4.6949
Other Non-Asphalt Surfaces	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		**4.3000e-004**	**3.8900e-003**	**3.2700e-003**	**2.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**4.6672**	**4.6672**	**9.0000e-005**	**9.0000e-005**	**4.6949**

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					
General Light Industry	0.0396712	4.3000e-004	3.8900e-003	3.2700e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		4.6672	4.6672	9.0000e-005	9.0000e-005	4.6949
Other Non-Asphalt Surfaces	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		**4.3000e-004**	**3.8900e-003**	**3.2700e-003**	**2.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**4.6672**	**4.6672**	**9.0000e-005**	**9.0000e-005**	**4.6949**

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	0.0205	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.1000e-004	2.1000e-004	0.0000		2.2000e-004
Unmitigated	0.0205	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.1000e-004	2.1000e-004	0.0000		2.2000e-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	lb/day										lb/day					
Architectural Coating	2.5000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0180					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.1000e-004	2.1000e-004	0.0000		2.2000e-004
Total	**0.0205**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.1000e-004**	**2.1000e-004**	**0.0000**		**2.2000e-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	lb/day										lb/day					
Architectural Coating	2.5000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0180					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.1000e-004	2.1000e-004	0.0000		2.2000e-004
Total	**0.0205**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.1000e-004**	**2.1000e-004**	**0.0000**		**2.2000e-004**

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
Fire Pump	1	6	6	500	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Fire Pump - Diesel (300 - 600 HP)	4.9226	13.7602	12.5531	0.0237		0.7242	0.7242		0.7242	0.7242		2,518.5424	2,518.5424	0.3531		2,527.3699
Total	**4.9226**	**13.7602**	**12.5531**	**0.0237**		**0.7242**	**0.7242**		**0.7242**	**0.7242**		**2,518.5424**	**2,518.5424**	**0.3531**		**2,527.3699**

11.0 Vegetation

PROJECT TITLE:

Victory Pump Station - Pipeline Construction HRA
Annual Average Diesel PM Concentrations - St. Bernardine

PLOT FILE OF PERIOD VALUES AVERAGED ACROSS 0 YEARS FOR SOURCE GROUP: ALL ug/m^3

Max: 6.6E-02 [ug/m^3] at (347336.63, 3783687.29)

2.8E-03 4.0E-03 5.0E-03 7.0E-03 9.0E-03 1.0E-02 3.0E-02 5.0E-02 6.0E-02 6.6E-02

COMMENTS:	SOURCES: 1	COMPANY NAME: TAHA	
	RECEPTORS: 145	MODELER: Anders Sutherland	taha environmental planners
	OUTPUT TYPE: Concentration	SCALE: 1:5,000 — 0 — 0.1 km	
	MAX: 6.6E-02 ug/m^3	DATE: 10/30/2019	PROJECT NO.:

Results Summary

C:\~Local TAHA Files\2019-019_VPS\VPS_Pipeline\VPS_Pipeline.isc

PM10 - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	2.92022	ug/m^3	347354.40	3783686.90	283.87	1.00	395.37	12/12/2013, 8
PERIOD		0.06619	ug/m^3	347336.63	3783687.29	283.64	1.00	395.37	

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME

Source: PIPE

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
4.00	0.00408		347777.58	3783618.45	269.46	5.00
			347750.18	3783621.86	269.34	5.00
			347721.04	3783625.36	269.36	5.00
			347658.48	3783633.49	269.50	5.00
			347612.19	3783640.17	270.41	5.00
			347573.58	3783644.59	271.35	5.00
			347533.77	3783649.16	273.30	5.00
			347462.53	3783658.07	276.70	5.00
			347400.65	3783665.75	279.09	5.00
			347368.24	3783670.43	279.78	5.00
			347328.50	3783674.33	281.73	5.00
			347292.56	3783680.39	284.28	5.00
			347278.96	3783680.18	286.24	5.00
			347266.29	3783677.92	286.10	5.00
			347257.43	3783675.14	286.83	5.00
			347237.46	3783668.63	288.24	5.00
			347219.88	3783661.00	289.25	5.00
			347204.49	3783654.09	290.22	5.00
			347189.58	3783648.37	291.76	5.00
			347178.57	3783646.21	292.76	5.00
			347167.77	3783644.87	293.63	5.00
			347146.44	3783646.77	296.43	5.00

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
PIPE	L0000001	347775.60	3783618.69	269.44	5.00	0.00003	4.00		1.86	0.65
	L0000002	347771.63	3783619.19	269.42	5.00	0.00003	4.00		1.86	0.65
	L0000003	347767.66	3783619.68	269.40	5.00	0.00003	4.00		1.86	0.65
	L0000004	347763.69	3783620.18	269.40	5.00	0.00003	4.00		1.86	0.65
	L0000005	347759.72	3783620.67	269.41	5.00	0.00003	4.00		1.86	0.65
	L0000006	347755.75	3783621.17	269.40	5.00	0.00003	4.00		1.86	0.65
	L0000007	347751.78	3783621.66	269.39	5.00	0.00003	4.00		1.86	0.65
	L0000008	347747.81	3783622.15	269.40	5.00	0.00003	4.00		1.86	0.65
	L0000009	347743.84	3783622.62	269.38	5.00	0.00003	4.00		1.86	0.65
	L0000010	347739.87	3783623.10	269.26	5.00	0.00003	4.00		1.86	0.65
	L0000011	347735.90	3783623.58	269.10	5.00	0.00003	4.00		1.86	0.65
	L0000012	347731.92	3783624.05	269.17	5.00	0.00003	4.00		1.86	0.65
	L0000013	347727.95	3783624.53	269.26	5.00	0.00003	4.00		1.86	0.65
	L0000014	347723.98	3783625.01	269.51	5.00	0.00003	4.00		1.86	0.65
	L0000015	347720.01	3783625.49	269.84	5.00	0.00003	4.00		1.86	0.65
	L0000016	347716.04	3783626.01	269.88	5.00	0.00003	4.00		1.86	0.65
	L0000017	347712.08	3783626.53	269.75	5.00	0.00003	4.00		1.86	0.65
	L0000018	347708.11	3783627.04	269.67	5.00	0.00003	4.00		1.86	0.65
	L0000019	347704.14	3783627.56	269.65	5.00	0.00003	4.00		1.86	0.65
	L0000020	347700.18	3783628.07	269.60	5.00	0.00003	4.00		1.86	0.65
	L0000021	347696.21	3783628.59	269.53	5.00	0.00003	4.00		1.86	0.65
	L0000022	347692.24	3783629.10	269.44	5.00	0.00003	4.00		1.86	0.65
	L0000023	347688.28	3783629.62	269.37	5.00	0.00003	4.00		1.86	0.65
	L0000024	347684.31	3783630.14	269.29	5.00	0.00003	4.00		1.86	0.65

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
PIPE	L0000025	347680.34	3783630.65	269.29	5.00	0.00003	4.00		1.86	0.65
	L0000026	347676.38	3783631.17	269.28	5.00	0.00003	4.00		1.86	0.65
	L0000027	347672.41	3783631.68	269.35	5.00	0.00003	4.00		1.86	0.65
	L0000028	347668.44	3783632.20	269.46	5.00	0.00003	4.00		1.86	0.65
	L0000029	347664.48	3783632.71	269.57	5.00	0.00003	4.00		1.86	0.65
	L0000030	347660.51	3783633.23	269.67	5.00	0.00003	4.00		1.86	0.65
	L0000031	347656.55	3783633.77	269.79	5.00	0.00003	4.00		1.86	0.65
	L0000032	347652.59	3783634.34	269.91	5.00	0.00003	4.00		1.86	0.65
	L0000033	347648.63	3783634.91	270.02	5.00	0.00003	4.00		1.86	0.65
	L0000034	347644.67	3783635.48	270.12	5.00	0.00003	4.00		1.86	0.65
	L0000035	347640.71	3783636.06	270.21	5.00	0.00003	4.00		1.86	0.65
	L0000036	347636.75	3783636.63	270.26	5.00	0.00003	4.00		1.86	0.65
	L0000037	347632.79	3783637.20	270.28	5.00	0.00003	4.00		1.86	0.65
	L0000038	347628.83	3783637.77	270.24	5.00	0.00003	4.00		1.86	0.65
	L0000039	347624.88	3783638.34	270.18	5.00	0.00003	4.00		1.86	0.65
	L0000040	347620.92	3783638.91	270.29	5.00	0.00003	4.00		1.86	0.65
	L0000041	347616.96	3783639.48	270.39	5.00	0.00003	4.00		1.86	0.65
	L0000042	347613.00	3783640.05	270.40	5.00	0.00003	4.00		1.86	0.65
	L0000043	347609.03	3783640.53	270.39	5.00	0.00003	4.00		1.86	0.65
	L0000044	347605.05	3783640.98	270.45	5.00	0.00003	4.00		1.86	0.65
	L0000045	347601.08	3783641.44	270.54	5.00	0.00003	4.00		1.86	0.65
	L0000046	347597.11	3783641.90	270.63	5.00	0.00003	4.00		1.86	0.65
	L0000047	347593.13	3783642.35	270.73	5.00	0.00003	4.00		1.86	0.65
	L0000048	347589.16	3783642.81	270.81	5.00	0.00003	4.00		1.86	0.65
	L0000049	347585.18	3783643.26	270.92	5.00	0.00003	4.00		1.86	0.65

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
PIPE	L0000050	347581.21	3783643.72	271.09	5.00	0.00003	4.00		1.86	0.65
	L0000051	347577.24	3783644.17	271.33	5.00	0.00003	4.00		1.86	0.65
	L0000052	347573.26	3783644.63	271.56	5.00	0.00003	4.00		1.86	0.65
	L0000053	347569.29	3783645.08	271.74	5.00	0.00003	4.00		1.86	0.65
	L0000054	347565.31	3783645.54	271.91	5.00	0.00003	4.00		1.86	0.65
	L0000055	347561.34	3783646.00	272.20	5.00	0.00003	4.00		1.86	0.65
	L0000056	347557.37	3783646.45	272.51	5.00	0.00003	4.00		1.86	0.65
	L0000057	347553.39	3783646.91	272.67	5.00	0.00003	4.00		1.86	0.65
	L0000058	347549.42	3783647.36	272.79	5.00	0.00003	4.00		1.86	0.65
	L0000059	347545.44	3783647.82	273.03	5.00	0.00003	4.00		1.86	0.65
	L0000060	347541.47	3783648.28	273.32	5.00	0.00003	4.00		1.86	0.65
	L0000061	347537.50	3783648.73	273.51	5.00	0.00003	4.00		1.86	0.65
	L0000062	347533.52	3783649.19	273.62	5.00	0.00003	4.00		1.86	0.65
	L0000063	347529.55	3783649.69	273.77	5.00	0.00003	4.00		1.86	0.65
	L0000064	347525.58	3783650.18	273.97	5.00	0.00003	4.00		1.86	0.65
	L0000065	347521.62	3783650.68	274.15	5.00	0.00003	4.00		1.86	0.65
	L0000066	347517.65	3783651.18	274.26	5.00	0.00003	4.00		1.86	0.65
	L0000067	347513.68	3783651.67	274.38	5.00	0.00003	4.00		1.86	0.65
	L0000068	347509.71	3783652.17	274.57	5.00	0.00003	4.00		1.86	0.65
	L0000069	347505.74	3783652.67	274.76	5.00	0.00003	4.00		1.86	0.65
	L0000070	347501.77	3783653.16	274.94	5.00	0.00003	4.00		1.86	0.65
	L0000071	347497.80	3783653.66	275.11	5.00	0.00003	4.00		1.86	0.65
	L0000072	347493.83	3783654.16	275.22	5.00	0.00003	4.00		1.86	0.65
	L0000073	347489.86	3783654.65	275.32	5.00	0.00003	4.00		1.86	0.65
	L0000074	347485.89	3783655.15	275.51	5.00	0.00003	4.00		1.86	0.65

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
PIPE	L0000075	347481.92	3783655.65	275.75	5.00	0.00003	4.00		1.86	0.65
	L0000076	347477.96	3783656.14	276.01	5.00	0.00003	4.00		1.86	0.65
	L0000077	347473.99	3783656.64	276.26	5.00	0.00003	4.00		1.86	0.65
	L0000078	347470.02	3783657.14	276.53	5.00	0.00003	4.00		1.86	0.65
	L0000079	347466.05	3783657.63	276.82	5.00	0.00003	4.00		1.86	0.65
	L0000080	347462.08	3783658.13	277.09	5.00	0.00003	4.00		1.86	0.65
	L0000081	347458.11	3783658.62	277.30	5.00	0.00003	4.00		1.86	0.65
	L0000082	347454.14	3783659.11	277.50	5.00	0.00003	4.00		1.86	0.65
	L0000083	347450.17	3783659.61	277.72	5.00	0.00003	4.00		1.86	0.65
	L0000084	347446.20	3783660.10	277.93	5.00	0.00003	4.00		1.86	0.65
	L0000085	347442.23	3783660.59	278.15	5.00	0.00003	4.00		1.86	0.65
	L0000086	347438.26	3783661.08	278.37	5.00	0.00003	4.00		1.86	0.65
	L0000087	347434.29	3783661.57	278.48	5.00	0.00003	4.00		1.86	0.65
	L0000088	347430.32	3783662.07	278.54	5.00	0.00003	4.00		1.86	0.65
	L0000089	347426.35	3783662.56	278.65	5.00	0.00003	4.00		1.86	0.65
	L0000090	347422.38	3783663.05	278.78	5.00	0.00003	4.00		1.86	0.65
	L0000091	347418.41	3783663.54	278.90	5.00	0.00003	4.00		1.86	0.65
	L0000092	347414.44	3783664.04	279.02	5.00	0.00003	4.00		1.86	0.65
	L0000093	347410.48	3783664.53	279.09	5.00	0.00003	4.00		1.86	0.65
	L0000094	347406.51	3783665.02	279.07	5.00	0.00003	4.00		1.86	0.65
	L0000095	347402.54	3783665.51	279.08	5.00	0.00003	4.00		1.86	0.65
	L0000096	347398.57	3783666.05	279.18	5.00	0.00003	4.00		1.86	0.65
	L0000097	347394.61	3783666.62	279.28	5.00	0.00003	4.00		1.86	0.65
	L0000098	347390.65	3783667.19	279.37	5.00	0.00003	4.00		1.86	0.65
	L0000099	347386.70	3783667.77	279.45	5.00	0.00003	4.00		1.86	0.65

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
PIPE	L0000100	347382.74	3783668.34	279.39	5.00	0.00003	4.00		1.86	0.65
	L0000101	347378.78	3783668.91	279.31	5.00	0.00003	4.00		1.86	0.65
	L0000102	347374.82	3783669.48	279.39	5.00	0.00003	4.00		1.86	0.65
	L0000103	347370.86	3783670.06	279.54	5.00	0.00003	4.00		1.86	0.65
	L0000104	347366.89	3783670.57	279.76	5.00	0.00003	4.00		1.86	0.65
	L0000105	347362.91	3783670.96	280.00	5.00	0.00003	4.00		1.86	0.65
	L0000106	347358.93	3783671.35	280.21	5.00	0.00003	4.00		1.86	0.65
	L0000107	347354.95	3783671.74	280.39	5.00	0.00003	4.00		1.86	0.65
	L0000108	347350.97	3783672.13	280.57	5.00	0.00003	4.00		1.86	0.65
	L0000109	347346.99	3783672.52	280.73	5.00	0.00003	4.00		1.86	0.65
	L0000110	347343.01	3783672.91	280.89	5.00	0.00003	4.00		1.86	0.65
	L0000111	347339.03	3783673.30	281.08	5.00	0.00003	4.00		1.86	0.65
	L0000112	347335.05	3783673.68	281.26	5.00	0.00003	4.00		1.86	0.65
	L0000113	347331.07	3783674.07	281.48	5.00	0.00003	4.00		1.86	0.65
	L0000114	347327.10	3783674.56	281.69	5.00	0.00003	4.00		1.86	0.65
	L0000115	347323.15	3783675.23	281.98	5.00	0.00003	4.00		1.86	0.65
	L0000116	347319.21	3783675.89	282.29	5.00	0.00003	4.00		1.86	0.65
	L0000117	347315.26	3783676.56	282.56	5.00	0.00003	4.00		1.86	0.65
	L0000118	347311.32	3783677.22	282.82	5.00	0.00003	4.00		1.86	0.65
	L0000119	347307.38	3783677.89	283.11	5.00	0.00003	4.00		1.86	0.65
	L0000120	347303.43	3783678.55	283.43	5.00	0.00003	4.00		1.86	0.65
	L0000121	347299.49	3783679.22	283.74	5.00	0.00003	4.00		1.86	0.65
	L0000122	347295.54	3783679.88	284.02	5.00	0.00003	4.00		1.86	0.65
	L0000123	347291.59	3783680.37	284.36	5.00	0.00003	4.00		1.86	0.65
	L0000124	347287.59	3783680.31	284.85	5.00	0.00003	4.00		1.86	0.65

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
PIPE	L0000125	347283.59	3783680.25	285.29	5.00	0.00003	4.00		1.86	0.65
	L0000126	347279.59	3783680.19	285.61	5.00	0.00003	4.00		1.86	0.65
	L0000127	347275.64	3783679.59	285.71	5.00	0.00003	4.00		1.86	0.65
	L0000128	347271.70	3783678.88	285.74	5.00	0.00003	4.00		1.86	0.65
	L0000129	347267.76	3783678.18	286.03	5.00	0.00003	4.00		1.86	0.65
	L0000130	347263.90	3783677.17	286.33	5.00	0.00003	4.00		1.86	0.65
	L0000131	347260.09	3783675.97	286.61	5.00	0.00003	4.00		1.86	0.65
	L0000132	347256.27	3783674.76	286.84	5.00	0.00003	4.00		1.86	0.65
	L0000133	347252.47	3783673.52	287.06	5.00	0.00003	4.00		1.86	0.65
	L0000134	347248.67	3783672.28	287.26	5.00	0.00003	4.00		1.86	0.65
	L0000135	347244.86	3783671.04	287.44	5.00	0.00003	4.00		1.86	0.65
	L0000136	347241.06	3783669.80	287.67	5.00	0.00003	4.00		1.86	0.65
	L0000137	347237.26	3783668.55	288.01	5.00	0.00003	4.00		1.86	0.65
	L0000138	347233.60	3783666.95	288.34	5.00	0.00003	4.00		1.86	0.65
	L0000139	347229.93	3783665.36	288.55	5.00	0.00003	4.00		1.86	0.65
	L0000140	347226.26	3783663.76	288.74	5.00	0.00003	4.00		1.86	0.65
	L0000141	347222.59	3783662.17	288.94	5.00	0.00003	4.00		1.86	0.65
	L0000142	347218.93	3783660.57	289.16	5.00	0.00003	4.00		1.86	0.65
	L0000143	347215.28	3783658.93	289.41	5.00	0.00003	4.00		1.86	0.65
	L0000144	347211.63	3783657.29	289.59	5.00	0.00003	4.00		1.86	0.65
	L0000145	347207.98	3783655.65	289.80	5.00	0.00003	4.00		1.86	0.65
	L0000146	347204.32	3783654.02	290.36	5.00	0.00003	4.00		1.86	0.65
	L0000147	347200.59	3783652.59	290.79	5.00	0.00003	4.00		1.86	0.65
	L0000148	347196.86	3783651.16	291.00	5.00	0.00003	4.00		1.86	0.65
	L0000149	347193.12	3783649.73	291.07	5.00	0.00003	4.00		1.86	0.65

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
PIPE	L0000150	347189.38	3783648.33	291.39	5.00	0.00003	4.00		1.86	0.65
	L0000151	347185.45	3783647.56	291.91	5.00	0.00003	4.00		1.86	0.65
	L0000152	347181.53	3783646.79	292.38	5.00	0.00003	4.00		1.86	0.65
	L0000153	347177.59	3783646.09	292.81	5.00	0.00003	4.00		1.86	0.65
	L0000154	347173.62	3783645.60	293.21	5.00	0.00003	4.00		1.86	0.65
	L0000155	347169.65	3783645.10	293.42	5.00	0.00003	4.00		1.86	0.65
	L0000156	347165.67	3783645.06	293.64	5.00	0.00003	4.00		1.86	0.65
	L0000157	347161.69	3783645.41	294.20	5.00	0.00003	4.00		1.86	0.65
	L0000158	347157.70	3783645.77	294.96	5.00	0.00003	4.00		1.86	0.65
	L0000159	347153.72	3783646.12	295.57	5.00	0.00003	4.00		1.86	0.65
	L0000160	347149.74	3783646.47	295.99	5.00	0.00003	4.00		1.86	0.65

Source Pathway

Building Downwash Information

Option not in use

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Variable Emissions

Hour / Day-of-Week Emission Rate Variation

Scenario: CON

Source ID: **PIPE**

Hour	Mon	Tues	Wed	Thr	Fri	Sat	Sun
1:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8:00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
9:00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
10:00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
11:00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
12:00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
13:00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
14:00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
15:00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
16:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Discrete Receptors

Plant Boundary Receptors

Receptor Pathway

Cartesian Plant Boundary

Primary

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	347336.63	3783687.29	FENCEPRI	283.64	
2	347363.29	3783686.70	FENCEPRI	283.36	
3	347364.98	3783732.08	FENCEPRI	282.89	
4	347332.91	3783732.08	FENCEPRI	284.73	
5	347333.14	3783757.64	FENCEPRI	283.89	
6	347289.00	3783757.64	FENCEPRI	285.03	
7	347289.70	3783745.10	FENCEPRI	285.18	
8	347314.79	3783744.40	FENCEPRI	284.92	
9	347314.56	3783737.89	FENCEPRI	284.89	
10	347291.55	3783735.80	FENCEPRI	285.17	
11	347292.72	3783720.00	FENCEPRI	284.91	
12	347310.14	3783722.79	FENCEPRI	284.56	
13	347311.77	3783716.75	FENCEPRI	284.38	
14	347333.84	3783720.00	FENCEPRI	284.48	
15	347335.70	3783688.87	FENCEPRI	283.84	
16	347272.00	3783655.44	FENCEPRI	285.53	
17	347286.22	3783652.88	FENCEPRI	285.16	
18	347282.67	3783626.21	FENCEPRI	286.29	
19	347272.59	3783627.79	FENCEPRI	288.50	
20	347263.11	3783622.26	FENCEPRI	288.50	
21	347263.90	3783619.30	FENCEPRI	288.49	
22	347243.17	3783611.80	FENCEPRI	287.69	
23	347231.71	3783640.04	FENCEPRI	288.74	
24	347299.44	3783656.83	FENCEPRI	284.25	
25	347325.70	3783653.11	FENCEPRI	282.66	
26	347327.79	3783655.20	FENCEPRI	282.30	
27	347356.60	3783651.49	FENCEPRI	281.44	
28	347354.28	3783611.29	FENCEPRI	282.80	
29	347349.63	3783584.33	FENCEPRI	283.62	
30	347352.65	3783582.01	FENCEPRI	282.94	
31	347351.02	3783569.00	FENCEPRI	283.21	
32	347348.07	3783562.26	FENCEPRI	283.42	
33	347295.14	3783573.32	FENCEPRI	284.51	
34	347298.49	3783598.40	FENCEPRI	284.45	
35	347308.17	3783598.01	FENCEPRI	284.46	
36	347311.92	3783631.39	FENCEPRI	284.11	
37	347296.52	3783633.95	FENCEPRI	284.64	
38	347299.74	3783566.90	FENCEPRI	284.33	
39	347348.95	3783558.15	FENCEPRI	283.38	

40	347341.84	3783496.92	FENCEPRI	282.96	
41	347339.65	3783473.13	FENCEPRI	283.03	
42	347343.48	3783454.54	FENCEPRI	283.23	
43	347336.10	3783452.90	FENCEPRI	283.47	
44	347335.83	3783442.24	FENCEPRI	283.73	
45	347310.95	3783446.34	FENCEPRI	284.40	
46	347312.86	3783458.92	FENCEPRI	283.84	
47	347306.30	3783462.74	FENCEPRI	283.94	
48	347304.39	3783461.38	FENCEPRI	284.03	
49	347295.91	3783461.38	FENCEPRI	284.34	
50	347293.73	3783476.96	FENCEPRI	284.42	
51	347281.15	3783477.51	FENCEPRI	285.01	
52	347293.45	3783569.64	FENCEPRI	284.49	

Intermediate

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	347345.52	3783687.09	FENCEINT	283.80	
2	347354.40	3783686.90	FENCEINT	283.87	
3	347363.63	3783695.78	FENCEINT	283.59	
4	347363.97	3783704.85	FENCEINT	283.60	
5	347364.30	3783713.93	FENCEINT	283.59	
6	347364.64	3783723.00	FENCEINT	283.68	
7	347356.96	3783732.08	FENCEINT	283.26	
8	347348.95	3783732.08	FENCEINT	283.56	
9	347340.93	3783732.08	FENCEINT	284.28	
10	347332.99	3783740.60	FENCEINT	284.67	
11	347333.06	3783749.12	FENCEINT	284.05	
12	347324.31	3783757.64	FENCEINT	284.78	
13	347315.48	3783757.64	FENCEINT	284.66	
14	347306.66	3783757.64	FENCEINT	284.71	
15	347297.83	3783757.64	FENCEINT	284.90	
16	347289.35	3783751.37	FENCEINT	285.23	
17	347298.06	3783744.87	FENCEINT	285.15	
18	347306.43	3783744.63	FENCEINT	285.03	
19	347306.89	3783737.19	FENCEINT	284.94	
20	347299.22	3783736.50	FENCEINT	285.02	
21	347292.14	3783727.90	FENCEINT	285.12	
22	347301.43	3783721.40	FENCEINT	284.61	
23	347319.13	3783717.83	FENCEINT	284.73	
24	347326.48	3783718.92	FENCEINT	284.68	
25	347334.31	3783712.22	FENCEINT	284.27	

26	347334.77	3783704.44	FENCEINT	284.10	
27	347335.24	3783696.65	FENCEINT	283.96	
28	347279.11	3783654.16	FENCEINT	285.33	
29	347285.04	3783643.99	FENCEINT	285.30	
30	347283.85	3783635.10	FENCEINT	285.73	
31	347277.63	3783627.00	FENCEINT	287.73	
32	347267.85	3783625.03	FENCEINT	288.52	
33	347256.99	3783616.80	FENCEINT	288.34	
34	347250.08	3783614.30	FENCEINT	287.92	
35	347240.31	3783618.86	FENCEINT	288.54	
36	347237.44	3783625.92	FENCEINT	288.36	
37	347234.58	3783632.98	FENCEINT	288.45	
38	347239.77	3783643.12	FENCEINT	288.48	
39	347247.83	3783646.20	FENCEINT	288.21	
40	347255.88	3783649.28	FENCEINT	287.58	
41	347263.94	3783652.36	FENCEINT	286.32	
42	347308.19	3783655.59	FENCEINT	283.65	
43	347316.95	3783654.35	FENCEINT	283.13	
44	347337.39	3783653.96	FENCEINT	281.91	
45	347347.00	3783652.73	FENCEINT	281.66	
46	347356.14	3783643.45	FENCEINT	282.86	
47	347355.67	3783635.41	FENCEINT	283.01	
48	347355.21	3783627.37	FENCEINT	282.91	
49	347354.74	3783619.33	FENCEINT	282.86	
50	347352.73	3783602.30	FENCEINT	283.05	
51	347351.18	3783593.32	FENCEINT	283.54	
52	347351.84	3783575.51	FENCEINT	282.99	
53	347339.25	3783564.10	FENCEINT	283.78	
54	347330.43	3783565.95	FENCEINT	283.91	
55	347321.61	3783567.79	FENCEINT	284.13	
56	347312.78	3783569.63	FENCEINT	284.32	
57	347303.96	3783571.48	FENCEINT	284.42	
58	347296.26	3783581.68	FENCEINT	284.56	
59	347297.37	3783590.04	FENCEINT	284.53	
60	347309.11	3783606.36	FENCEINT	284.38	
61	347310.05	3783614.70	FENCEINT	284.28	
62	347310.98	3783623.05	FENCEINT	284.21	
63	347304.22	3783632.67	FENCEINT	284.37	
64	347297.49	3783641.58	FENCEINT	284.64	
65	347298.47	3783649.20	FENCEINT	284.54	
66	347309.58	3783565.15	FENCEINT	284.24	

67	347319.42	3783563.40	FENCEINT	284.14	
68	347329.27	3783561.65	FENCEINT	283.95	
69	347339.11	3783559.90	FENCEINT	283.77	
70	347347.93	3783549.40	FENCEINT	283.29	
71	347346.92	3783540.66	FENCEINT	283.15	
72	347345.90	3783531.91	FENCEINT	283.07	
73	347344.89	3783523.16	FENCEINT	283.07	
74	347343.87	3783514.41	FENCEINT	283.21	
75	347342.86	3783505.67	FENCEINT	283.30	
76	347341.11	3783488.99	FENCEINT	282.75	
77	347340.38	3783481.06	FENCEINT	282.85	
78	347341.57	3783463.84	FENCEINT	283.13	
79	347335.97	3783447.57	FENCEINT	283.60	
80	347327.54	3783443.61	FENCEINT	283.86	
81	347319.24	3783444.97	FENCEINT	284.08	
82	347311.91	3783452.63	FENCEINT	284.01	
83	347294.82	3783469.17	FENCEINT	284.37	
84	347287.44	3783477.24	FENCEINT	284.68	
85	347282.38	3783486.72	FENCEINT	285.04	
86	347283.61	3783495.94	FENCEINT	285.05	
87	347284.84	3783505.15	FENCEINT	284.93	
88	347286.07	3783514.36	FENCEINT	284.80	
89	347287.30	3783523.58	FENCEINT	284.66	
90	347288.53	3783532.79	FENCEINT	284.52	
91	347289.76	3783542.00	FENCEINT	284.51	
92	347290.99	3783551.21	FENCEINT	284.55	
93	347292.22	3783560.43	FENCEINT	284.54	

Receptor Groups

Record Number	Group ID	Group Description
1	FENCEPRI	Cartesian plant boundary Primary Receptors
2	FENCEINT	Cartesian plant boundary Intermediate Receptors

APPENDIX B
Biological Resources Technical Memorandum

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October 19, 2022

Nadia Parker
Los Angeles Department of Water and Power
111 N. Hope Street
Los Angeles, CA 90012

Subject: Victory Pump Station Replacement Project, Biological Resources Memorandum

1. INTRODUCTION

The Los Angeles Department of Water and Power (LADWP) proposes to implement the Victory Pump Station Replacement Project (referred to herein as the proposed project or project), which involves the construction of a new pump station to replace the existing aged, temporary underground pumping facility (the existing facility) at 24661 Victory Boulevard in the West Hills community of the City of Los Angeles (City). To allow for optimum performance of the proposed new pump station, approximately 1,800 linear feet of pipeline would be installed along Calvert Street from Sylvan Street to Pat Avenue as part of the proposed project. The proposed project would allow the facility to meet current building, plumbing, mechanical, electrical, green and geological standards; reduce maintenance and safety concerns; increase fire flow requirements; and provide for current and projected system demands for water supply more efficiently and reliably.

AECOM was retained by LADWP to prepare a biological resource assessment of the pump station replacement in support of the California Environmental Quality Act (CEQA). In addition, LADWP is currently pursuing funding through the State Water Resources Control Board (SWRCB) Clean Water State Revolving Fund (SRF) for the project. Per requirements of the SRF Environmental Package application, a biological resources assessment prepared in support of the project is required. Therefore, this memorandum has been prepared in accordance with CEQA and the requirements of the SRF application.

This memo summarizes the results of a site survey conducted by AECOM to document existing biological conditions at the pump station site and along the pipeline alignment. This report includes the methods used to assess existing biological resources, results of vegetation, wildlife, and habitat evaluations, the list of potential special-status species evaluated, an identification of potential impacts to these resources, and mitigation measures identified to minimize and avoid potential impacts to biological resources.

2. PROJECT DESCRIPTION

2.1 Project Location and Setting

The proposed new pump station would be located on a 75-foot long by 50-foot wide easement granted to LADWP in 1966, which would encompass the proposed and existing pump stations. LADWP also proposes to acquire in fee or by easement an undeveloped portion of an adjacent property along Victory Boulevard to the east of the existing easement to provide room for vehicle access and space for vehicles to turn around within the site. The pump station property would be located on two residential parcels on the northern side of Victory Boulevard, approximately 550 feet west of Pat Avenue in the West Hills community

of the San Fernando Valley region of Los Angeles. The pump station replacement site is generally bounded by the rear yards of adjacent single-family residential properties to the west, north, and east, and by the Victory Boulevard right-of-way (ROW) to the south. The proposed project also involves the installation of approximately 1,800 linear feet of pipeline within Calvert Street between Pat Avenue and Sylvan Street. Local access is provided via Victory Boulevard, adjacent to the southern boundary of the pump station replacement site, and Valley Circle Boulevard, which intersects with the pipeline alignment at Calvert Street. Regional access is provided via U.S. Route 101 (US 101) approximately 2.2 miles south of the project site. Figure 1 shows the regional vicinity of the project site. Figure 2 shows the location of the proposed pump station replacement site and the proposed pipeline alignment. All figures are included in Attachment A.

The pump station replacement site is currently developed with an underground pumping facility containing two 500 gallon-per-minute (gpm) pumps buried in a 9-foot diameter steel can. A 300-gpm internal combustion fire pump is also located on the LADWP easement. The current pump station replacement site is bounded by a chain link fence with a large access gate. The existing pump station is enclosed within a wooden fenced area that screens it from public view. Sidewalks provide pedestrian access along both the north and south sides of Victory Boulevard. Figure 3 depicts the location of the pump station replacement site.

The proposed pipeline alignment would be located within the existing ROW along Calvert Street, beginning approximately 600 feet southeast of the pump station replacement site. The proposed pipeline alignment commences at the intersection of Calvert Street and Pat Avenue and travels approximately 1,800 linear feet east on Calvert Street, concluding at the intersection of Calvert Street and Sylvan Street, where the Granada Trunk Line is located. Access to the proposed pipeline alignment site would be provided via the existing local roadway network. Figure 4 depicts the location of the proposed pipeline alignment.

2.2 Project Objectives

The objectives of the proposed project are to:

- Remove the existing temporary and outdated underground pump facility from service;
- Construct a new pump station to increase the reliability and efficiency of domestic water and fire flow to the surrounding 1,383-foot elevation and 1,540-foot elevation service zones;
- Reduce maintenance and access concerns by repositioning the new pump station above ground.

2.3 Construction Scenario

A new pump station facility is required to replace the aged, temporary underground Victory Pump Station. To support the new pump station, approximately 1,800 feet of pipeline would also be installed. These two components (pump station replacement and pipeline installation) would allow the facility to meet current building, plumbing, mechanical, electrical, green and geological standards; reduce maintenance and safety concerns;

increase fire flow requirements; and provide for current and projected system demands for water supply more efficiently and reliably. The two proposed project components would be implemented as described below.

Pump Station Replacement

The pump station replacement would involve the construction of a new, permanent pump station building and the decommissioning of the existing, temporary underground pump facility. The proposed new pump station building would be approximately 27 feet tall by 27 feet wide and 38 feet long, consisting of concrete walls, windows, wood plank finishing, and metal roofing. The new pump station building would also include exterior security lighting. A 14-foot-wide access roller door would allow for the entry of maintenance vehicles, including trucks. A control room and a restroom would be included to provide office space and amenities for workers. Equipment would be installed within the control room to record flow and pressure via remote monitoring to a Supervisory Control and Data Acquisition system.

The new pump station building would house a total of three new pumps, two of which would be 1,100-gpm capacity electrical pumps to supply potable water to the service areas. While the existing pumps have a nameplate capacity of 500 gpm, they were installed in 1967 when the size of planned development in the surrounding service area was considerably smaller than existing areas of development currently served by the pump facility. Furthermore, as mentioned above, the existing pumps have been operating above their nameplate capacity (in the range of 850 to 1,000 gpm) due to higher suction grades from the adjacent 1305 service zone. Therefore, the replacement pumps would have a capacity that reflects the actual current demand for water in the service areas, increasing reliability and efficiency, and reducing wear on the new pumping facilities. As possible, depending on actual demand, these pumps may be cycled, idling one pump at a time, to further extend their lifetime.

The third pump at the Victory Pump Station would be a 4,000-gpm fire pump, which would replace the existing 300-gpm fire pump to provide the fire flow capacity required by the Los Angeles Fire Department, given the expanded area of development since it was first installed. The fire pump would be powered by an internal combustion engine to run independently of the electric power system, which may not be reliable during a fire event. Installing the new pumps within an enclosed structure would serve to reduce noise from operation of the pumps and associated equipment.

Construction of retaining walls surrounding the proposed new pump station building would be required to accommodate the difference between the existing ground elevation and the pump station building floor. Additionally, a new exterior concrete pad would be installed in the northwest corner of the pump station replacement site to accommodate a new electrical transformer.

The existing fence and gates at the site would be removed for the construction of the new pump station building. During construction, temporary fencing would be erected. Following the completion of the new pump station, new permanent steel security fencing would be erected. This would include the establishment of two new access gates and associated driveways. The new access gates would be sliding gates, 12-feet-wide (eastern driveway) and 16-feet-wide (western driveway), to allow for ease of truck and worker access. The establishment of the eastern driveway would require relocation of an existing street light, an electrical pull box, and a fire hydrant. Additionally, three mature trees located within the

existing easement would require removal to allow for construction of the new building.[1] The eastern portion of the property would be paved in order to provide adequate space for vehicle ingress and egress.

Various water line connections on-site and within Victory Boulevard would be required to support construction and operation of the new pump station. The existing, temporary pump station would remain in service for the duration of construction until the new pumps are operational. Upon operation of the new pump station, some existing pump appurtenances would be removed and the existing underground pump station would be sealed and buried in place. The existing above-ground equipment, including electrical cabinets, light pole, meter vault, diesel pump, electrical conduit, and fencing would be removed. The area containing the existing pump station and associated equipment would be filled and paved over to provide vehicular access at the new pump station building.

Pipeline Installation

To support the new pump station, approximately 1,800 linear feet of pipeline would be installed along Calvert Street between Pat Avenue and Sylvan Street. The westernmost approximately 500 linear feet of pipeline would be installed between Pat Avenue and Valley Circle Boulevard. This segment would consist of a new 12-inch diameter pipe, which would replace the existing 12-inch diameter pipeline at that location. The existing pipeline would be abandoned in place. The easternmost approximately 1,300 linear feet of pipeline would be a new, 8-inch diameter pipeline connected from the new 12-inch diameter pipeline at Valley Circle Boulevard to the existing Granada Trunk Line at Sylvan Street. The new, 8-inch diameter pipeline would be installed parallel to an existing 8-inch mainline in Calvert Street, which would remain functioning in place.

2.4 Construction Schedule and Procedures

Construction of the proposed pump station is anticipated to begin in January 2026 and take approximately 24 months to complete, concluding in January 2028. Construction of the new pump station would occur throughout the 24-month construction schedule. Installation of the proposed pipeline would begin in late 2027 and would be installed at a rate of approximately 30 linear feet per day, taking a total of approximately 60 working days to complete. In accordance with City Noise Ordinance, construction activities would occur Monday through Friday and workers would typically be onsite for eight hours per day from approximately 7:00 a.m. to 3:00 p.m. No work outside of these hours, or work on weekends or national holidays, is anticipated. Construction procedures for each of the project components are described below.

Pump Station Replacement

Construction activities for the pump station would occur within the boundaries of the LADWP easement and property, except the construction staging and laydown area, which would be established immediately adjacent to the construction site in Victory Boulevard. This would require the temporary occupation of the existing parking lane, the existing bike lane, and one existing vehicular travel lane, as well as the existing sidewalk along the north side of

[1] Implementation of the proposed project would result in the removal of non-native trees such as Brazilian pepper tree (*Schinus terebinthifolius*) and Italian stone pine (*Pinus pinea*), as well as one native (but non-protected tree, velvet ash (*Fraxinus velutina*)), occurring on the parcel adjoining the east side of the current pump station site.

Victory Boulevard. The general location and extent of this construction site and associated laydown area is shown in Figure 2. It will be defined by fencing or other barriers. This laydown area will remain in this location for the duration of construction. It is anticipated that construction equipment would remain at the project site within the designated laydown area and/or construction site. Vehicular, bicycle, and pedestrian detours would be provided to guide traffic around the construction site and laydown areas.

Excavation activities would be required at various stages of construction to allow for site preparation, construction of the new pump station building, and the construction of retaining walls. Approximately 1,036 cubic yards of material would be removed. In addition to excavation and removal of materials, some material would be imported to replace material excavated to comply with geotechnical requirements. Approximately 152 cubic yards would be imported.

Construction equipment anticipated for pump station replacement includes two dirt haul trucks, one crane, two excavators, one bulldozer, one flatbed truck, and one front loader. Additionally, construction of the retaining wall would require the installation of approximately 12 drilled piles. A truck-mounted drill rig with 24-inch auger and a 30-ton crane would be used for pile installation, which would occur over an approximate 3-week period.

Pipeline Installation

Construction activities associated with the proposed pipeline installation would take place within the existing ROW of Calvert Street between Pat Avenue and Sylvan Street. A construction laydown area would be established That would occupy an area of approximately 50 feet by 10 feet. The exact location of this area will be determined during final design, prior to the commencement of construction activities. Once established, the location of this construction laydown area may move several times along the pipeline installation alignment.

The new pipeline would be installed using an open trenching method. The excavated trench would be 5 feet wide by 7 feet deep. The majority of excavated material would be used to backfill the trench following pipe installation, leaving a minimal amount of excavated material requiring disposal. Construction equipment would remain at the project site within the designated laydown area and/or construction site for the duration of its use. Trenching would also be used to install the 8-inch diameter pipeline over the existing storm drain channel on the eastern end of the pipeline alignment. In this area of the project site, the 8-inch diameter pipeline would be a welded steel pipe encased in concrete. Vehicular and pedestrian detours would be provided to guide traffic around construction sites and laydown areas.

Construction equipment anticipated for pipeline installation includes 2 pickup trucks, 3 dump trucks, 1 Pittman hoist, 1 backhoe with carrier, 1 flatbed truck, 2 weld trucks, 1 utility truck, and 1 gang truck.

2.5 Best Management Practices

An appropriate combination of monitoring and resource impact avoidance would be employed during all phases of the proposed project, including implementation of the following Best Management Practices (BMP):

- 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.
  - All haul 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.
  - Ground cover in disturbed areas shall be replaced in a timely fashion when work is completed in the area.
  - A community liaison shall be identified to address concerns regarding on-site construction activity including resolution of issues related to dust generation.
  - Apply non-toxic soil stabilizers 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.

- The LADWP and/or the construction contractor would develop and implement an erosion control plan and Storm Water Pollution Prevention Plan for construction activities. Erosion control and grading plans 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 Best Management Practices 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.

- 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.

- LADWP would coordinate with all applicable agencies regarding construction schedules and worksite traffic control and detour plans, including but not limited to

LADOT, 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.

- LADWP would conduct pre-construction surveys for nesting birds and provide a biological monitor as necessary should project activities be initiated during the nesting bird season (February 1 through September 15 for songbirds, and as early as January 15 through September 15 for raptors). Should active nests be observed, a qualified biologist would monitor the nest on a weekly basis and, if deemed necessary, construction activity would be postponed until the biologist determines that the nest is no longer active.

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 pump station replacement site and pipeline alignment are located in the western portion of the West Hills and Woodland Hills communities, just east of center in the U.S. Geological Survey's Calabasas, California quadrangle. A search of the Calabasas quadrangle and surrounding eight quadrangles (nine-quad search), including Santa Susana, Oat Mountain, Canoga Park, Topanga, Malibu Beach, Point Dume, Thousand Oaks, and Simi, was made of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and of the California Native Plant Society's (CNPS) on-line Inventory of Rare and Endangered Plants of California. Additionally, the U.S. Fish and Wildlife Service's (USFWS) online Information for Planning and Consultation (IPaC) database was queried for special-status species, sensitive natural communities, and protected areas known from the project vicinity. Databases were again queried during the preparation of this report to determine if any additional special-status resources had been identified.

The project area evaluated for biological resources includes the pump station replacement site and pipeline alignments, plus a 500-foot survey buffer around these features, combined the Biological Survey Areas (BSA) or area of potential effect (APE) (see Figures 3 and 4). A buffer around the project alignment was evaluated in order to capture potential indirect effects to biological resources from implementation of the 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 for this project are generally diffuse and would not significantly impact biological resources.

Prior to conducting a field survey, aerial imagery of the BSA was reviewed for the presence of areas that could potentially support special-status biological resources. Since most of the BSA is developed by hardscape features (i.e., roadways and buildings), the desktop review focused on identifying any significant green or otherwise open spaces in the vicinity of the proposed project. On March 13, 2019, a field survey of the pump station site and pipeline alignments and the survey buffers was conducted by AECOM biologist Art Popp[2] to document existing biological resources that occur or have the potential to occur within and adjacent to the BSA, and to evaluate the potential for special-status plant and wildlife species to occur within the BSA. Binoculars were utilized to scan for evidence of wildlife

[2] Mr. Popp is no longer with AECOM. Memorandum was updated by Vanessa Tucker, Sr. Biologist, AECOM.

activity in the BSA. Seasonal, species-specific botanical and wildlife surveys were not conducted as part of this evaluation; however, based on the survey conducted and an assessment of conditions in the BSA, it is apparent that special-status plant and wildlife species are not anticipated within the urbanized environment of the proposed project.

4. EXISTING CONDITIONS

The proposed project occurs along City streets in the communities of West Hills and Woodland Hills, in the far western portion of the San Fernando Valley region of the City. The Los Angeles and Ventura County line lies approximately 0.50 mile west of the proposed project. The entire BSA is urbanized or has otherwise been previously disturbed by residential development.

Areas surrounding the pump station site and pipeline alignments can generally be described as low/medium density residential, typically characterized by stand-alone dwellings on moderately-sized, landscaped lots, serviced by a network of local roads and sidewalks. Vegetation within and immediately surrounding the BSA consists of landscaped trees, gardens, and lawns associated with private residences and parkways adjacent to sidewalks. The area immediately north of the existing pump station is a residential rear-yard vegetated with mature trees. Several ornamental shrubs and trees are also located within the boundary of the existing pump station site.

The land surrounding the pump station replacement site is moderately sloped in a west to east direction, with an elevation of approximately 1,050 feet above mean sea level (AMSL) at the existing facility.

Photographs of the pump station site and pipeline alignment are included in Attachment B.

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. No native plant communities occur within or adjacent to the project. Common non-native weedy species dominate the pump station site, and ornamental vegetation common on City and residential properties occur along the pipeline alignments. The nearest vegetation communities occur 0.50 mile west of the project, where native grassland, coastal sage scrub, chaparral, oak woodland, and riparian woodlands habitats occur within the Upper Las Virgenes Canyon Open Space Preserve (Preserve), just over the county line in Ventura County (see Figure 2).

Pump Station

Vegetation within the fenced-in pump station consists of non-native plant species. Brazilian pepper (*Schinus terebinthifolius*), Tree-of-heaven (*Ailanthus altissima*), cedar (*Cedrus* sp.), and bottlebrush (*Callistemon citrinus*) trees occur within the pump station. A large Italian stone pine (*Pinus pinea*) occurs on the residential property immediately north of the pump station, growing over and covering a portion of the pump station site. Most of the pump station consists of structures/equipment associated with the existing pump station and bare ground. Herbaceous vegetation occurring within the pump station includes ruderal species such as prickly lettuce (*Lactuca serriola*), cheeseweed (*Malva parviflora*), wild oat (*Avena barbata*), and brome grasses (*Bromus* spp.).

The parcel east of the existing pump station parcel which will become part of the pump station site, includes a large native velvet ash (*Fraxinus velutina*), with non-native shrub and herbaceous species covering the remainder of the parcel, including golden wattle (*Acacia longifolia*) shrubs, cheeseweed, wild oat, brome grass, Coppery mesembryanthemum (*Malephora crocea*), yellow clover (*Melilotus indicus*), field bindweed (*Convolvulus arvensis*), and red stemmed filaree (*Erodium cicutarium*).

The BSA around the pump station site (Figure 3) includes Victory Boulevard and residential lots along it. Large mature pine, eucalyptus, and palm trees occur along Victory Boulevard, with additional ornamental trees and other landscape species occurring in residential lots within the BSA.

Pipeline Alignment

Vegetation within the BSA of the pipeline alignment (Figure 4) includes a mix of ornamental tree, shrub, and herbaceous species typical on City residential lots. Large mature palm, pine, eucalyptus, cedar, and other ornamental trees occur within the BSA along the alignment.

No special-status plant species were observed in the BSA during the field survey.

4.2 Wildlife

Wildlife species observed during the field survey of the project and surrounding areas included bird species that are common in and adapted to urban environments, including American crow (*Corvus brachyrhynchos*), Eurasian collared dove (*Streptopelia decaocto*), and song sparrow (*Melospiza melodia*). Two raptors also not uncommon in urban areas, turkey vulture (*Cathartes aura*) and red-tailed hawk (*Buteo jamaicensis*) were also observed. Overall bird activity was low, no active or old nests were detected, and no other wildlife (i.e., mammals, reptiles) were observed during the site visit.

No special-status wildlife species were detected during the site visit.

4.3 Wildlife Corridors

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 project occurs within an urbanized area of the San Fernando Valley and the BSA does not occur within or intersect a recognized/established regional wildlife corridor. Ornamental trees within and adjacent to the project 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.

The Preserve, located roughly 0.50 mile west of the project, includes hills and mountainous terrain west of the San Fernando Valley, south of Simi Valley, and east of Conejo Valley. Native habitats within the Preserve serve as wildlife linkages south, via Crummer Canyon, to the Santa Monica Mountains, and to the Simi Hills and Santa Susanne Mountains to the north.

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 the US Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (FESA), those listed by CDFW under the California Endangered Species Act (CESA), and the CNPS.[3,4,5] 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 44 special-status plant species were identified from the CNDDB[6] and CNPS[7] nine-quad searches, and from a search of IPaC[8] for the project area, including 16 federal and/or state-listed species:

- marsh sandwort (*Arenaria paludicola*), federal and state-listed endangered
- Braunton's milk-vetch (*Astragalus brauntonii*), federal-listed endangered
- Ventura Marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), federal and state-listed endangered
- coastal dunes milk-vetch (*Astragalus tener* var. *titi*), federal and state-listed endangered
- salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimus*), federal and state-listed endangered
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), federal candidate for listing and state-listed endangered
- beach spectaclepod (*Dithyrea maritima*), state-listed threatened
- slender-horned spineflower (*Dodecahema leptoceras*), federal and state-listed endangered
- Agoura Hills dudleya (*Dudleya cymosa* ssp. *agourensis*), federal-listed threatened
- marcescent dudleya (*Dudleya cymosa* ssp. *marcescens*), federal-listed threatened and state rare
- Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*), federal-listed threatened

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3 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).

4 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).

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

6 California Department of Fish and Wildlife. *California Natural Diversity Data Base (CNDDB).* Full condensed report for the Calabasas and surrounding Eight quadrangles. Generated October 14, 2022.

7 California Native Plant Society, Rare Plant Program. 2022. Inventory of Rare and Endangered Plants (online edition, v8-02). Available at: http://www.rareplants.cnps.org/. Accessed October 14, 2022.

8 Information for Planning and Consultation. 2019. U.S. Fish and Wildlife Service. Available at: https://ecos.fws.gov/ipac/. Accessed October 14, 2022.

- Conejo dudleya (*Dudleya multicaulis*), federal-listed threatened
- spreading navarretia (*Navarretia fossalis*), federal-listed threatened
- Lyon's pentachaeta (*Pentachaeta lyonia*), federal and state-listed endangered
- California orcutt grass (*Orcuttia californica*), federal and state-listed endangered
- Gambel's watercress (*Rorippa gambellii*), federal-listed endangered and state-listed threatened

The 44 special-status plant species identified during the most recent database reviews (October 2022), their status, and habitat requirements are provided in Table A, Attachment C.

No records of special-status plant species were found during the database reviews to coincide with the BSA. The nearest occurrences of special-status plants are of Braunton's milk-vetch (from 2002) and San Fernando Valley spineflower (from 1998), located from 0.50 to 1.0 mile southwest of the project, within the Preserve. The BSA does not provide natural habitats potentially suitable for special-status plants. Records of special-status plant species identified during database reviews are primarily from native habitats in the Preserve and from the Santa Monica Mountains to the south, and Simi Hills and Santa Susanna Mountains to the north.

No USFWS-designated critical habitat for any special-status plant species coincides with the BSA. The nearest critical habitat areas are for Braunton's milk-vetch located 2-5 miles to the north, northwest, and west of the project within the Preserve.

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 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 Migratory Bird Treaty Act (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 California Fish and Game Code (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.

[9] California Department of Fish and Wildlife. 2022. California Natural Diversity Database (CNDDB). Special Animals List. August.

A total of 49 special-status wildlife species were identified from the CNDDB[10] nine-quad search and from a search of IPaC[11] for the project vicinity, including 14 federal and/or State-listed wildlife species:

- tricolored blackbird (*Agelaius tricolor*)
- Swainson's hawk (*Buteo swainsoni*)
- southwestern willow flycatcher (*Empidonax traillii extimus*)
- California condor (*Gymnogyps californianus*)
- coastal California gnatcatcher (*Polioptila californica californica*)
- bank swallow (*Riparia riparia*)
- least Bell's vireo (*Vireo bellii pusillus*)
- arroyo toad (*Anaxyrus californicus*)
- California red-legged frog (*Rana draytonii*)
- tidewater goby (*Eucyclogobius newberryi*)
- southern California steelhead Distinct Population Segment (DPS) (*Oncorhynchus mykiss irideus pop. 10*)
- quino checkerspot butterfly (*Euphydryas editha quino*)
- vernal pool fairy shrimp (*Branchinecta lynchi*)
- yellow-billed cuckoo (*Coccyzus americanus*).

The 49 special-status wildlife species identified during the most recent database reviews (October 2022), their status, and habitat requirements are provided in Table B, Attachment C.

A CNDDB record of coast horned lizard (*Phrynosoma blainvillii*) from 1954 coincides with the BSA of the pipeline alignment. Although coastal sage scrub habitat preferred by this species likely occurred in the project area at the time of this observation, subsequent development has removed native vegetation, and as a result this species is not expected in the BSA. A CNDDB record of California leaf-nosed bat (*Macrotus californicus*) from 1949 occurs just north of the pump station. Due to the age of this record and a lack of suitable habitat for this species in the BSA, it is not expected to occur in the BSA.

The BSA does not provide natural habitats potentially suitable for special-status wildlife. Records of special-status wildlife species identified during database reviews are primarily from native habitats in the Preserve and from the Santa Monica Mountains to the south, and Simi Hills and Santa Susanna Mountains to the north.

No USFWS-designated critical habitat for any special-status wildlife species coincides with the BSA. Critical habitat for California red-legged frog occurs roughly 0.50 mile west of the BSA in the Preserve.

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).

[10] California Department of Fish and Wildlife. *California Natural Diversity Data Base (CNDDB).* Full condensed report for the Calabasas and surrounding eight quadrangles. Generated October 14, 2022.

[11] Information for Planning and Consultation. 2022. U.S. Fish and Wildlife Service. Available at: https://ecos.fws.gov/ipac/. Accessed October 14, 2022.

Rare communities are given the highest inventory priority.[12,13] Based on a review of the CNDDB,[14] 13 sensitive vegetative communities were identified during the nine-quad search of the CNDDB:

- California Walnut Woodland
- Cismontane Alkali Marsh
- Southern California Coastal Lagoon
- Southern California Steelhead Stream
- Southern Coast Live Oak Riparian Forest
- Southern Coastal Salt Marsh
- Southern Mixed Riparian Forest
- Southern Riparian Scrub
- Southern Sycamore Alder Riparian Woodland
- Southern Willow Scrub
- Southern Cottonwood Willow Riparian Forest
- Valley Needlegrass Grassland
- Valley Oak Woodland

These sensitive communities are primarily documented in the CNDDB from the Santa Monica Mountains to the south and the Simi Hills and Santa Susanna Mountains to the north.

No sensitive natural communities occur within the project and surrounding areas. Vegetation in the project area consists of ornamental trees and shrubs that are common in urban environments. Additionally, no USFWS-designated critical habitat, or aquatic features (i.e., wetlands or other waters) under regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE), CDFW, and/or the Regional Water Quality Control Board (RWQCB) coincide with the BSA.

7. APPLICABLE REGULATIONS

7.1 Federal Regulations and Standards

Federal Endangered Species Act (ESA)

Enacted in 1973, the federal ESA 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). The ESA 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 the ESA. "Take" under the ESA is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

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12 Holland, R., *Preliminary Descriptions of the Terrestrial Natural Communities of California*. California Department of Fish and Game, The Resources Agency. 156 pp. 1986.

13 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.

14 California Department of Fish and Wildlife. *California Natural Diversity Data Base (CNDDB).* Full condensed report for the Calabasas and surrounding eight quadrangles. Generated October 14, 2022.

Formal consultation under the ESA would be required if the project had the potential to affect a federally-listed species that has been detected within or adjacent to the BSA. No federally-listed species were detected during the field survey, and suitable habitats for such species do not occur in the BSA, or the species' known distribution does not coincide with the BSA. 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 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 BSA to ensure construction does not affect species protected under the MBTA.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (the Eagle Act) amended in 1962, was originally implemented for the protection of bald eagles. In 1962, Congress amended the Eagle Act to also cover golden eagles, a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. This act makes it illegal to import, export, take (which includes molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or part thereof.

Bald and golden eagles are not known from the project area, and habitat in the BSA is not suitable for these species. As a result, the project would not be expected to take bald or golden eagle.

Clean Water Act

Under Section 404 of the Clean Water Act (CWA), the USACE regulates the discharge of dredged or fill material into jurisdictional waters of the U.S., which include those waters listed in 33 CFR 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. RWQCB is the state agency in charge of issuing a CWA Section 401 water quality certification or waiver.

No aquatic features under regulatory jurisdiction of the USACE or RWQCB occur within the BSA. As a result, permits from these agencies are not anticipated.

Magnuson-Stevens Fishery Conservation and Management Act

Under the purview of the National Oceanic and Atmospheric Association's National Marine Fisheries Service (NMFS), amendments in 1996 to the Magnuson-Stevens Fishery Conservation and Management Act set forth a number of mandates for NMFS, Regional

Fishery Management Councils, and federal action agencies to identify and protect important marine and anadromous fish habitat. The Councils, with assistance from NMFS, are required to delineate Essential Fish Habitat (EFH) in fishery management plans for all managed species. EFH is defined to include "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include historic areas if appropriate; substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities; necessary means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle (from the 1997 Interim Final Rule [62 Fed. Reg. 66551, Section 600.10 Definitions]).

The BSA is located within the urbanized San Fernando Valley region of the City and does not include EFH, nor is it connected to any EFH.

Protection of Wetlands – Executive Order Numbers 11990 and 12608

Under this Executive Order (EO) issued May 24, 1977 and amended by EO 12608, Federal agencies must provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands (42 CFR 26961; 3 CFR 1977 Comp., p. 121). Each agency, to the extent permitted by law, must avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds: there is no practical alternative to such construction; the proposed action includes all practical measures to minimize harm to wetlands that may result from such use. In making this finding, the head of the agency may take into account economic, environmental and other pertinent factors. Each agency must also provide opportunity for early public review of any plans or proposals for new construction in wetlands.[15]

Wetlands, as defined below under this EO, do not occur within the BSA and as a result would not be affected by the project.

> "…areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds."

Wild and Scenic Rivers Act

The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, while also recognizing the potential for their appropriate use and development. It encourages river

[15] FedCenter.gov. 2017. Executive Order 11990. Protection of Wetlands. Available at: https://www.fedcenter.gov/Bookmarks/index.cfm?id=585

management that crosses political boundaries and promotes public participation in developing goals for river protection.

An online review of designated Wild and Scenic Rivers[16] was conducted and it was determined that the BSA is not located within the watershed of a wild and scenic river.

Coastal Zone Management Act

The U.S. Congress recognized the importance of meeting the challenge of continued growth in the coastal zone by passing the Coastal Zone Management Act in 1972 (Public Law 109-58; 16 U.S.C. 1451 et seq.). This act, administered by NOAA, provides for the management of the nation's coastal resources, including the Great Lakes. The goal is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

The BSA is located within the urbanized San Fernando Valley region of the City and is not located in the California Coastal Zone.

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 the California Endangered Species Act (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 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 does not occur in the BSA, or the species' known distribution does not coincide with the BSA. As a result, a permit under Section 2081 is not anticipated for the project.

No aquatic features under CDFW jurisdiction occur within the BSA. As a result, coordination with CDFW and the issuance of an LSAA is not anticipated for this 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).

[16] National Wild and Scenic Rivers System. 2019. Wild and Scenic Rivers. Explore Designated Rivers. Available at: https://www.rivers.gov/map.php. Accessed October 28, 2019.

No aquatic features under RWQCB jurisdiction occur within the BSA. As a result, coordination with RWQCB and the issuance of a permit under Porter-Cologne is not anticipated for the project.

California Environmental Quality Act[17]

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 report has been prepared for project compliance with CEQA.

7.3 Local Regulations and Standards

Significant Ecological Area Program

Los Angeles County 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 Los Angeles County deems it important to facilitate a balance between development and resource conservation.

Together, the General Plan overlays and a SEA conditional use permit (CUP) 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 SEA Technical Advisory Committee. Development activities in the SEAs are reviewed closely in order to conserve water and biological resources such as streams, oak woodlands, and threatened or endangered species and their habitat.

The BSA does not coincide with a SEA. The Chatsworth Reservoir and Simi Hills SEAs lie approximately 2.5 miles north of the BSA and the Palo Comado Canyon SEA approximately the same distance to the south. The project is not anticipated to affect resources within these SEAs, and as a result the SEA program would not be applicable to the proposed project.

City of Los Angeles Protected Tree 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

[17] PRC Section 21000 et seq. and the State CEQA Guidelines, California Code of Regulations, Section 15000 et seq.

Code). Additionally, trees must be four inches or greater in diameter at 4.5 feet above ground 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.

No protected trees occur within the BSA, and as a result, compliance with the oak tree ordinance is not required. Should it be determined that a protected tree would require removal or trimming, LADWP would comply with provisions of this 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 impacts of proposed project construction on biological resources are described below.

8.1.1 Vegetation

Implementation of the proposed project would result in the removal of non-native trees and herbaceous species at the pump station site. One native tree, velvet ash, occurring on the parcel adjoining the east side of the current pump station site, will also be trimmed or removed under the project. No vegetation will be removed along the pipeline alignment. The

removal of non-native vegetation and single native tree at the pump station site do not constitute a significant direct impact.

Indirect impacts to vegetation during project construction could include the accumulation of fugitive dust, and further colonization of nonnative, invasive plant species. Other indirect impacts could include an increase in the amount of compacted or modified surfaces that, if not controlled, could increase the potential for surface runoff, increased erosion, and sediment deposition beyond the project's footprint. Although indirect impacts to ornamental trees surrounding the pump station and pipeline alignment would not constitute a significant impact, with implementation of the BMP included in Section 2.5, the potential for indirect impacts to vegetation would be further reduced below the level of significance

8.1.2 Special Status Plant Species

Individual special-status plant species could be damaged or destroyed from crushing or trampling during construction activities; however, no federal or state-listed plant species were identified during the field survey, and special-status plants are not expected to occur in the BSA due to a lack of potentially suitable habitat. Since no special-status plants were observed during the field survey and the BSA is not suitable for them, none are expected to occur within the BSA. As a result, significant direct effects on special-status plants are not anticipated.

Indirect impacts to special-status plant species occurring outside the Project site could result from construction-related habitat loss and modification of sensitive natural communities related to dust, noise, stormwater runoff, and through the potential spread of noxious and invasive plant species into these communities. Such impacts would be considered significant; however, suitable habitat for special-status plants is not present in the urbanized environment surrounding the project, and by implementing standard construction practices related to fugitive dust and erosion control, the potential for indirect impacts to special-status plants would be further reduced. As a result, indirect impacts to special-status plants are not anticipated.

8.1.3 Sensitive Natural Communities

Implementation of the proposed project would not result in direct or indirect impacts to any sensitive natural communities, as none occur within the BSA or surrounding area. The nearest natural communities occur 0.50 mile west of the BSA in the Preserve. As a result, significant impacts to sensitive natural communities are not anticipated due to the distance between the project and Preserve.

8.1.4 Wildlife

Elements of project construction could potentially affect common wildlife. Vegetation removal and ground disturbance activities could result in the mortality of individual wildlife species, and species with limited mobility or that occupy burrows within the construction zone could be crushed during proposed project activities. Additionally, short-term indirect effects on wildlife, primarily urban bird species (discussed further below), would occur due to noise disturbances, increased human activity, and vibrations caused by heavy equipment. Although wildlife mortality is unlikely and not considered significant, direct and indirect

impacts to common wildlife would be avoided and minimized by implementing and adhering to BMP included in Section 2.5. As a result, significant impacts to wildlife are not anticipated

Ornamental vegetation in the BSA provides potentially suitable nesting habitat for common urban bird species protected by the MBTA and by CFGC, including raptors such as Cooper's hawk (*Accipter cooperii*), a CDFW WL species (see Table B, Attachment C). As such raptors become more common in urban areas, large mature trees provide potentially suitable nesting habitat for them. By avoiding vegetation removal during the nesting bird season (generally February 15 to September 1, and as early as January 1 for raptors), or by implementing and adhering to BMP included in Section 2.5 related to pre-construction surveys for nesting birds and providing a qualified biological monitor should nesting birds be present, direct impacts from vegetation removal on nesting birds and the associated nesting habitat are not anticipated.

Indirect impacts to nesting birds within the BSA could occur during construction as a result of noise, dust, increased human presence, and vibrations resulting from construction activities. Such disturbances could result in increased nestling mortality due to nest abandonment or decreased feeding frequency. Therefore, indirect impacts would be considered significant. However, by implementing and adhering to BMP included in Section 2.5 related to pre-construction surveys and providing qualified biological monitors as necessary, indirect impacts to nesting birds protected under the MBTA and by CFGC would be reduced to less than significant.

8.1.5 Special-Status Wildlife Species

Individual special-status wildlife species could be directly and indirectly affected during construction in the same manner as described above; however, no federal or State-listed wildlife species have been identified in the BSA, and potentially suitable habitat for such species is absent from the BSA. As a result, direct and indirect impacts to special-status wildlife are not anticipated.

8.1.6 Wildlife Movement Corridor

The BSA does not serve as a regional wildlife corridor and as a result, direct impacts to a regional wildlife movement corridor would not occur. Project construction activities (i.e., increased noise, human presence, vibration) would likely result in bird species traveling through the area avoiding the immediate project vicinity. Such indirect effects would be temporary in nature, restricted to the project construction time period. By implementing the BMP outlined in Section 2.5 and conducting pre-construction surveys and providing qualified biological monitors as necessary, indirect impacts to localized bird movement would be reduced.

The Preserve located 0.50 mile west of the BSA, provides native vegetation habitats that facilitate wildlife movement; however, project activities are not anticipated to affect biological resources in the Preserve due to its distance from the project.

As a result, impacts to a wildlife movement corridor are not anticipated.

8.2 Operation

Significant impacts to vegetation, special-status plant species, and sensitive natural communities during operations and routine maintenance of the project are not anticipated. Only ornamental vegetation occurs in the BSA, and special-status plants are not expected to occur in the BSA due to a lack of suitable habitat. As a result, significant impacts to vegetation, special-status plants, and sensitive natural communities during operation and routine maintenance of the pump station and pipeline alignment are not anticipated.

Impacts to common wildlife, special-status wildlife species, and wildlife movement are not anticipated. Activities would be conducted within previously disturbed and developed surfaces containing only ornamental vegetation, and would generally not change conditions from those present prior to and after project construction. As a result, operation and maintenance activities are not anticipated to significantly affect common wildlife, special-status wildlife species, or wildlife movement.

9. AVOIDANCE, MINIMIZATION, AND STANDARD CONSTRUCTION MEASURES

With the potential for nesting birds protected under the MBTA and CFGC to occur in ornamental trees within the BSA, implementation of pre-construction surveys and providing a qualified biological monitor if nesting birds are present, would ensure potential impacts to nesting birds during the bird breeding season (February 15 through September 1) are avoided. Additionally, implementation of BMP presented in Section 2.5 would further reduce impacts to a level below significance.

10. CONCLUSIONS

Based on the analysis presented above regarding anticipated effects of the proposed project, significant impacts to nesting birds protected under the MBTA and by CFGC could occur. However, by conducting pre-construction surveys and subsequent biological monitoring efforts as described above, and by implement the BMP presented 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,

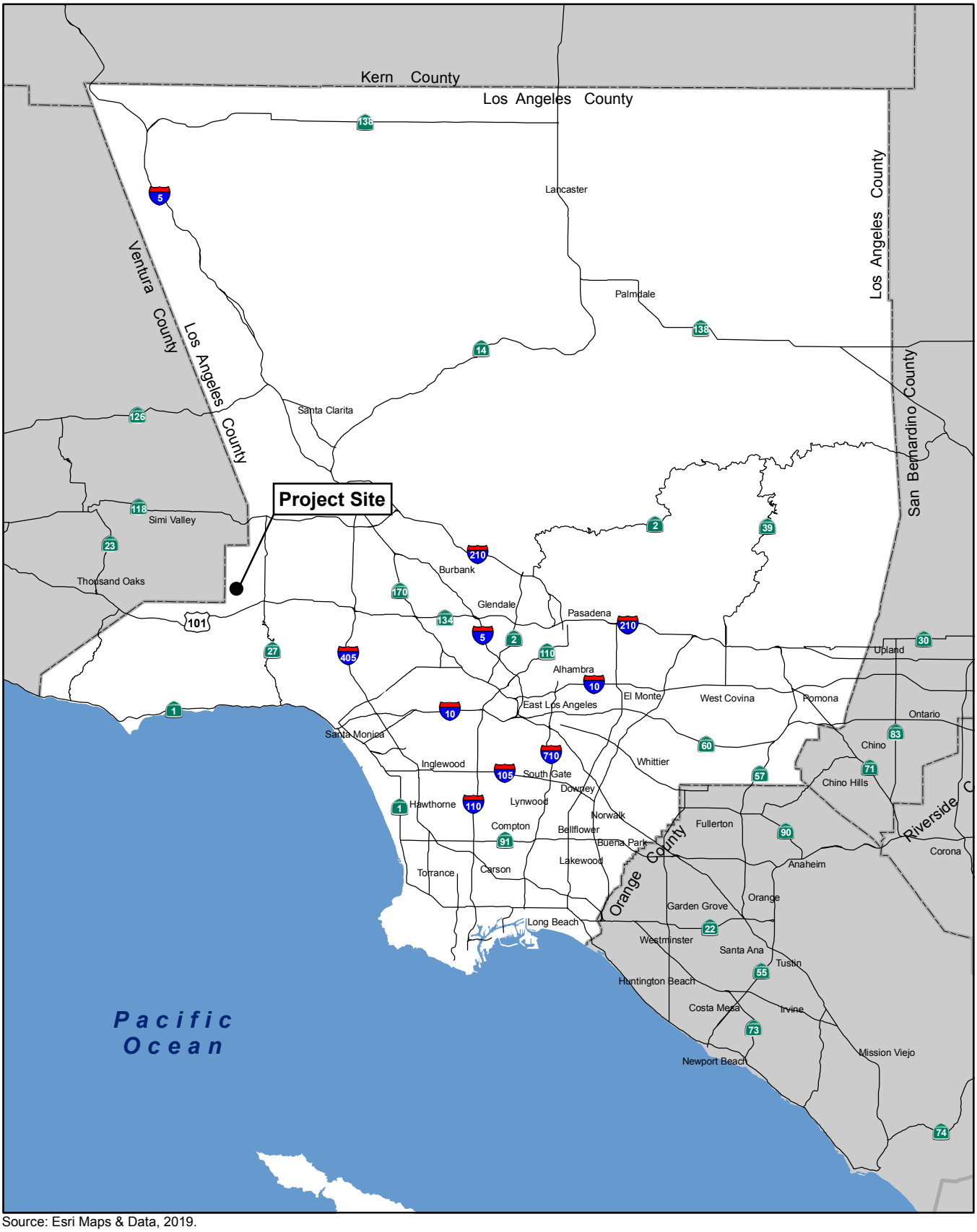
Vanessa Tucker
Senior Biologist

Enc:

Attachment A: Project Figures
Attachment B: Project Photographs
Attachment C: Special-Status Plant and Wildlife Species and Natural Communities Tables

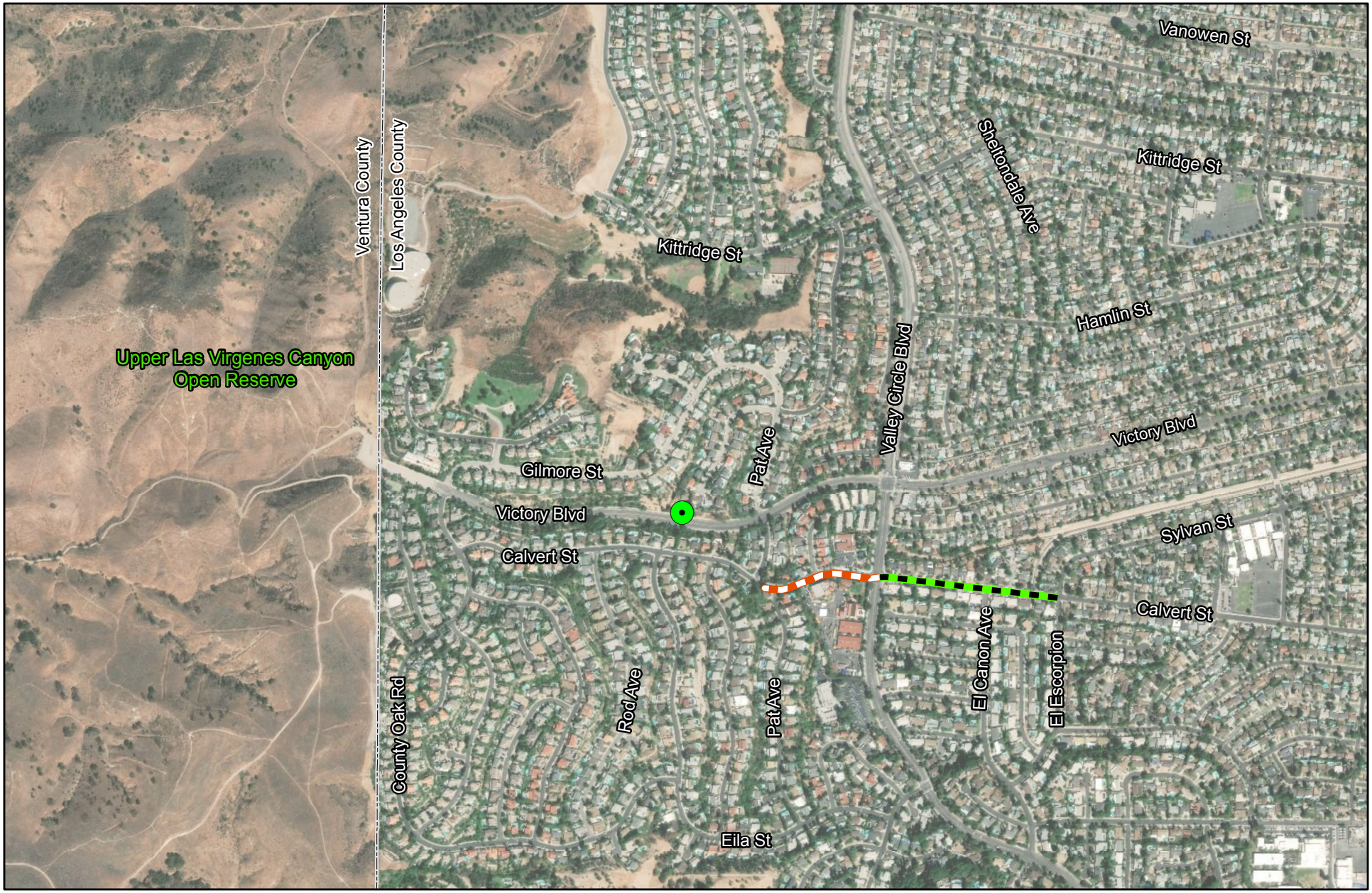
ATTACHMENT A

PROJECT FIGURES



Source: Esri Maps & Data, 2019.

Figure 1
Regional Map



Source: Esri 2019; Created by: AECOM, 2019.

0 500 1,000 Feet

1" = 1000'

Victory Pump Station

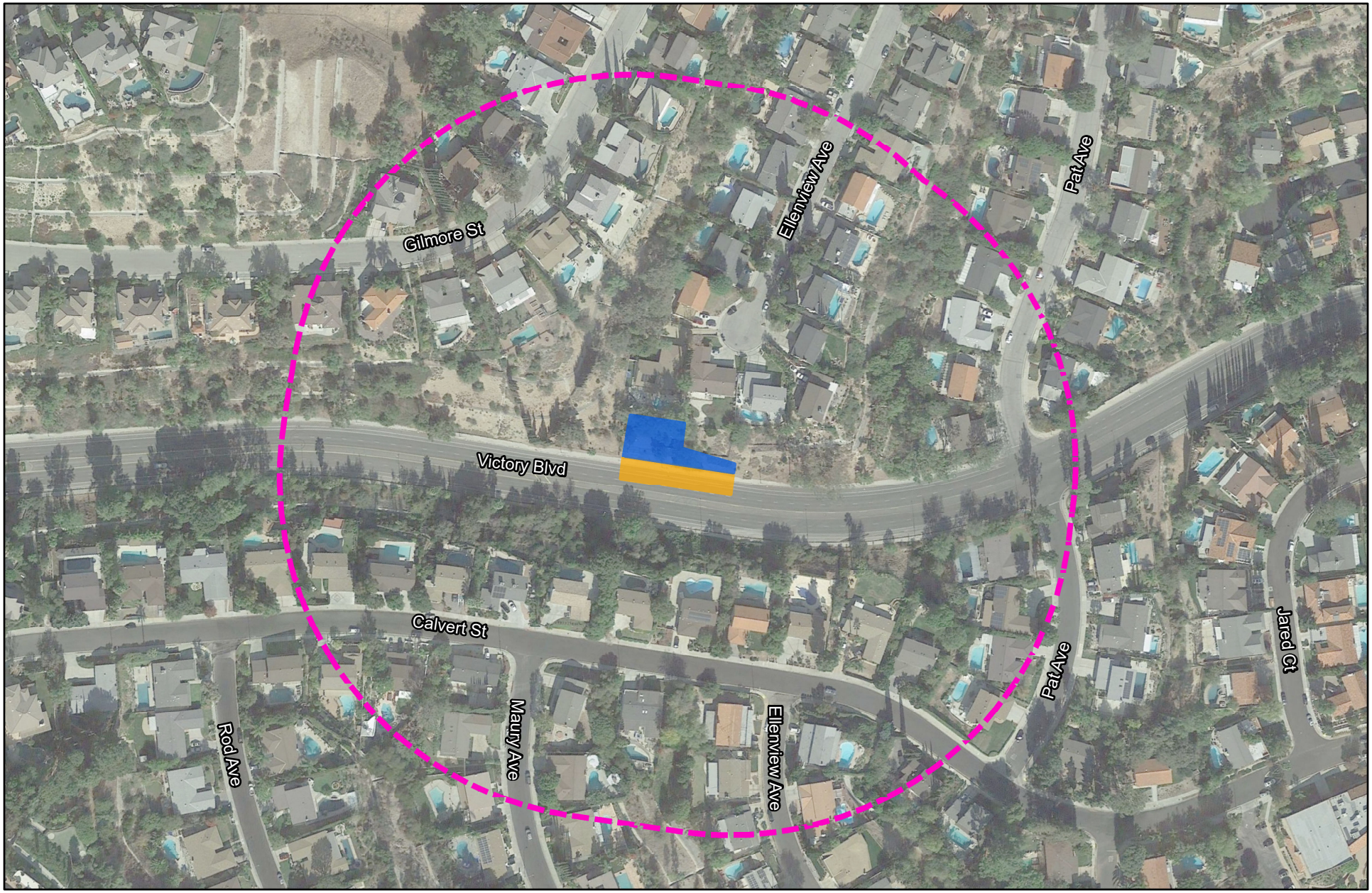
Proposed New Pipeline Installation

Proposed Pipeline Replacement

County Boundary

Figure 2

Project Vicinity Map



Source: Esri 2019; Created by: AECOM, 2019.

0 100 200 Feet

1" = 200'

Approximate Pump Station Replacement Site

Proposed Construction Laydown Area

Biological Survey Area

Figure 3

Proposed Pump Station Replacement Site

Source: Esri 2019; Created by: AECOM, 2019.

0 175 350 Feet

1" = 350'

Proposed Pipeline Installation (12-inch)

Proposed Pipeline Replacement (12-inch)

Biological Survey Area

Figure 4

Proposed Pipeline Alignment

ATTACHMENT B

PROJECT PHOTOGRAPHS

Photo 1. Northeast-facing view from Victory Boulevard of entrance to pump station site.

Photo 2. West-facing view inside the pump station site.

Photo 3. East-facing view of the back (north) perimeter of the pump station site. Italian stone pine visible on adjacent residential property at top of photo.

Photo 4. East-facing view of fenced-in pump station equipment.

Photo 5. Existing pump station equipment inside the wood fencing depicted in Photo 4.

Photo 6. West-facing view of parcel east of existing pump station site (in background) which is being added to the pump station site. Victory Boulevard is at left.

Photo 7. Northwest-facing view of fenced pump station site at left and east parcel that will be added to the project at right.

Photo 8. West-facing view along Calvert Street of pipeline alignment. Jared Court enters photo from left.

Photo 9. West-facing view along Calvert Street of pipeline alignment. Photo taken from intersection of Calvert Street and Valley Circle Boulevard.

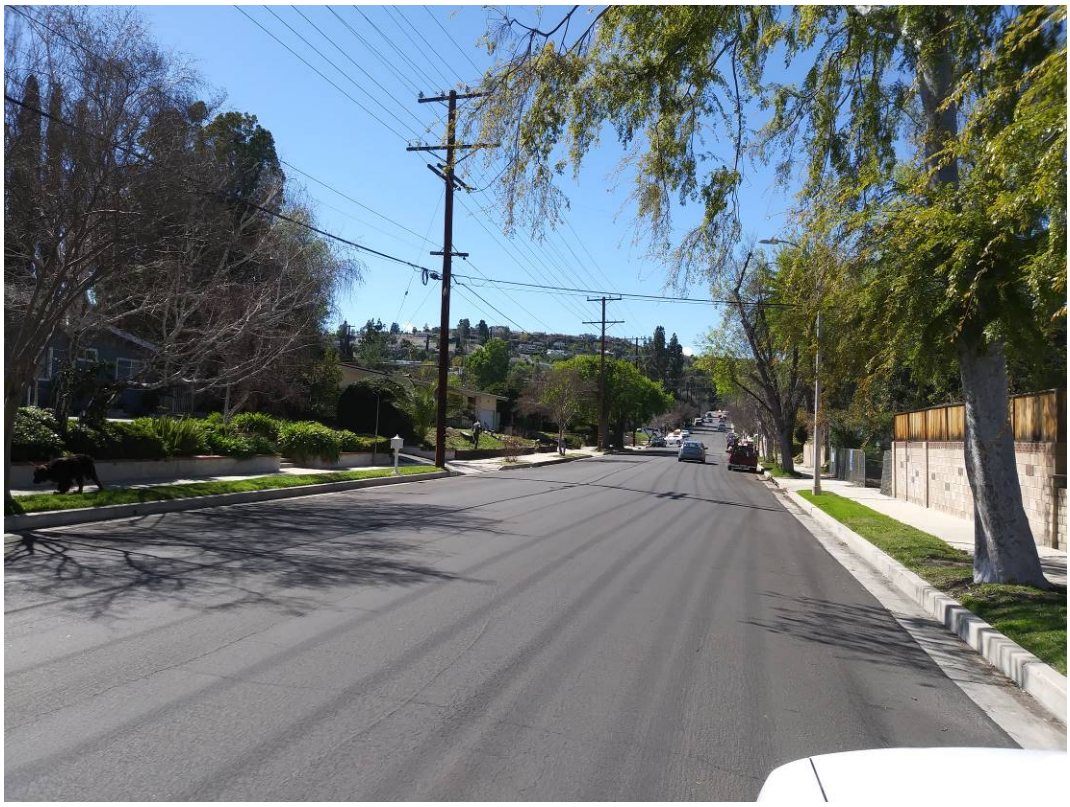


Photo 10. East-facing view along Calvert Street of pipeline alignment. Photo taken from intersection of Calvert Street and Valley Circle Boulevard.

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**
PLANTS			
marsh sandwort *Arenaria paludicola*	Federal: FE State: SE CRPR 1B.1	Prefers sandy, openings. Marshes and swamps (freshwater or brackish). Occurs between 3-170 meters (9-557 feet). Blooms May- August.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA and the project falls outside the elevation range known for this species.
Braunton's milk- vetch *Astragalus brauntonii*	Federal: FE State: None CRPR 1B.1	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 BSA.
Ventura Marsh milk-vetch *Astragalus pycnostachyus* var. *lanosissimus*	Federal: FE State: SE CRPR 1B.1	Coastal dunes, coastal scrub, and edges of coastal salt or brackish marshes and swamps. Occurs between 1-35 meters (3-115 feet). Blooms June-October.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA and the project falls 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
coastal dunes milk-vetch *Astragalus tener* var. *titi*	Federal: FE State: SE CRPR 1B.1	Often vernally mesic areas in sandy coastal bluff scrub, coastal dunes, and mesic coastal prairie. Occurs between 1-50 meters (3-165 feet). Blooms March-May.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Coulter's saltbush *Atriplex coulteri*	Federal: None State: None CRPR 1B.2	Often in alkaline or clay habitats of coastal bluff scrub, coastal dunes, coastal scrub and valley and foothill grasslands. Occurs between 3-460 meters (10-1,510 feet). Blooms March-October.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
south coast saltscale *Atriplex pacifica*	Federal: None State: None CRPR 1B.2	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 BSA and the project falls outside the elevation range known for this species.
Parish's brittlescale *Atriplex parishii*	Federal: None State: None CRPR 1B.1	Alkaline chenopod scrub, playas, and vernal pools. 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 BSA.
Davidon's saltscale *Atriplex serenana* var. *davidsonii*	Federal: None State: None CRPR 1B.2	Coastal bluff scrub and coastal scrub. 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 BSA and the project falls outside the elevation range known for this species.
Malibu baccharis *Baccharis malibuensis*	Federal: None State: None CRPR 1B.1	Chaparral, cismontane woodland, coastal scrub, and riparian woodland. Occurs between 150–305 meters (500-1,000 feet). Blooms in August.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
slender mariposa-lily *Calochortus clavatus* var. *gracilis*	Federal: None State: None CRPR 1B.2	Chaparral and coastal scrub, in shaded foothill canyons, often 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 BSA.
late-flowered mariposa-lily	Federal: None	Found on serptentinite	**Not Expected.**

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA
Calochortus fimbriatus	State: None CRPR 1B.3	substrates in chaparral, cismontane woodland, and riparian woodland. Occurs between 275-1,905 meters (900-6,250 feet). Blooms June-August.	Potentially suitable habitat for this species is absent from the BSA.
Plummer's mariposa-lily *Calochortus plummerae*	Federal: None State: None CRPR 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest, 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 BSA.
salt marsh bird's-beak *Chloropyron maritimum* ssp. *maritimus*	Federal: FE State: SE CRPR 1B.2	Coastal dunes and coastal salt marshes and swamps. Occurs between 0-30 meters (0-100 feet). Blooms May-October.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA and the project falls outside the elevation range known for this species.
San Fernando Valley spineflower *Chorizanthe parryi* var. *fernandina*	Federal: FC State: SE CRPR 1B.1	Sandy coastal scrub and valley and foothill grasslands. Occurs 150-1,220 meters (490-4,000 feet). Blooms April - July	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Parry's spineflower *Chorizanthe parryi var. parryi*	Federal: None State: None CRPR 1B.1	Sandy or rocky, openings. Chaparral, cismontane woodland, coastal scrub, valley and foothill grasslands. Occurs between 275–1,220 meters (900-4,000 feet) Blooms April-June.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Santa Susana tarplant *Deinandra minthornii*	Federal: None State: SR CRPR 1B.2	Rocky soils within chaparral and coastal scrub. Occurs between 280–760 meters (925–2,510 feet). Blooms July–November.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
dune larkspur *Delphinium parryi* ssp. *blochmaniae*	Federal: None State: None CRPR:1B.2	Chaparral (maritime) and coastal dunes. Occurs between 0-200 meters (0-650 feet). Blooms April- June.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA and the project falls outside the elevation range known for this species.
beach spectaclepod *Dithyrea maritima*	Federal: None	Coastal dunes and sandy coastal scrub. Occurs	**Not Expected.** Potentially suitable

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA
	State: ST CRPR 1B.1	between 3–50 meters (10–165 feet). Blooms March-May.	habitat for this species is absent from the BSA and the project falls outside the elevation range known for this species.
slender-horned spineflower *Dodecahema leptoceras*	Federal: FE State: SE CRPR 1B.1	Sandy chaparral, cismontane woodland, and alluvial fan coastal scrub. Occurs between 200-760 meters (890–2,510 feet). Blooms April–June.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Blochman's dudleya *Dudleya blochmaniae* ssp. *blochmaniae*	Federal: None State: None CRPR 1B.1	Rocky, often clay or serpentinite soils in coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grasslands. Occurs between 5-450 meters (15-1,485 feet). Blooms April–June.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Agoura Hills dudleya *Dudleya cymosa* ssp. *agourensis*	Federal: FT State: None CRPR: 1B.2	Rocky, volcanic substrates in chaparral and cismontane woodlands. Occurs between 200-500 meters (660-1,650 feet). Blooms May-June.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
marcescent dudleya *Dudleya cymosa* ssp. *marcescens*	Federal: FT State: SR CRPR 1B.2	Volcanic or rocky soils in chaparral. Occurs between 150–52 meters (495–1,700 feet). Blooms April-July.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Santa Monica dudleya *Dudleya cymosa* ssp. *ovatifolia*	Federal: FT State: None CRPR 1B.1	Volcanic or sedimentary, rocky soils in chaparral and coastal scrub. Occurs between 150–1675 meters (495–5,525 feet). Blooms March–June.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
many-stemmed dudleya *Dudleya multicaulis*	Federal: None State: None CRPR 1B.2	Chaparral, coastal scrub, valley and foothill grassland. Often 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 BSA.
Conejo dudleya *Dudleya multicaulis*	Federal: FT State: None CRPR 1B.2	Prefers clay in chaparral, coastal scrub, valley and foothill grassland. Occurs between 15 - 790 meters (50-2,590 feet). Blooms April-July.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
conejo buckwheat *Eriogonum crocatum*	Federal: None State: Rare	Prefers Conejo volcanic outcrops, and rocky soils.	**Not Expected.** Potentially suitable

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA
	CRPR 1B.2	Chaparral, coastal scrub valley and foothill grassland. Occurs between 50 - 580 meters (165-1,902 feet). Blooms April-July.	habitat for this species is absent from the BSA.
Palmer's grapplinghook *Harpagonella palmeri*	Federal: None State: None CRPR 4.2	Often on clay soils in open grassy areas within shrubland, such as chaparral, coastal scrub, and valley and foothill grassland. Occurs between 20-955 meters (65-3,130 feet). Blooms March-May.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
mesa horkelia *Horkelia cuneata* var. *puberula*	Federal: None State: None CRPR 1B.1	Sandy or gravelly sites in chaparral, cismontane woodland, and coastal scrub. Occurs between 70-810 meters (230-2,660 feet). Blooms from February-September.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
decumbent goldenbush *Isocoma menziesii* var. *decumbens*	Federal: None State: None CRPR 1B.2	Prefers chaparral and coastal scrub (sandy, often in disturbed areas). Occurs between 10-135 meters (30-450 feet). Blooms April-November.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA and the project falls outside the elevation range known for this species.
Coulter's goldfields *Lasthenia glabrata* ssp. *coulteri*	Federal: None State: None CRPR 1B.1	Coastal salt marshes, playas, and vernal pools. Occurs between 1-1,220 meters (3-4,000 feet). Blooms February-June.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Payne's bush lupine *Lupinus paynei*	Federal: None State: None CRPR 1B.1	Sandy substrates in coastal scrub, riparian scrub, and valley and foothill grassland. Occurs between 220-420 meters (720-1,380 feet). Blooms March-April (May-July).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
white-veined monardella *Monardella hypoleuca* ssp. *hypoleuca*	Federal: None State: None CRPR 1B.3	Lower montane coniferous forest in scree, disturbed areas, rocky or gravelly areas, and roadside habitats. Occurs between 975-2,920 meters (3,200-9,580 feet). Blooms May-August.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA and the project falls 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
spreading navarretia *Navarretia fossalis*	Federal: FT State: None CRPR 1B.1	Prefers coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. San Diego hardpan and San Diego claypan vernal pools; in swales & vernal pools, often surrounded by other habitat types. Occurs between 30-655 meters (50 – 2,790 feet). Blooms April – June.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Ojai navarretia *Navarretia ojaiensis*	Federal: None State: None CRPR 1B.1	Prefers openings in chaparral and coastal scrub, valley and foothill grasslands. Occurs between 275-620 meters (920-2,030 feet). Blooms May-July.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
chaparral nolina *Nolina cismontana*	Federal: None State: None CRPR 1B.2	Prefers sandstone or gabbro chaparral and coastal scrub. Occurs between 140-1,275 meters (460-4,180 feet). Blooms (March) May-July.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
California Orcutt grass *Orcuttia californica*	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 BSA.
Lyon's pentachaeta *Pentachaeta lyonii*	Federal: FE State: SE CRPR 1B.1	Prefers rocky, clay sites in chaparral, coastal scrub and valley and foothill grasslands. Occurs between 30-690 meters (100-2,265 feet). Blooms February-August.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
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 BSA.
Gambel's watercress *Rorippa gambellii*	Federal: FE State: ST CRPR 1B.1	Marshes and swamps (freshwater or brackish). Occurs between 5-330 meters (15-1,080 feet). Blooms April-October.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
chaparral ragwort *Senecio aphanactis*	Federal: None State: None CRPR 2B.2	Prefers alkaline sites in chaparral, cismontane woodland, and coastal scrub. Occurs 15-800 meters (50-2,625 feet).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA
		Blooms January-April (May).	
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 BSA.
western bristly scaleseed *Spermolepis lateriflora*	Federal: None State: None CRPR 2A	Rocky or sandy. Sonoran desert scrub. Occurs between 365–670 meters (1,205–2,210 feet). Blooms March–April.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA and the project falls outside the elevation range known for this species.
Sonoran maiden fern *Thelypteris puberula* var. *sonorensis*	Federal: None State: None CRPR 2B.2	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 BSA.
California screw moss *Tortula californica*	Federal: None State: None CRPR 1B.2	Sandy, soil. Chenopod scrub Valley and foothill grassland Occurs: 10-1,460 meters (30-4,790 feet).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Sensitive Natural Communities			
California Walnut Woodland			**Absent**
Cismontane Alkali Marsh			**Absent**
Southern California Coastal Lagoon			**Absent**
Southern California Steelhead Stream			**Absent**
Southern Coast Live Oak Riparian Forest			**Absent**
Southern Coastal Salt Marsh			**Absent**
Southern Mixed Riparian Forest			**Absent**
Southern Riparian Scrub			**Absent**
Southern Sycamore Alder Riparian Woodland			**Absent**
Southern Willow Scrub			**Absent**
Southern Cottonwood Willow Riparian Forest			**Absent**
Valley Needlegrass Grassland			**Absent**
Valley Oak Woodland			**Absent**

[1] Special-Status species known from the CNDDB and CNPS to occur on the Calabasas, Canoga Park, Malibu Beach, Topanga, Thousand Oaks, Point Dume, Santa Susana, Oat Mountain, and Simi 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
- **FE** - Federally Endangered under the Federal Endangered Species Act
- **FC** – A Federal Candidate for listing under the Federal Endangered Species Act

State
- **ST** - State Threatened under the California Endangered Species Act
- **SE** - State Endangered under the California Endangered Species Act

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.

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]
Invertebrates			
Santa Monica shieldback katydid *Aglaothorax longipennis*	Federal: None State: None Other: CNDDB	Endemic to the Santa Monica mountains, specifically to one known population at the mouth of Big Rock Canyon. Inhabits chaparral and streambeds, as well as introduced iceplants.	**Not Expected.** Although introduced iceplant in the form of Coppery mesembryanthemum (*Malephora crocea*) is present at the pump station site, this species is not expected within the BSA. Species known only from Big Rock Canyon, five plus miles north of the BSA.
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 BSA.
vernal pool fairy shrimp *Branchinecta lynchi*	Federal: FE State: None	Occur primarily in vernal pools, seasonal wetlands that fill with water during fall and winter rains and dry up in spring and summer. The majority of pools in any vernal pool complex are not inhabited by the species at any one time. Different pools within or between complexes may provide habitat for the fairy shrimp in alternative years, as climatic conditions vary.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
sandy beach tiger beetle *Cicindela hirticollis gravida*	Federal: None State: None Other: CNDDB	Inhabits areas adjacent to non-brackish water along the California coast 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 BSA.

Common Name ***Scientific Name*[2]**	**Status**[3]	**General Habitat Description**[4]	**Potential for Occurrence in the BSA**[5]
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. Most common beneath dune vegetation.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
monarch butterfly-California overwintering population *Danaus plexippus pop. 1*	Federal: None 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.** Although groves of large mature trees are present in the project vicinity, no overwintering colonies are known from the vicinity and there are no suitable water sources nearby.
quino checkerspot butterfly *Euphydryas editha quino*	Federal: FE State: None	Occurs in coastal sage scrub habitats in southern California and northern Baja California. Larvae rely on host plants *Plantago erecta* or *Castilleja exserta* found in meadows and upland sage scrub/chaparral.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA and the host plant for this species was not detected within the BSA.
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 BSA and project site is not located in Brentwood or Topanga Canyon.
Santa Monica grasshopper *Trimerotropis occidentiloides*	Federal: None State: None	Found in Los Angeles and Ventura Counties, preferring shrubland/chaparral habitats.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
Fish			
tidewater goby *Eucyclogobius newberryi*	Federal: FE State: None Other: SSC	Benthic fish that occurs in small coastal lagoons, lower reaches of streams, and uppermost portions of large bays. It is most abundant in the upper ends of lagoons created by small coastal streams. In lower sections of coastal streams, it occurs in fresh to brackish water (preferably less than 10 ppt).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
arroyo chub *Gila orcuttii*	Federal: None State: None Other: SSC	Habitat includes headwaters, creeks, and small to medium rivers, often intermittent streams; permanent, small to moderate-sized, moderate to high gradient streams with more than 50% of the habitat as runs and pools < 10 cm deep and reaches of permanent water more than 2 km long; requires some flow.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
steelhead – southern California DPS *Oncorhynchus mykiss irideus pop.10*	Federal: FE State: None	Found in Pacific Ocean tributaries from Aleutian Islands in Alaska south to Southern California. Anadromous forms are known as steelhead, freshwater forms as rainbow trout.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Reptiles			
California legless lizard *Anniella sp.*	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 BSA.
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 BSA.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
California glossy snake *Arizona elegans occidentalis*	Federal: None State: None Other: SSC	Most common is desert habitats but also occur in chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grass.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
coastal whiptail *Aspidoscelis tigris stejnegeri*	Federal: None State: None Other: CNDDB	Found in deserts and semiarid areas with sparse vegetation and open areas. Also 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 BSA.
San Bernardino ringneck snake *Diadophis punctatus modestus*	Federal: None State: None Other: CNDDB	Prefers moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests and woodlands.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
western pond turtle *Emys marmorata*	Federal: None State: None Other: SSC	Inhabits permanent or nearly permanent bodies of water in many habitat types, below 6,000 feet (1,830 meters). 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 BSA.
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 BSA.
two-striped garter snake *Thamnophis hammondii*	Federal: None State: None Other: SSC	Highly aquatic, found in or near permanent freshwater, often along streams with rocky beds and riparian growth. Known from coastal California from the vicinity of Salinas to northwest Baja California, from sea to about 7,000 feet (2,135 meters).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Amphibians			
arroyo toad *Anaxyrus californicus*	Federal: FE State: None Other: SSC	Federal listing refers to populations in the San Gabriel, San Jacinto, and San Bernardino Mountains	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
		only. Always encountered within a few feet of water. Tadpoles may require 2-4 years to complete their aquatic development.	
California red-legged frog *Rana draytonii*	Federal: FT State: None Other: SSC	Occurs in the vicinity of quiet, permanent pools of streams, marshes, and occasionally ponds. Occurs along the Coast Ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges, usually below 1200 meters (3,935 ft).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
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 1363 m (4460 ft). 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 BSA.
Coast Range newt *Taricha torosa*	Federal: None State: None Other: SSC	Endemic to California. Found in wet forests, oak forests, chaparral, and rolling grasslands. In southern California, drier chaparral, oak woodland, and grasslands are used.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Birds[18]			
Cooper's hawk *Accipiter cooperii*	Federal: None State: None Other: WL	Inhabits dense stands of live oak, riparian deciduous, or other forest habitats near water. Nests in deciduous riparian areas, usually near streams. Species has become a fairly common urban/suburban bird.	**Low:** Although forest habitats preferred by this species are absent from the BSA, large mature trees within the BSA and project vicinity may provide suitable nesting habitat for this species, which has become common in urban areas in southern California.

[18] The October 2022 IPaC data included one additional species, the yellow-billed cuckoo (*Coccyzus americanus*). Given that no potential to occur exists, and that the species remains absent from the CNDDB data, the PTO table was not modified to include this species.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
tricolored blackbird *Agelaius tricolor*	Federal: None State: ST 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 BSA.
southern California rufous-crowned sparrow *Aimophila ruficeps*	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.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
golden eagle *Aquila chrysaetos*	Federal: None State: None Other: FP	Uses rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops. Uncommon permanent resident and migrant throughout California, except center of Central Valley. Ranges from sea level up to 3,833 meters (0-11,500 feet). Habitat typically rolling foothills, mountain areas, sage-juniper flats, and desert.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Bell's sage sparrow *Artemisiospiza belli belli*	Federal: None State: None Other: WL	Breeds in dense chaparral and desert scrub habitats. Also found in low, generally dense coastal sage scurb and alkali desert scrub.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
burrowing owl *Athene cunicularia*	Federal: None State: None Other: SSC	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 BSA.
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 BSA.

Common Name ***Scientific Name*[2]**	**Status**[3]	**General Habitat Description**[4]	**Potential for Occurrence in the BSA**[5]
white-tailed kite *Elanus leucurus*	Federal: None State: None Other: FP	Inhabits herbaceous and open stages of most habitats, primarily in cismontane California. Prefers undisturbed, open grasslands, meadows, farmlands, and emergent wetlands for foraging.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
southwestern willow flycatcher *Empidonax traillii extimus*	Federal: FE State: SE	Found in riparian woodlands in Southern California.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
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. Also know to nest on tall buildings or bridges within urban environments.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
California condor *Gymnogyps californianus*	Federal: FE State: SE	Aerial, cliff, grassland/herbaceous, savanna, shrubland/chaparral, conifer woodland, hardwood woodland, mixed woodlands, standing snag/hollow tree. Usual habitat is 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. Condors often roost in snags or tall open-branched trees near important foraging grounds.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
coastal California gnatcatcher *Polioptila californica californica*	Federal: FT State: None Other: SSC	Obligate, permanent resident of coastal sage scrub below 2.500 feet (760 meters) 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 BSA.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
bank swallow *Riparia riparia*	Federal: None State: ST	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 BSA.
least Bell's vireo *Vireo bellii pusillus*	Federal: FE State: SE Other:	Summer resident of southern California in low riparian habitat in vicinity of water or in dry river bottoms, below 2,000 feet (610 meters).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Mammals			
pallid bat *Antrozous palidus*	Federal: None State: None Other: SCC, WBWG-H	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 BSA.
spotted bat *Euderma maculatum*	Federal: None State: None Other: SCC, WBWG-H	Prefers sites with adequate roosting habitat, such as cliffs. Feeds over water and along washes. May move from forests to lowlands in autumn. Found at a small number of localities, mostly in the foothills, mountains and desert regions of southern California. Preferred habitats include arid deserts, grasslands, and mixed conifer forests. Elevational range extends from below sea level in California to above 3,000 meters (10,000 ft).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.

Common Name ***Scientific Name*[2]**	**Status**[3]	**General Habitat Description**[4]	**Potential for Occurrence in the BSA**[5]
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 BSA.
western red bat *Lasiurus blossevillii*	Federal: None State: None Other: SCC, WBWG-H	Prefers edges or habitat mosaics that have trees for roosting and open areas for foraging. Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Not found in desert areas	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
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 BSA.

Common Name ***Scientific Name*[2]**	**Status[3]**	**General Habitat Description[4]**	**Potential for Occurrence in the BSA[5]**
California leaf-nosed bat *Macrotus californicus*	Federal: None State: None Other: SCC, WBWG-H	Roosts in rocky, rugged terrain with mines and caves. Forages over nearby flats and washes. Habitats occupied include desert riparian, desert wash, desert scrub, desert succulent shrub, alkali desert scrub, and palm oasis. California records are below 600 meters (2,000 feet).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
western small-footed myotis *Myotis ciliolabrum*	Federal: None State: None Other: WBWG-MH	The small-footed myotis is a bat of arid, upland habitats. It prefers open stands in forests and woodlands as well as brushy habitats. Streams, ponds, springs, and stock tanks are used for drinking and feeding. It occurs in a wide variety of habitats, primarily in relatively arid wooded and brushy uplands near water. This species is found from sea level to at least 2,700 meters (8,900 feet).	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
Yuma myotis *Myotis yumanensis*	Federal: None State: None Other: WBWG-LM	Distribution is closely tied to bodies of water, which it uses as foraging sites and sources of drinking water. Found in a wide variety of habitats ranging from sea level to 3300 m (11,000 ft), but it is uncommon to rare above 2560 m (8000 ft). Optimal habitats are open forests and woodlands with sources of water over which to feed.	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.
San Diego desert woodrat *Neotoma lepida intermedia*	Federal: None State: None Other: SCC	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 BSA.
American badger *Taxidea taxus*	Federal: None State: None Other: SCC	Uncommon, permanent resident found throughout most of the state, except in the northern North Coast area. Most abundant in	**Not Expected.** Potentially suitable habitat for this species is absent from the BSA.

Common Name *Scientific Name*[2]	Status[3]	General Habitat Description[4]	Potential for Occurrence in the BSA[5]
		drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	

[1] Special-Status species known from the CNDDB to occur on the Calabasas, Canoga Park, Malibu Beach, Topanga, Thousand Oaks, Point Dume, Santa Susana, Oat Mountain, and Simi 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 CDFW
WL – Designated as a Watch List species by CDFW
CNDDB - Tracked by CDFW in the CNDDB or considered locally sensitive.
WBWG-H - Designated by the Western Bat Working Group (WBWG) as High Priority - species that are imperiled or are at high risk of imperilment
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 WBWG as Low Priority – an indication that existing data supports stable populations of the species and that the potential for major changes in status in the future is considered unlikely.

[4] General Habitat Descriptions from CDFW.

[5] Historical occurrence data from CDFW.

APPENDIX C
Phase I Cultural Resources Assessment

PHASE I CULTURAL RESOURCES ASSESSMENT
VICTORY PUMP STATION REPLACEMENT PROJECT
WOODLAND HILLS, CITY OF LOS ANGELES,
LOS ANGELES COUNTY, CALIFORNIA

Prepared for:

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December 2019

U.S.G.S. Quadrangle: Canoga Park, CA

Keywords: adobe sites, Casa Blanca Adobe, Goodall Ranch, Rancho el Escorpion, Rancho las Virgenes

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EXECUTIVE SUMMARY

AECOM was retained by the Los Angeles Department of Water and Power (LADWP) to conduct a Phase I cultural resources assessment to identify potential impacts to cultural resources in compliance with provisions of the California Environmental Quality Act (CEQA) by the Victory Pump Station Replacement Project. A new pump station facility is required to replace the aged, temporary underground Victory Boulevard pump station. To support the new pump station, approximately 1,800 feet of pipeline would also be installed. These two components (pump station replacement and pipeline installation) would allow the facility to meet current standards and demands, fire flow requirements, and future system demands. LADWP is the lead agency.

A records search in connection with this project was conducted at the South Central Coastal Information Center (SCCIC) housed at California State University, Fullerton. The records search revealed that none of the proposed project area had been subject to previous cultural resources study and no cultural resources had been identified within the project area. However, one cultural resource (Site 19-192465) was documented within 200 feet of the project area.

A Sacred Lands File search conducted for this project by the Native American Heritage Commission did not result in the identification of documented sacred lands within the proposed project area.

A field survey was conducted as part of this assessment to identify the presence of any cultural resources in the proposed project area. One resource, the Victory Pump Station, was recorded during the field survey. The approximate location of 19-192465 was visited, but no archaeological remains associated with the site were observed. The field survey did not result in the identification of any archaeological resources.

The Victory Pump Station was evaluated for inclusion in the California Register of Historical Resources (CRHR) and as a Los Angeles Historical-Cultural Monument (LAHCM). The resource does not appear eligible for inclusion in the CRHR or listing as a LAHCM.

Although no cultural resources were identified within the project area during the course of this Phase I background research and cultural resources field survey, archaeological resources may be located within portions of the project area. The project area is located within the traditional territory of the *Gabrielino/Fernandeño* Indians. Historic use of the project area extends at least as far back as the nineteenth century. Two locations, at the east and west ends of the Calvert Street pipeline alignment, have been identified as having a moderate to high sensitivity for cultural resources. As such, it is recommended that archaeological monitoring be conducted within 200 feet of the intersection of Pat Avenue and Calvert Street (due to the proximity of resource 19-192465) and within 200 feet of Bell Creek South Branch during ground disturbing activities. Archaeological monitoring should be conducted by a qualified archaeological monitor who is working under the guidance of an archaeologist meeting, at a minimum, the standards of the Secretary of the Interior. Ground disturbing activities include, but are not limited to,

geotechnical boring, boring, trenching, grading, excavating, and the demolition of building foundations. The archaeological monitor will observe ground disturbing activities within the required areas to depth.

In the event archaeological resources are encountered during archaeological monitoring, the LADWP construction manager may halt work in the immediate vicinity until the discovery is assessed by the project archaeologist, and appropriate treatment determined. Additional recommendations may be made at that time.

If human remains are discovered, work in the immediate vicinity of the discovery will be suspended and the Los Angeles County Coroner contacted. If the remains are deemed Native American in origin, the Coroner will contact the NAHC and identify a Most Likely Descendant (MLD) 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.

Upon completion of monitoring of ground disturbing activities associated with the identified segments of this project, an Archaeological Resources Monitoring Report shall be prepared documenting construction activities observed, including copies of all daily archaeological monitoring logs. If discoveries are made during ground disturbing activities, the report will also document the associated cultural materials and the methods of treatment as determined appropriate by the archaeologist. The report will be placed on file at the SCCIC upon its completion.

INTRODUCTION

This document reports a Phase I cultural resources assessment in connection with the Victory Pump Station Replacement Project (proposed project). The Los Angeles Department of Water and Power (LADWP) proposes to construct a new pump station to replace the existing aged, temporary underground pumping facility (the existing facility) at Victory Boulevard in Woodland Hills. To allow for optimum performance of the proposed new pump station, approximately 1,800 linear feet of pipeline would be installed along Calvert Street from Sylvan Street to Valley Circle Boulevard as part of the proposed project. The proposed project would allow the facility to meet current standards and demands, fire flow requirements, and future system demands.

This document is prepared in support of a Draft Initial Study/Mitigated Negative Declaration prepared in accordance with CEQA, Public Resources Code Section 21000 *et seq.* and the State CEQA Guidelines, CCR Section 15000 *et seq.*

REPORT ORGANIZATION

This report is organized following the *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* guidelines, Department of Parks and Recreation (DPR), Office of Historic Preservation, State of California, 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, and proposed project work. Next, the environmental and cultural settings of the proposed project area are presented. This is followed by the archival research methods and results. Then survey methodology and results are described. The final section summarizes the results of the cultural resources investigation and provides recommendations and conclusions for project mitigation.

PROJECT PERSONNEL

AECOM personnel involved in the cultural resources assessment are as follows: Marc A. Beherec, Ph.D., RPA, served as report author, conducted archival research, and conducted archaeological survey; Christy Dolan, M.A., RPA, performed senior review; and Alec Stevenson, M.A., RPA, provided graphics and GIS support. Resumes of key personnel are included in Appendix A.

PROJECT DESCRIPTION

PROJECT LOCATION AND SETTING

The proposed new pump station would be located on a 75-foot long by 50-foot wide easement operated by LADWP. The easement is located on a residential parcel on the northern side of Victory Boulevard, approximately 545 feet west of Pat Avenue in the Woodland Hills community of the San Fernando Valley region of Los Angeles. The pump station replacement site is generally bound by the rear yards of surrounding single-family residential properties to the west, north, and east, and by the Victory Boulevard right-of-way (ROW) to the south. The proposed project also involves the installation of approximately 1,800 linear feet of pipeline within Calvert Street between Pat Avenue and Sylvan Street. Figure 1 shows the regional vicinity of the project site. Figure 2 shows the location of both project components, including the proposed pump station replacement site and the proposed pipeline alignment.

The pump station replacement site is currently developed with an underground pumping facility containing two 500 gallon-per-minute (gpm) pumps buried in a 9-foot diameter steel tank. A 300 gpm internal combustion fire pump is also located on the LADWP property. The pump station replacement site is set back approximately 18 feet from the road boundary and is bounded by a chain link fence with a large access gate. The existing pump station is enclosed within a wooden fenced area that screens the station from public view. Figure 3 shows the location of the pump station replacement site.

The proposed pipeline alignment would be located within the existing ROW along Calvert Street, approximately 620 feet southeast of the pump station replacement site. The proposed pipeline alignment commences at the intersection of Calvert Street and Pat Avenue and travels approximately 1,800 linear feet east on Calvert Street, concluding at the intersection of Calvert Street and Sylvan Street. The excavated trench would be 5 feet wide by 7 feet deep, and would span the approximately 1,800 feet length of the proposed pipeline alignment. Figure 4 shows the location of the proposed pipeline alignment.

The land surrounding the pump station replacement site is moderately sloped in a west to east direction, with an elevation of approximately 1,050 feet above sea level (ASL) at the existing facility, trending down to approximately 900 feet ASL at the easternmost point of the proposed pipeline alignment.

PROJECT DESCRIPTION

A new pump station facility is required to replace the aged, temporary underground Victory Boulevard pump station. To support the new pump station, approximately 1,800 feet of pipeline would also be installed. These two components (pump station replacement and pipeline installation) would allow the facility to meet current standards and demands, fire flow requirements, and future system demands. The two proposed project components would be implemented as described below.

Pump Station Replacement

The pump station replacement would involve the construction of a new permanent pump station building and the decommissioning of the existing temporary underground pump facility. The proposed new pump station building would be approximately 25 feet tall by 31 feet wide, consisting of concrete walls, windows, wood plank finishing, and metal roofing. The new pump station building would also include exterior security lighting. A 14-foot-wide access roller door would allow for the entry of maintenance vehicles, including trucks. A control room and a restroom would be included to provide office space and amenities for workers. Equipment would be installed within the control room to record flow and pressure via remote monitoring with a Supervisory Control and Data Acquisition system.

The new pump station building would house a total of three new pumps, two of which would be 1,100-gpm capacity electrical pumps to supply potable water to the service areas. While the existing pumps have a nameplate capacity of 500 gpm, they were installed in 1967 when the size of planned development in the surrounding service area was considerably smaller than existing areas of development currently served by the pump facility. Furthermore, as mentioned above, the existing pumps have been operating above their nameplate capacity (in the range of 850 to 1,000 gpm) due to higher suction grades from the adjacent 1,305-foot elevation service zone. Therefore, the replacement pumps would have a capacity that reflects the actual current demand for water in the service areas, increasing reliability and efficiency, and reducing wear on the new pumping facilities. As possible, depending on actual demand, these pumps may be cycled, idling one pump at a time, to further extend their lifetime. The third pump would be a 4,000-gpm fire pump, which would replace the existing 300-gpm fire pump to provide the fire flow capacity currently required by the Los Angeles Fire Department, given the expanded area of development since it was first installed. The fire pump would be powered by an internal combustion engine to run independently of the electric power system, which may not be reliable during a fire event. Installing the new pumps within an enclosed structure would serve to reduce noise from operation of the pumps and associated equipment.

Construction of retaining walls surrounding the proposed new pump station building would be required to accommodate the difference between the existing ground elevation and the pump station building floor. Additionally, a new exterior concrete pad would be installed in the northwest corner of the pump station replacement site to accommodate a new electrical transformer.

The existing fence and gates at the site would be removed for the construction of the new pump station building. During construction, temporary fencing would be erected. Following the completion of the new pump station, new permanent fencing would be erected. This would include the establishment of two new access gates and associated driveways. The new access gates would be sliding gates, 12-feet-wide (eastern driveway) and 16-feet-wide (western driveway), to allow for ease of truck and worker access. The establishment of the eastern driveway would require relocation of an existing street light, an electrical pull box, and a fire hydrant. Additionally, three mature trees would require removal to allow for construction. The eastern portion of the project site would be paved in order to provide adequate space for vehicle ingress and egress.

The following water line connections would be required to support the construction and operation of the new pump station:

- Relocate the existing 12-inch discharge line to outside the new building footprint prior to start of grading.
- Connect the new 12-inch suction line to the existing 12-inch suction line on Victory Boulevard.
- Connect the new 12-inch discharge line to the existing 12-inch discharge line on Victory Boulevard.

The existing pump facility would remain in service for the duration of construction until the new pumps are operational. Upon operation of the new pump station, some existing pump appurtenances would be removed and the existing underground pump station would be sealed and buried in place. The existing above-ground equipment, including electrical cabinets, light pole, meter vault, diesel pump, electrical conduit, and fencing would be removed. The area containing the existing pump station and associated equipment would be filled and paved over to provide vehicular access at the new pump station.

Pipeline Installation

To support the new pump station, approximately 1,800 linear feet of pipeline would be installed along Calvert Street between Pat Avenue and Sylvan Street. The westernmost approximately 500 linear feet of pipeline would be installed between Pat Avenue and Valley Circle Boulevard. This segment would consist of a new 12-inch diameter pipe, which would replace the existing 12-inch diameter pipeline at that location. The existing pipeline would be abandoned in place. The easternmost approximately 1,300 linear feet of pipeline would be a new, 8-inch diameter pipeline connected from the new 12-inch diameter pipeline at Valley Circle Boulevard to the existing Granada Trunk Line at Sylvan Street. The new, 8-inch diameter pipeline would be installed parallel to an existing 8-inch mainline in Calvert Street, which would remain functioning in place to support the pump station operations.

Source: Esri Maps & Data, 2019.

Figure 1
Regional Map

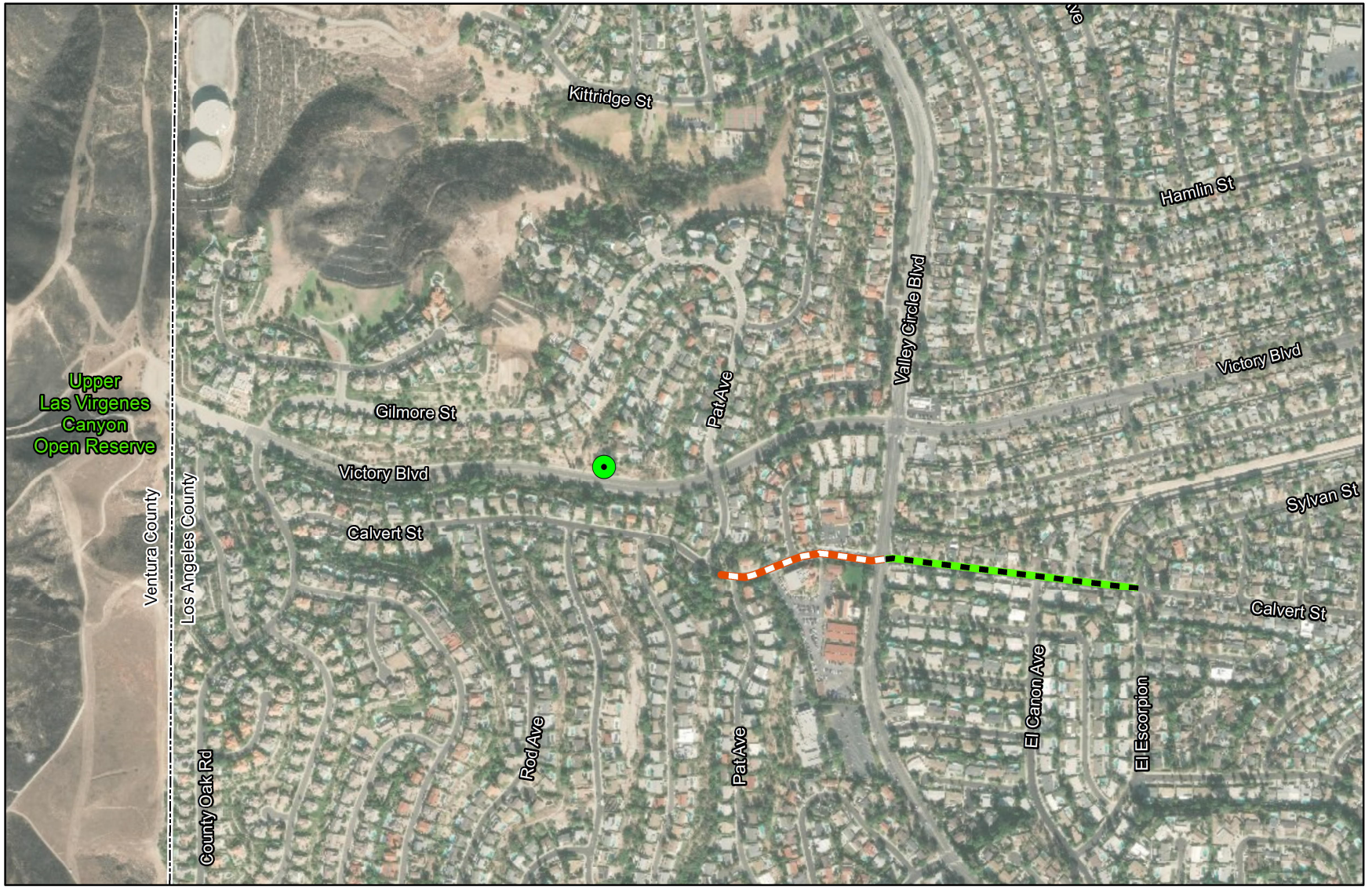


Figure 2

Project Vicinity Map

Source: Esri 2019; Created by: AECOM, 2019.

0 50 100 Feet

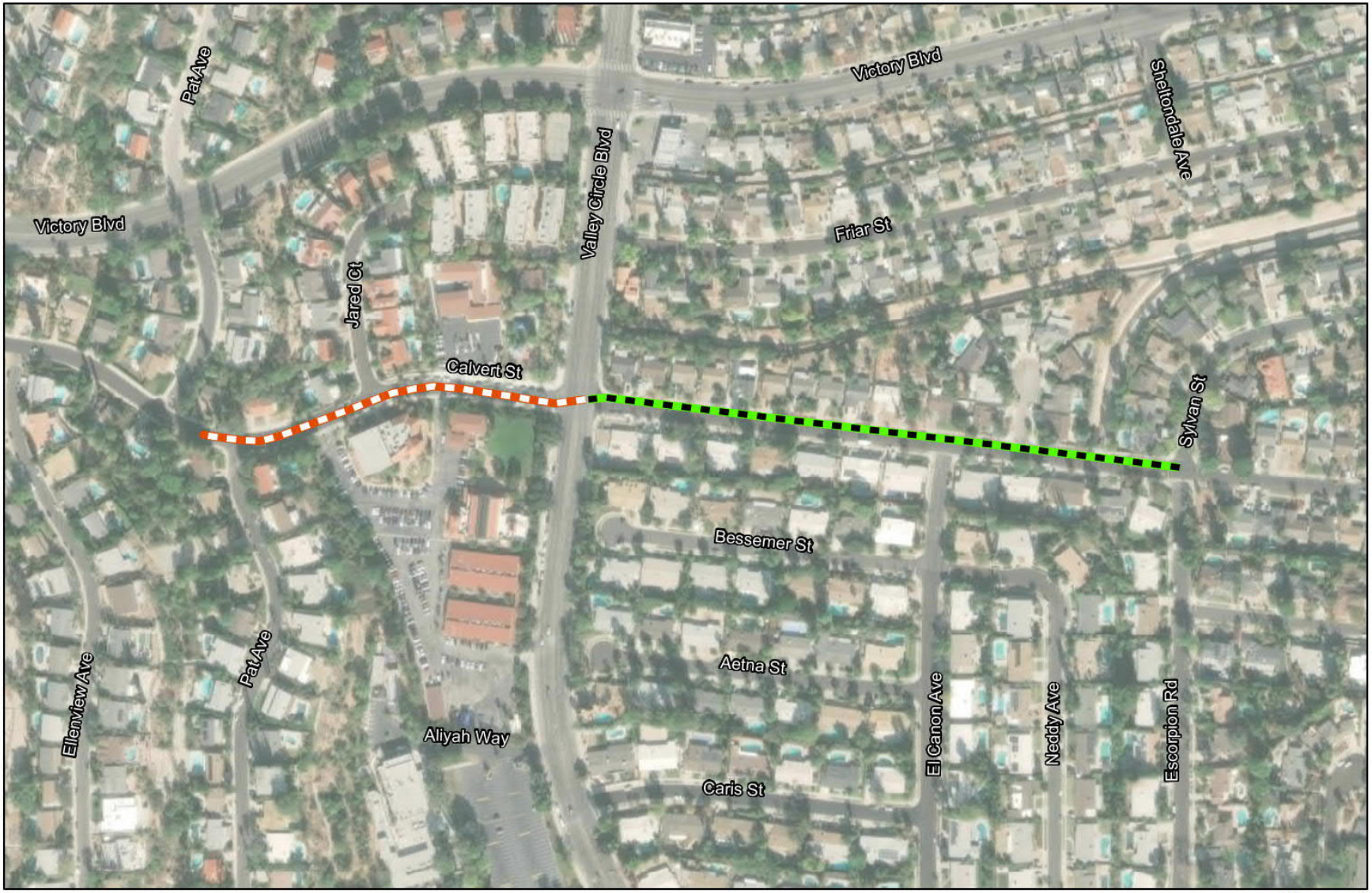
1" = 100'

Approximate Pump Station Replacement Site

Proposed Construction Laydown Area

Figure 3

Proposed Pump Station Replacement Site



Source: Esri 2019; Created by: AECOM, 2019.

0 150 300 Feet

1" = 300'

Proposed New Pipeline Installation

Proposed Pipeline Replacement

Figure 4

Proposed Pipeline Alignment

SETTING

ENVIRONMENTAL SETTING

The project is located at the eastern edge of the Simi Hills, where the hills meet the San Fernando Valley. The generally Mediterranean climate is characterized as mild, with warm, nearly rainless summers and mild winters with only occasional storms. Natural vegetation communities located within the vicinity of the Project consist mostly of willow woodland, mulefat scrub, and coastal sage scrub. Historically, economically important species such as yucca (*Hesperoyucca whipplei*) and various species of oak (*Quercus spp.*) might have been found in the near vicinity. Also present are areas of disturbed and non-native vegetation including park, ruderal, and pond that can be characterized as primarily park/ruderal habitat. Vegetation in the immediate vicinity of the proposed project typically consists of landscaped gardens and lawns associated with private residences and parkways adjacent to sidewalks. The area immediately to the north of the existing pump station is a residential rear-yard vegetated with mature trees. Several ornamental shrubs and trees are also located within the boundary of the existing pump station site. Ruderal grassland occurs in disturbed areas where vegetation consists mainly of early successional native herbaceous plants. Black mustard is common in this habitat as are several nonnative grasses, including ripgut brome (*Bromus diandrus*) and foxtail chess (*Bromus rubens*). Fauna historically found in the area include black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), and numerous rodents such as Botta's pocket gopher (*Thomomys bottae*), and pocket mice (*Perognathus* spp.). Red-tailed hawks (*Buteo jamaicensis*) were commonly found, as were western scrub jays (*Alphelocoma californica*), mourning doves (*Zenaida macroura*), and California quail (*Callipepla californica*).

CULTURAL SETTING

As a framework for discussing the types of cultural resources that might be encountered in the vicinity of the proposed project, the following section summarizes our current understanding of major prehistoric and historic developments in and around Los Angeles and the San Fernando Valley. This is followed by a more focused discussion of the history of the Project area itself.

Prehistoric Overview

While people are known to have inhabited southern California beginning at least 13,000 years Before Present (B.P.) (Arnold et al. 2004), the first evidence of human occupation in the Los Angeles area dates to at least 9,000 years 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 exploited. 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., a number of 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 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 atlatal 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 *Fernadeño*, whose name was derived from nearby Mission San Fernando. The *Fernadeño* 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. Often members of both tribes shared a single village, 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 forty 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, 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]).

Historic 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 Fernadiño Rey de España*, the seventeenth of the twenty-one 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, and 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.

At least ten important Gabrielino or Fernandino villages were located within the San Fernando Valley. The most populous of these was *Pasheeknga*, located near where the Mission was established. 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). This lifestyle change also brought with it 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, the majority of these holdings quickly fell into non-Indigenous hands. Mission buildings were abandoned and quickly 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).

The San Fernando Valley mission life, in particular, was not immediately affected in 1822 when New Spain gained its independence from Spain. In 1822, there were 1,001 indigenous individuals living within the mission. Native Americans continued agricultural work and cultivated wheat, barley, corn, beans, and peas. They also tended to their fruit trees, cattle, horses, and sheep, and vineyards (Robinson 1942). In 1834, though, the *desecularization mission* of post-Independence Mexico reached the San Fernando Mission (Robinson 1942). Secularization brought about a progressive deterioration at Mission San Fernando. Annual loses in farming were recorded and the Indigenous population also increasingly drifted away from the mission center (Robinson 1942, 1963). With the decline of mission life, the physical mission itself, the symbol of centrality, also dissolved. Indians disbanded and mission celebrations broke down.

Gold was discovered in 1842, north of the ex-Mission San Fernando in Placerita Canyon. The discovery of gold prompted the migration of many prospectors who worked the canyon for several years and yielded six to eight thousand dollars each year (Robinson 1942).

In 1846, the Mexican government authorized Pio Pico to take any steps necessary to protect Alta California from American invasion. Consequently, Pico sold the greater part of what was referred to as "*Rancho Ex-Mision de San Fernando*" in 1846 for $14,000. In addition to payment, de Celis agreed to tend to the aging Native Americans on his newly acquired land and respective their agricultural autonomy. More than 116,000 acres were sold to a native of Spain, Eulogio de Celis. With the exception of Rancho Encino, Rancho El Escorpion, and a few hundred acres around the mission, de Celis nearly purchased the entire valley. This sale effectively marked the valley's transition to private ownership.

De Celis returned to Spain in 1853. His lessee (and later part owner), Andres Pico, remained at Rancho Ex-Mission of San Fernando and occupied the former mission buildings. In 1862, Andres Pico transferred his interests in the San Fernando Rancho to his brother, Pio. On July 2, 1869, Pio Pico once again sold the land. This time, however, the sale excluded certain areas such as 1,000 acres near the mission. Pico in turn used the money to build a hotel in Los Angeles which stands today, the Pico House. The sale was made to the San Fernando Farm Homestead which was headed by Isaac Lankershim and I.N. Van Nuys. The Association fought the heirs of Eulogio de Celis in court and in 1871, the District Court granted the Association full title to the southern portion of the valley. Under the administration of Lankershim and Van Nuys, the southern portion of the valley focused on wheat farming.

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 United States 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 United States loomed large, the Mexican government increased the number of land grants in an effort 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 Pio Pico sold the San Fernando Valley to Eulogio de Celis for $14,000 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 United States 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 United States 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 United States 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 which 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 twentieth 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 five 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. During the first three decades of the 20th century, more than 2 million people moved to Los Angeles County, transforming it from a largely agricultural region into a major metropolitan area (Gumprecht 1999).

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 United States, 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

El Escorpion

The area to the north and northwest of the project area was important to both the Gabrielino and the Chumash. A village called Escorpion was known to the Spanish even before Mission San Fernando was founded. On September 17, 1783, the Santa Barbara Presidio journal mentions

plans to carry out a raid on the Rancherias of Conejo (west of the project area) and El Escorpion in retaliation for stealing cattle (Cohen 1989:1). A village stood in the upper stretches of Las Virgenes Canyon, northwest of the project area. The Rancho area, or one of the villages in the area, was known as ‘Atavsanga to the Fernandeno and Huwam to the Venterneo Chumash (McCawley 1995:35-36). Another Gabrielino village within the boundaries of Rancho el Escorpion was known as Totoonga; according to J.P. Harrington’s informant all its people died of smallpox.

The Rancho el Escorpion area was a special place. The vicinity was haunted by a large animal, like a snake, but with legs. This creature is said to be the source of the name Escorpion, although others say the place is named Escorpion because of Castle Peak’s similarity to a scorpion’s tail (Cohen 1989:1). The creature lived in a cave in the vicinity, through which it could pass through the hills, possibly as far as the sacred area around Burro Flats. Today’s Castle Peak, known to the Ventureno Chumash as Kaselewun, meaning “tongue,” was the site where Sparrow Hawk killed the sorcerer Munits. A bead shrine was located at the top of the peak. Munits lived in a cave near Castle Peak, which was said to connect to other caves in the vicinity (McCawley 1995:36). These places are all north and northwest of the project area.

A place called Kwaru or Kwaa’ronga, the Frog, or “el Aguage de los Guares,” the Water-hole of the Twins, was located two miles southeast of Castle Peak. The place was located in a “corner of hills” beside a group of oak trees by an old adobe ranch house (McCawley 1995: 37). The location and description appear to be consistent with the “casa blanca” building located on the Rancho las Virgenes, southeast of the project area, as described in the map research section below. This place may have had religious significance. Twins, Frog, and springs are important recurring motifs in Southern California Native American mythology.

When Mission San Fernando was established, El Escorpion was located at the far west end of the Mission’s sphere of influence. Mission San Fernando was secularized, few of its vast landholdings were granted to the Native Americans as was intended. A major exception was Rancho el Escorpion. Three Ventureno Chumash Indians, Jose Odon, his son-in-law Urbano, and Urbano’s son Miguel, a group with family ties to the Native American village el Escorpion, petitioned Governor Pio Pico for approximately two square leagues in the Escorpion area in 1845. Pico granted the trio half a square league. Juan Sepulveda, the Second Alcalde of Los Angeles, was put in charge of surveying the grand and establishing landmarks at its four corners, and Sepulveda marked out one-quarter of one league for Rancho el Escorpion (Cohen 1989; Johnson 2006). The eastern part of the project area, including the portion of the pipeline extending from approximately Pat Avenue east, is located on the former Rancho el Escorpion.

After the American takeover of Alta California Rancho el Escorpion remained in its grantees hands. However, American courts, finding against the American Land Commission, granted the three Native Americans the half league to which they were entitled by Governor Pico’s grant. A sizable Native American community continued on the rancho, augmented by additional settlers. The most notable of the newcomers was the Basque Miguel Leonis, who married into Odon’s family. By fair means and foul, Leonis eventually acquired all of Rancho el Escorpion. He also acquired a parcel of land northwest of the rancho itself; the ranch buildings had been unwittingly

constructed there, outside of the boundaries of the rancho itself. Failing to pay the taxes, Leonis lost the rancho, which was homesteaded beginning in the 1890s (Cohen 1989).

The homesteader who eventually took possession of the western portion of the project area, including the Victory Pump Station property itself, was Frank Goodall. Goodall was a farmer his whole life. Born in Missouri in 1856, he came to Santa Clara County, California, in 1875, moved to San Diego County in 1879, and finally came to Los Angeles County in 1882; in each place he worked in farming. In 1882 he purchased sixty-five acres near Downey where he built a home, planted an orchard, raised horses, and, in 1887, married Sue Adams, the daughter of a prominent local Southern Methodist Episcopal pastor (Lewis Publishing Company 1889: 493).

In 1891, Frank Goodall occupied 160 acres which he successfully patented on June 13, 1899. Frank's family initially stayed in Downey so Erle could attend school, but the family relocated to the homestead in the early 1900s. The homestead was described in 1934 as "at the head of the present Calvert street" (Keffer 1934:197), which at that time was approximately where the intersection of Pat Avenue and Calvert Street are today. Legally, the patented land was described as the "South half of the North East quarter, and the North half of the South East quarter of Section nine, in Township one North, of Range seventeen West, of San Bernardino Meridian, in California, containing one hundred and sixty acres" (McKean 1899). "He had a big ranch, Mr. Goodall," one woman whose father was one of Goodall's ranch hands recalled (Anne Margaret "Queenie" Gaines Billings, qtd. in Ovnick 2015:55). The Goodall family became prominent local citizens, both for their participation in civic and county affairs and for the family's longevity in the Canoga Park area.

In 1913, the year Owens Valley water made farming more profitable in the valley, Erle Goodall joined his father in farming, horticulture, and ranching. Later Erle extended the family property by establishing a 40 acre orchard at the corner of Shoup Avenue and Victory Boulevard. Erle went on to be active in the Los Angeles County Farm Bureau, the California Farm Bureau Federation, the Canoga Park Chamber of Commerce, and the American Boy Scouts. Erle married Martha Schildmeyer and the two had two children, and family members still occupied the Goodall homestead at least as late as 1934 (Keffer 1934:197-198).

Meanwhile, the San Fernando Valley, supplied by LADWP developed into what has been called "America's Suburb." What had been small farming communities became annexed to the City of Los Angeles and farms and ranches were subdivided and turned into suburban tracts and single-family homes. In 1912 the community of Owensmouth was formed at the west end of the San Fernando Valley, where the Los Angeles Aqueduct debouched. The new community was named to celebrate the aqueduct, as the new mouth of the Owens River. The community was annexed to the City of Los Angeles in 1917 and was renamed Canoga Park after an existing train station in 1931 (Roderick 2001). Many of the residences that line east end of the project area were built up as Canoga Park was developed in the middle twentieth century.

The community of West Hills was formed from the western end of Canoga Park in 1987. In the middle to late twentieth century, the western part of Canoga Park had remained largely undeveloped, due in part both to its remoteness and its topography. As it was built up,

homeowners wanted to create a new identity and increase property values by disassociating their properties from the aging factories and strip malls of Canoga Park. However, West Hills remains a portion of the City of Los Angeles (Fuentes 1988).

ARCHIVAL RESEARCH

Archival research for this project was conducted by AECOM archaeologist Marc A. Beherec, Ph.D., RPA, on February 27, 2019, at the SCCIC housed at California State University, Fullerton. The SCCIC is the Information Center of the CHRIS which maintains information about Ventura and Los Angeles Counties. The research focused on the identification of previously recorded cultural resources within the Project Area, as well as within a 0.5-mile radius of the Project Area (Study Area). The archival research included review of previously recorded archaeological site records and reports, historic site and property inventories and historic maps. Inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California State Historic Resources Inventory (HRI), California Historical Landmarks and Points of Interest, and the list of Los Angeles Historic-Cultural Monuments were also reviewed to identify cultural resources within both the Project and Study Areas.

ARCHIVAL RESEARCH AND PREVIOUS STUDIES

Previous Cultural Resources Investigation Reports

The records search revealed that a total of 6 cultural resource investigations were previously conducted within 0.5-mile of the project area (Table 1). These cultural resource investigations include: four surveys, one survey and monitoring report, and one critique of the cultural resources section of an EIR. Approximately 20 percent of the records search area, and none of the project area, has been previously surveyed and/or investigated. A map showing the locations of previous investigations is included in confidential Appendix B.

Table 1. Previous Surveys Conducted within 0.5-mile of the Project Area

Report	Author	Description	Date
LA-00256	Chace, Paul G.	Archaeological Survey and Monitoring for Valley Circle Estates, City of Los Angeles	1988
LA-02730	King, Chester	Review of Cultural Resource Element of Ahmanson Ranch EIR	1992
LA-07142	Kyle, Carolyn E.	Cultural Resource Assessment for AT&T Wireless Facility 950-014-222d Located at Twisted Oak Drive and Wooded Vista Road, City of Woodland Hills, Los Angeles County, California	2004
VN-00714	Van Horn, David M.	Archaeological Survey Report: The Ventura County Portion of the Las Virgenes Ranch	1980
VN-01174	Bissell, Ronald M.	Cultural Resources Summary of the Ahmanson Ranch Property, 5500 Acres in Ventura County, California	1989
VN-03152	King, Chester	Archaeological Assessment of Areas Burned by the Topanga Fire, Ventura and Los Angeles Counties, California	2006

Previously Recorded Cultural Resources Site Records

The records search also indicated that a total of two cultural resources have been previously recorded within 0.5-mile of the project area (Table 2). One is a prehistoric site, and the other is a historic site. Neither is within the project area, although the mapped location of the historic site is located within 200 feet of the project area. A map showing the locations of previously recorded sites is included in confidential Appendix B.

Table 2. Previously Recorded Cultural Resources within 0.5 Mile of the Project Footprint

Permanent Trinomial (CA-LAN-)	Primary Number (P-19)	Other Identifier	Description	Date Recorded/ Revisited
1413	001413	Valley Circle Estates #1	Lithic scatter; 5 cobble manos, 4 quartzite hammer stones, 2 quartzite choppers, and 3 quartzite and chalcedony flakes	1979
None	192465	Casa Blanca	House and barn	2018

Resource 19-001413 (CA-LAN-1413) is a sparse lithic scatter located on the crest of a ridge southwest of the project area. The site was encountered during construction monitoring; no artifacts or other site components were exposed on the surface (Chase 1988). Artifacts observed included 5 cobble manos, 4 quartzite hammer stones, 2 quartzite choppers, and 2 quartzite flakes and 1 chalcedony flake. According George Torren's site form, "None of the materials were closely associated; they were essentially like a series of isolated finds along the ridge" (Torren 1988). "Technically, these artifacts might be considered as insignificant isolated finds because of their very dispersed situation," Paul Chase's report notes (Chase 1988: 2).

Resource 19-192465 is the former location of a house and barn in the approximate location of the west intersection of Calvert Street and Pat Avenue. The resource is described by Albert Knight and Ray Vincent as a white adobe shown in maps as early as 1869 and aerial photographs as late as the middle twentieth century. They also note that anthropologist J. P. Harrington mentions a "new white house" halfway between Calabasas and Escorpion, i.e., in this approximate location (Knight and Vincent 2018). The resource was identified during archival research only; no field visit was conducted during the preparation of the site form. The site form for this resource is attached to this report as confidential Appendix D.

Research discussed in the Historic Maps subsection, below, suggests that Knight and Vincent conflate two different building complexes. One building is a "casa blanca" adobe located southeast of the project area. That building was constructed on the Rancho las Virgenes before 1869. The building complex formerly located adjacent to the project area is the ca. 1891 home of Frank Goodall. Goodall's Ranch was located in the approximate location described by Knight

and Vincent. Goodall's house may be the "new white house" mentioned by Harrington. Harrington conducted his fieldwork in the early twentieth century, and a house constructed after 1891 is more consistent with Harrington's description of a "new white house" than a pre-1869 adobe would be. The materials used to build the Goodall home are unknown but are more likely to have been frame or brick than adobe.

California Historic Landmarks

A search of California Historic Landmarks identified no landmarks within 0.5 mile of the project area.

Los Angeles Cultural Monuments

Los Angeles Historic-Cultural Monuments (LAHCMs) are sites in Los Angeles that have been designated by the Los Angeles Cultural Heritage Commission. A search of the LAHCMs found no LAHCMs within 0.5 mile of the project area.

Historic Maps and Aerial Photographs

Historic map research based on historic land claim maps, GLO maps, and USGS topographic maps was conducted in order to gain an understanding of the level of disturbance in the area as well as identify possible location of archaeological sensitivity in the project footprint.

The pipeline along the easternmost part of the project area extends into portions of Rancho Ex-Mission San Fernando and the southwestern corner of Rancho el Escorpion. An 1861 map of Rancho el Escorpion, then owned by Pierre Domec, shows buildings in Bell Canyon to the north of the project area, but no improvements in the project area itself (*Pierre Domec – Escorpion* 1861). An 1862 map of Township 1 North and Township 2 North shows just four claimed tracts: Rancho el Escorpion partially overlapping the project area, M. Leonis' tract to the northwest of Rancho el Escorpion, and two other properties more than three miles northeast of the project area. No improvements are shown on the map (Waldemar 1862).

An 1871 *Plat of the Ex Mission de San Fernando Finally Confirmed to Eulogio de Celis* shows north-south roads through Rancho el Escorpion (Figure 5). Bell Creek South Fork is shown as the closest water source. The closest building within the rancho itself to the project area is a building in the southwest quadrant of the rancho. Another building is shown on what is labeled Rancho las Virgenes, southeast of the project area; this is the "casa blanca" adobe mentioned by Knight and Vincent in the site form for resource 19-192465 (Knight and Vincent 2018). No improvements appear in the project area itself (*Plat of the Ex Mission de San Fernando* 1871).

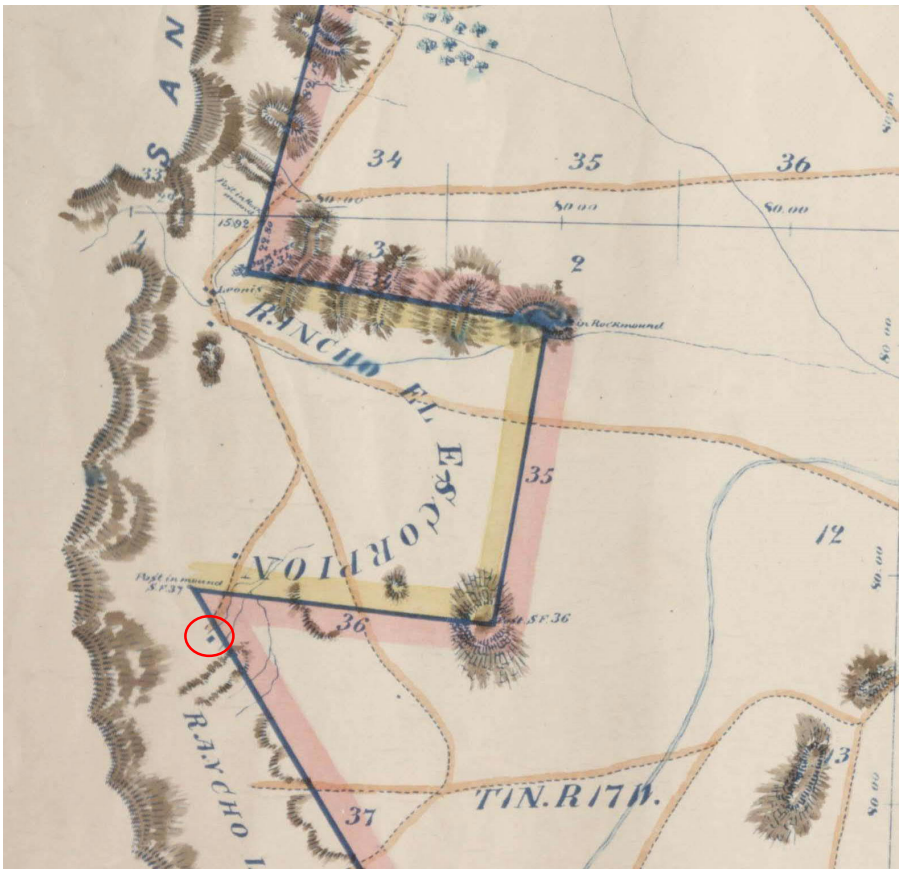


Figure 5: ***Plat of the Ex Mission de San Fernando Finally Confirmed to Eulogio de Celis*** **Showing Rancho El Escorpion and Vicinity. The "Casa Blanca" Circled in Red (*Plat of the Ex Mission* 1871).**

Knight and Vincent based their site recordation on an undated and trimmed plat map located at the Leonis Adobe Museum. The map includes notes dated 1869 and 1877. One building, described as a "casa blanca," is shown in Section 9, south of Rancho el Escorpion, and southeast of the project area (Knight and Vincent 2018: 12). This plat map shows no improvements in the project area itself.

A GLO map dated 1895 shows two structures just west of the proposed pipeline alignment (Figure 6). The buildings stand beside a drainage. The western building is labeled "Barn," and the eastern building is labeled "Goodhall's [*sic*] h[o[use]]". Another building is also shown in Section 10, southeast of the project area, and is labeled "Mitchell's h[o[use]]". Mitchell's House is probably the same structure as the "casa blanca" of Knight and Vincent's plat map and the Rancho las Virgenes building of the 1871 *Plat of the Ex Mission de San Fernando Finally Confirmed to Eulogio de Celis*.

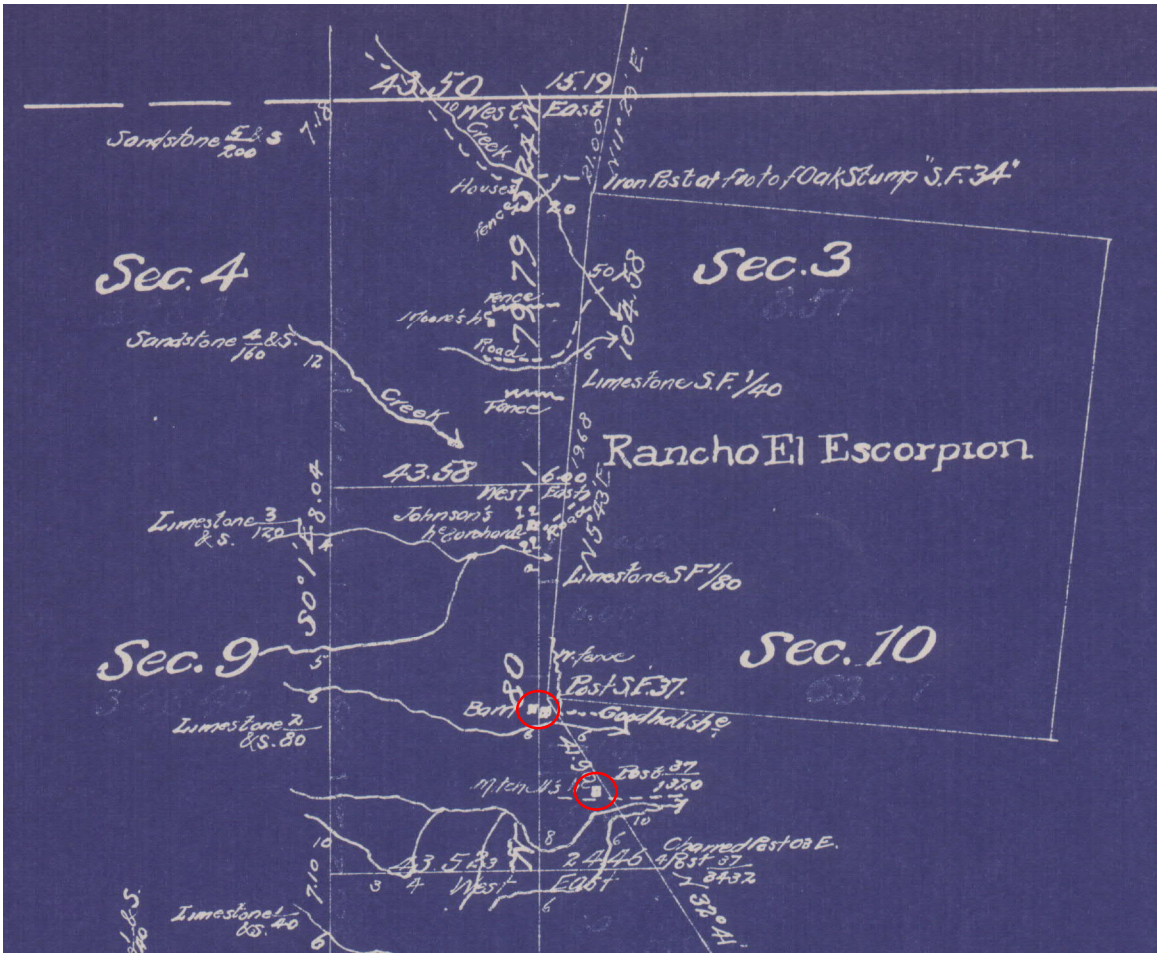


Figure 6: GLO Map Showing Rancho El Escorpion and Vicinity. Goodall Homestead Circled At Left, Casa Blanca Circled at Right.

Unpaved roads appear in the 1903 Calabasas 1:62500 USGS maps, including a north-south route which appears to be a predecessor to Valley Circle Boulevard, and an east-west route that appears to be today's Calvert Street. A track follows the approximate course of Bell Creek South Fork. The east-west route ends at Goodall's house, a building just west of the project area (although the USGS map shows it sanding within Section 10). Another building stands to the southeast of the project area; this is the Rancho las Virgenes building, Knight and Vincent's "casa blanca" (USGS 1903).

An aerial photograph dated December 31, 1927 shows the Goodall property and the Rancho las Virgenes adobe (Figure 7). A large building, probably a barn, stands on the Goodall property, next to an orderly orchard at the end of a dirt road. Vincent and Knight reproduce this photo and erroneously identify the large structure as the "casa blanca" adobe (Knight and Vincent 2018: 4). To the southeast, a much smaller structure is visible. The smaller structure is more similar in size to adobe buildings and to other houses seen in the aerial photo. This is the "casa blanca" Rancho las Virgenes adobe.

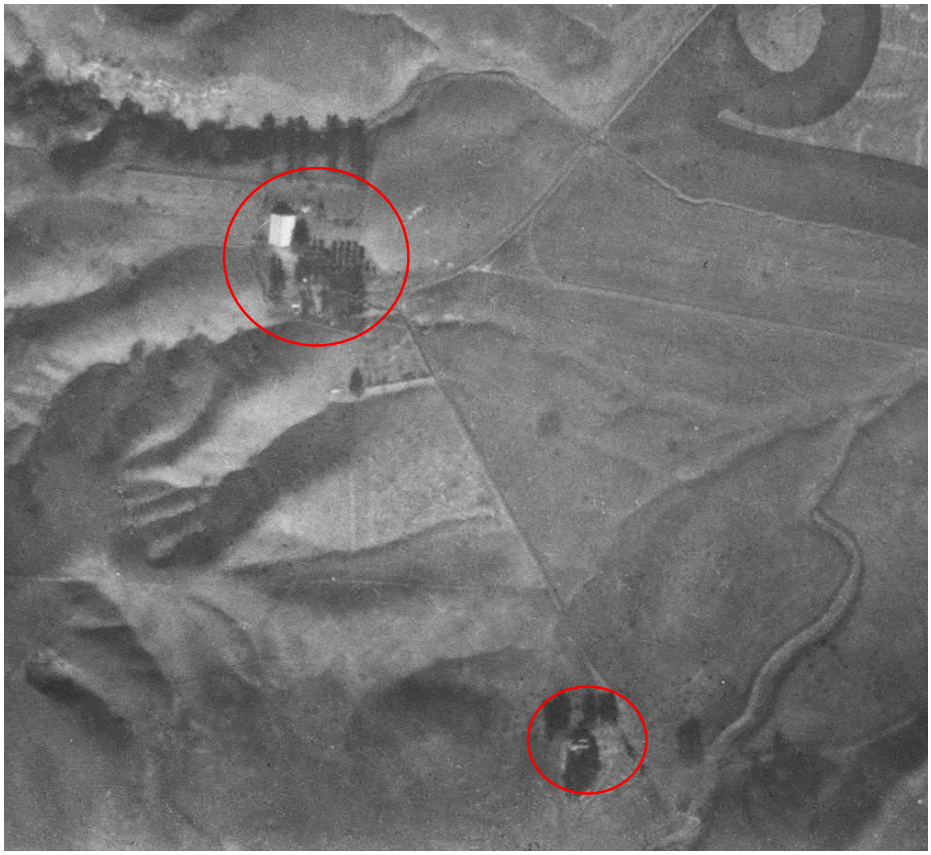


Figure 7: Aerial Photograph Dated December 31, 1927. Goodall Homestead Circled Top Left, "Casa Blanca" Circled Bottom Right (UCSB 1927).

Victory Boulevard appears in the 1925, 1928, 1929, 1932 Dry Canyon, California 1:24000 maps (Figure 8). It is a dirt road that does not yet extend as far west as the project area. Calvert Street is shown, and labeled Goodall Road. The future site of the Victory Pump Station is located along an ephemeral drainage that is undeveloped. Another ephemeral drainage is shown at the location of Bell Creek South Fork. No buildings are shown in the 1925 and 1929 maps (USGS 1925, 1929). The 1928 map shows the "casa blanca" building southeast of the project area, but does not show the Goodall homestead (USGS 1928). But the 1932 map shows both the "casa blanca" building southeast of the project area Goodall's house at the end of Goodall Road (USGS 1932).

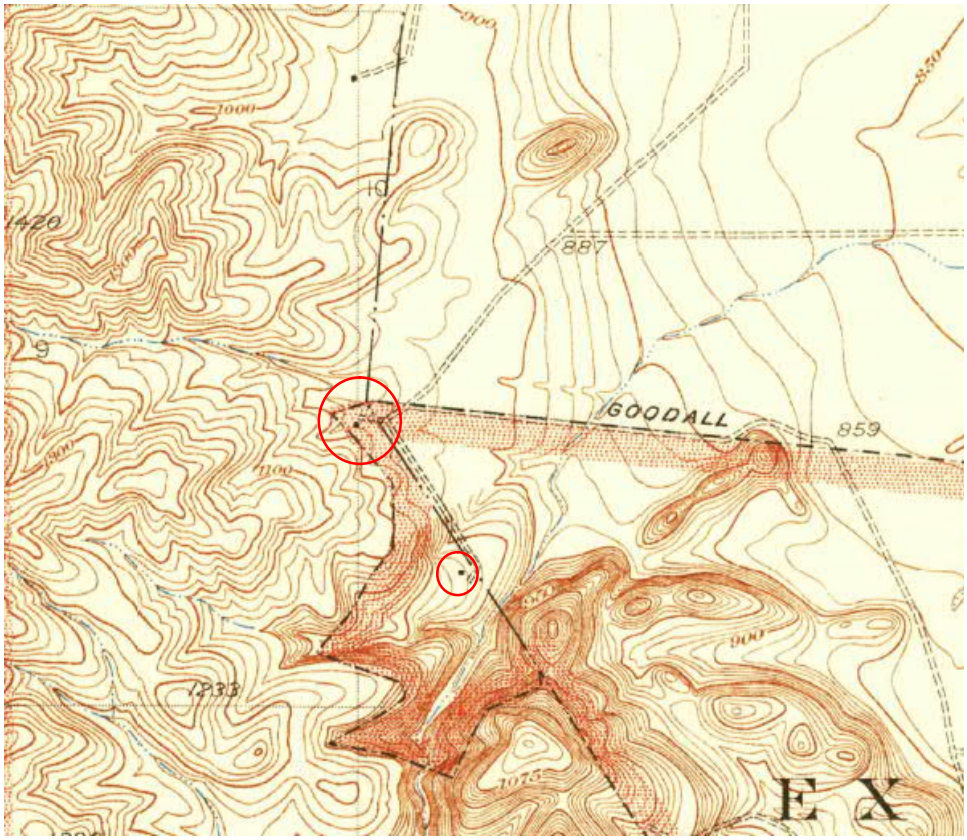


Figure 8: USGS Dry Canyon 1:24000 Topographic Map. Goodall Homestead Circled Top Left, "Casa Blanca" Circled Bottom Right (USGS 1932).

The project area does not appear in standard references such as Baist Real Estate maps because it was not annexed to the City of Los Angeles until 1958-1959. However, the 1921 Baist Fire Insurance map shows today's Calvert Street, which was then the city boundary. In the Baist map Calvert Street is labeled "GOODALL RD" (Baist 1921: Plate 47).

The 1944 Calabasas 1:62500 map shows two buildings on the Goodall homestead, possibly the same house and barn first mapped in 1895. In addition, a trail has been developed along the ephemeral drainage. The Rancho las Virgenes "casa blanca" building is still visible southeast of the project area. Calvert Street is not shown on this map (USGS 1944).

In the 1952 Calabasas 1:24000 map, most of the streets of Woodland Hills have been developed and paved. Victory Boulevard has been paved, as has Calvert Street, which is labeled with its modern name. Victory Boulevard does not yet extend as far west as the Victory Pumping Station location (USGS 1952).

The portion of the project area within the former Rancho el Escorpion was annexed November 6, 1958 as part Calabasas Addition 6. The remainder of the project area was annexed as February 4, 1959 as Calabasas Addition 3 (City of Los Angeles 2015).

Aerial photographs dated 1947 and 1952 show the large Goodall commercial building, as well as smaller buildings nearby, continue to stand. However, by 1967 the Goodall homestead has been demolished to make way for new housing tracts. Similarly fields and structures, possibly including the "casa blanca" building, stand to the southeast of the Goodall homestead in 1947 and 1952, but are demolished to build housing subdivisions by 1959. These photographs suggest that the "casa blanca" Rancho las Virgenes building stood northwest of the modern intersection of Valerie Avenue and Valley Circle Boulevard, in an area that is now a residential district (NETR 2018).

SACRED LANDS FILE SEARCH

As part of this investigation, a sacred lands file (SLF) search was requested from the Native American Heritage Commission (NAHC) of the project area and vicinity. A letter was prepared and mailed to the NAHC on February 22, 2019. The letter requested that a SLF check be conducted for the proposed project and that contact information be provided for Native American groups or individuals that may have concerns about cultural resources in the project site. The NAHC responded to the request in a letter dated March 6, 2019. The letter stated, "The result of any Sacred Lands File (SLF) check conducted through the NAHC was negative." The letter also provided a list of 13 Native American groups the Commission deemed to be traditionally and culturally affiliated with the geographic area to contact for their interests in this proposed project (Appendix C). The contact information was provided to LADWP, and all Native American contact and consultation will be conducted by LADWP.

NATIVE AMERICAN CONSULTATION

As discussed above, all Native American contact and consultation is being conducted by LADWP. As part of this ongoing consultation effort, on September 16, 2019, LADWP sent letters about the project to the 13 Native American governmental representatives identified by the NAHC as potential sources of information related to cultural resources in the vicinity of the project. The letters advised the tribes and specific individuals of the proposed project and requested information regarding cultural resources in the immediate area, as well as feedback or concerns related to the proposed project. To date, LADWP has received request for consultation from one tribe, the Gabieleno Band of Mission Indians – Kizh Nation. Tribal consultation with Chairperson Andrew Salas of the Gabieleno Band of Mission Indians – Kizh Nation is ongoing.

SURVEY METHODS AND RESULTS

SURVEY METHODOLOGY

An archaeological field survey of the project area was conducted by Marc Beherec, Ph.D., RPA, on July 3, 2019. Survey methodology was tailored according to the degree of ground visibility and property access.

Within the existing Victory Pump Station property, 100 percent of exposed ground surfaces were inspected in transects with intervals of 10 meters or less.

The two properties adjacent to the VPS property were surveyed from the fence lines within the Victory Pump Station property and from the public right-of-way adjacent to Victory Boulevard. In this way, the small properties were inspected with the equivalent of transects of 10 meters or less.

Paving obscures the surface of the entire project area along the Calvert Street pipeline alignment. To obtain an indication of what may be obscured by the street paving, the sidewalk was walked on either side of Calvert Street. Exposed areas of ground surface within the public right-of-way and private properties on either side of Calvert Street were examined for the presence of archaeological resources.

Resource 19-192465 is recorded adjacent to the project alignment at the west end of the Calvert Street pipeline. The location recorded for this resource was revisited, and exposed ground surfaces adjacent to the roadway within the public right-of-way were examined for the presence of cultural resources.

RESULTS

Victory Pump Station and Adjacent Properties

The Victory Pump Station is located on the north side of Victory Boulevard west of Pat Avenue. The pump station property is located on an artificial flat (Figure 9). The western and northern portions of the property appear to have been cut into the surrounding bedrock. The southern and eastern portions of the property appear to consist largely of artificial fill meant to level the surface of the property.

Ground visibility within the Victory Pump Station property was generally very good, ranging from approximately 75 to 90 percent (Figure 10). The soil within the pump station property was a fine silty sand with some gravel.

Figure 9: Victory Pump Station and Adjacent Properties, View Northwest.

Figure 10: Victory Pump Station, View East.

The property adjacent to and west of the Victory Pump Station consists of the base of an artificially terraced hillside (Figure 11). Like the Victory Pump Station itself, it appears to be artificially flattened. Although the property is private and no access was arranged for the survey, the surveyor stood within 10 meters of every flat space on the property.

Figure 11: Property West of Victory Pump Station, View Northeast.

The property adjacent to and east of the Victory Pump Station property is similarly artificially flattened. The unfenced property was examined in transects of less than 10 meters. Ground visibility ranged from approximately 10 percent to approximately 40 percent, with foliage and dead leaves obscuring much of the ground surface.

Calvert Street Pipeline Alignment

As previously noted, the planned pipeline alignment is entirely located within the current limits of Calvert Street, which is paved and classified by the City of Los Angeles as a collector street number 8322. No contractors' marks were observed impressed into the pavement or the curbs. The street is paved in asphalt concrete and appears recent in age.

Today the alignment extends through residential neighborhoods and is flanked by single-family residences and a church and school, all initially constructed in the 1960s. A strip of land extends between the road and the sidewalk in most of the neighborhood, and this was examined for cultural resources in order to obtain an idea of what may lie beneath the paved street. Visibility in this area ranged from zero percent, where the area was entirely landscaped, to approximately seventy-five percent in areas where landscaping was neglected or the yards were in the process of being relandscaped. Although non-diagnostic refuse such as broken glass was observed at various points along the alignment, no diagnostic historic artifacts were observed.

The east end of the Calvert Street portion of the project area is located at the intersection of Calvert Street and Escorpion Road/Sylvan Street. The east end of the project area, extending from the eastern boundary as far west as Valley Circle Boulevard, was flat to very slightly sloped towards the west (Figure 12).

Figure 12: Calvert Street Project Alignment, East End, View West.

Approximately 200 feet west of the intersection is the Bell Creek South Fork (Figure 13). Water flows from the hills south of the road northwards, passing beneath houses in a closed drain. It then proceeds beneath Calvert Street. The water finally exits the closed drain and enters the open concrete channel of Bell Creek South Fork just north of Calvert Street. There was flowing water in the creek at the time of the survey.

Figure 13: Bell Creek South Fork, View Southwest.

The point at which Bell Creek South Fork exits its closed drain and enters an open channel, view southwest.

The portion of the Calvert Street alignment west of Valley Circle Boulevard slopes to the west. The alignment terminates at the intersection of Calvert Street and the southern extension of Pat Avenue (Figure 14).

Figure 14: Calvert Street Alignment, View East from Pat Avenue.

Victory Pump Station

The property is occupied by the existing Victory Pump Station, the majority of which is constructed underground. The existing pump station was intended to be a temporary facility when it was first constructed in 1965.

At the west end of the property is a Ford pump or generator and an adjacent pipeline (Figure 15).

Figure 15: Ford Engine, View North.

At the east end of the property is a recent wooden enclosure measuring approximately 20 feet (north/south) by 25 feet (east/west). Within the wooden enclosure, four large metal electrical boxes and pipes surround the domed roof of a subsurface confined space measuring approximately 10 feet in diameter and accessed by a hatch (Figure 16). The confined space holds instrumentation for the pump station but was not entered for this study.

The pump station uses standard engineering equipment with labels identifying them as having been manufactured by firms such as Dayton Electric Manufacturing Company and Ford Motor Company.

Figure 16: Electrical Boxes and Entry to Confined Space, Victory Pump Station, View Northeast.

19-192465

The recorded location of resource 19-192465 was visited in an attempt to locate the resource (Figure 17). The reported location is at the intersection of Pat Avenue and Calvert Street just west of the project alignment, but the nature of the resource suggested it may extend into the project area. The resource was recorded by Albert Knight and Ray Vincent in 2018 on the basis of archival and historic cartographic research (Knight and Vincent 2018). As detailed in the earlier in this report, Knight and Vincent were incorrect in asserting that the location was the site of an adobe. Instead, this was the location of the post-1891 Goodall homestead. Knight and Vincent did not visit the site and therefore gave no description of the site's current condition.

Figure 17: Documented Location of 19-192465, View East.

The exact locations of the Goodall home, the probable barn building visible in aerial photographs of the site, and any ancillary structures have not been identified. However, the area around the intersection of Pat Avenue and Calvert Street was graded, built upon, and landscaped in the 1960s. It is anticipated that any buildings or structures associated with the Goodall ranch were entirely destroyed and removed at that time. A light scatter of non-diagnostic clear glass fragments and one bovine bone fragment were observed outside the project area on the ground surface of private parcels in this general vicinity; however, the scatter was very sparse, averaging less than one fragment per visible square meter, and was no more dense than the background scatter of broken glass observed along Calvert Street beside the entire project alignment.

The only historic structures now standing within the vicinity are single-family residences that postdate 1960 and are therefore not associated with the Goodall ranch. In addition, no sign of what could be called a historic archaeological site was observed on the surface in this location.

SUMMARY

One built resource that is more than 45 years in age, the Victory Pump Station, will be impacted by the project. The resource was documented on appropriate DPR 523 series forms.

An attempt was made to locate archaeological remains associated with the Goodall ranch, resource 19-192465. No evidence of an archaeological site was observed on the surface. An updated DPR 523 form was created for the resource.

The survey of the study area did not result in the identification of any previously unknown archaeological resources.

Potential for Archaeological Resources

Archaeological Site Potential

Archival research, review of previous investigations in the vicinity of the project, and review of the prehistoric context for the area provides an understanding of the potential for encountering buried archaeological sites in the project area. The important factors to consider in constructing such a model include elevation, soil conditions, proximity to water sources, and proximity to raw materials. In addition, subsequent land use is an essential factor in whether archaeological remains have been preserved.

Victory Pump Station

The Victory Pump Station property itself appears to have low potential for the presence of archaeological resources. The property has been extensively impacted by ground disturbances beginning in the 1960s when Victory Boulevard was constructed and the project vicinity was developed as a residential neighborhood. Construction of the pump station necessitated extensive grading of the property, including cutting into the bedrock at the west end of the property and adding fill at the east end of the property. In addition extensive excavations were required for the construction of the pumping station, including the pipelines and confined space.

Calvert Street Pipeline Alignment

The Calvert Street pipeline alignment has two areas of moderate to high archaeological sensitivity.

The majority of the Calvert Street alignment may be considered to have low to moderate sensitivity for cultural resources. The project is located within the traditional territory of the Gabrielino, and may be expected to have been utilized by human beings since prehistoric times. Moreover, the project is located within a depositional environment, where alluvial and colluvial deposits may obscure intact cultural resources. It is possible that archaeological resources could be buried beneath the ground surface, especially in areas where development has included only minimal ground disturbance where the roadway may have effectively capped buried prehistoric or historic resources.

However, only two resources have been recorded within 0.5-mile of the Calvert Street alignment, the location of one of which, 19-192465 is documented extensively on historic maps. The Calvert Street alignment has also been extensively impacted to unknown depths by construction activities associated with construction of the surrounding residential district. This work has included road grading, which has required cutting and, in the vicinity of Valley Circle Boulevard, the introduction of artificial fill. Excavations within the roadway were required to install existing utilities, including storm drains and gas, sewer, fiber optic, and electrical lines.

Near the east end of the pipeline alignment, within 200 feet of Bell Creek South Fork, the project area is considered to have moderate to high sensitivity for cultural resources because of its close proximity to the current bed of Bell Creek South Fork. A drainage is shown in this approximate location in the 1871 *Plat of the Ex Mission de San Fernando Finally Confirmed to Eulogio de Celis.* This drainage does not appear as a drainage in the earliest USGS maps (USGS 1903); however, a track is shown following the course of the drainage. All subsequent USGS maps

show an ephemeral drainage starting in the hills and flowing past this location. Although the drainage is ephemeral, it contained water during the survey in July 3. The water source, despite being ephemeral, may have been important both prehistorically and historically. The immediate area around the drainage, is considered to have an elevated sensitivity for cultural resources. However, the pipeline in this location would be installed at shallow depth above the existing concrete box culvert. Thus, the pipeline installation at this location would result in only shallow excavations of up to one foot in depth in an area that has been previously disturbed by construction of the culvert and the roadway.

The west end of the pipeline alignment, within 200 feet of Pat Avenue, is considered to have moderate to high sensitivity for cultural resources because of its close proximity to 19-192465. The vicinity was used intensively as a homestead and the headquarters for the Goodall ranch beginning in 1891 and continuing until the 1960s, when the ranch was subdivided for residential development. Although no evidence of the Goodall ranch was observed on the surface within or adjacent to the project area, buried features such as building foundations, wells and privies, and refuse deposits may exist within the vicinity.

MANAGEMENT RECOMMENDATIONS

REGULATORY SETTING

Cultural resources in California are protected by a number of 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. State and federal laws use different terms for cultural resources. California state law discusses significant cultural resources as "historical resources," whereas federal law uses the terms "historic properties" and "historic resources." In all instances where the term "resource" or "resources" is used, it is intended to convey the sense of both state and federal law.

California Register of Historical Resources

The California Register was created to identify resources deemed worthy of preservation on a state level and was modeled closely after the National Register. The criteria are nearly identical to those of the National Register but focus on resources of statewide, rather than national, significance. The California Register consists of properties that are listed automatically as well as those that must be nominated through an application and public hearing process.

The criteria for eligibility of listing in the California Register are based on National Register criteria but are identified as 1 through 4 instead of A through D. To be eligible for listing in the California Register, a property must be at least 50 years of age and possess significance at the local, state, or national level, under one or more of the following four criteria:

1. It 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 United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important in the prehistory or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, historic resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be able to convey the reasons for their significance. Such integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

City of Los Angeles Historic-Cultural Monument

On the local level, a historical or cultural monument is eligible for listing as an LAHCM under Article 4, Section 22.130 of the City of Los Angeles Administrative Code if the resource meets a number of criteria. Section 22.130 indicates that a monument is

> any site … building or structure of particular historic or cultural significance to the City of Los Angeles, such as historic structures or sites in which the broad cultural, economic, or social history of the nation, State, or community is reflected or exemplified, or which are identified with historic personages or with important events in the main currents of national, State, or local history or which embody the distinguishing characteristics of an architectural type specimen, inherently valuable for a study of a period style or method of construction, or a notable work of a master builder, designer, or architect whose individual genius influenced his age.

RESOURCES EVALUATION

Victory Pump Station

The Victory Pump Station does not meet the criteria to be eligible for the CRHR. The complex, originally constructed as a temporary pump station ca. 1965, was built during the 1960s development of the Woodland Hills and West Hills neighborhood of the City of Los Angeles. It currently serves as a station within the LADWP's potable water supply system. The complex has had several alterations for functional reasons several times in the past.

The complex is associated with the late 20th century development of the West Hills community and the City of Los Angeles, but the structures and their utilitarian functions have not had an important or specific historic role, nor are they 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 United States (Criterion 1). Research has not revealed an association between the facility and any specific historical figures or any person whose life was important to local, California, or national history (Criterion 2). The facility, including the pumping station, the electrical boxes, and the ancillary pipelines, are utilitarian in construction, and typical of their types dating from the 1960s. The complex, including all its individual structures, uses standard engineering equipment and does not embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic values (Criterion 3). It is unlikely to yield information important in the prehistory or history of the local area, California, or the nation (Criterion 4). The resource does not meet the level of significance to meet CRHR criteria 1 through 4. It is not eligible for the CRHR.

For similar reasons, the Victory Pump Station is not eligible for listing as a LAHCM. The station does not have particular historic or cultural significance to the City of Los Angeles. It does not exemplify the broad cultural, economic, or social history of the nation, State, or community; it is not identified with historic personages or with important events; and it does not embody the distinguishing characteristics of an architectural type specimen, nor is it, inherently valuable for a study of a period style or method of construction, nor as a notable work of an individual genius.

RECOMMENDATIONS

Archaeological Recommendations

Recommendations specific to the portions of the project are detailed below. For each portion of the project area, there are specific recommendations pertinent to archaeological resources. Although no archaeological resources were identified within the project area during the course of this Phase I background research and cultural resources field survey, potentially eligible archaeological resources may be buried in the project area.

To address potential impacts of the proposed project to unknown archaeological resources, the following recommendations are offered:

This project involves ground disturbing activities throughout the area defined as the project area. Because buried or otherwise obscured archaeological resources may be encountered, an archaeological monitoring program shall be implemented within segments identified as having cultural resources sensitivity. Archaeological monitoring of ground disturbing activities shall include, at minimum:

- Archaeological monitoring for the Calvert Street alignment within approximately 200 feet of the intersection with Pat Avenue (i.e., approximately between the intersection of Calvert Street and Pat Avenue and the west vehicle entrance of the property of St. Bernardine of Siena Church).

The on-site archaeological monitor shall work under the direction of a qualified archaeological Principal Investigator who meets the Secretary of the Interior's standards for archaeology. The on-site archaeological monitor shall conduct worker training prior to the initiation of ground-disturbing activity in order to inform workers of the types of resources that may be encountered and apprise them of appropriate handling of such resources. If any prehistoric archaeological sites are encountered within the project area, consultation with interested Native American parties shall be conducted to apprise them of any such findings and solicit any comments they may have regarding appropriate treatment and disposition of the resources. The LADWP construction manager shall have the authority to redirect construction equipment in the event potential archaeological resources are encountered.

In the event archaeological resources are encountered, either within or outside the monitored areas, LADWP shall be notified immediately and work in the vicinity of the discovery shall be halted until appropriate treatment of the resource, is determined by the qualified archaeological Principal Investigator in accordance with the provisions of CEQA Guidelines Section 15064.5.

Ground disturbing activities include, but are not limited to, geotechnical boring, boring, trenching, grading, excavating, and the demolition of building foundations. The archaeological monitor will observe ground disturbing activities in the segments requiring monitoring, to depth.

Once ground disturbing activities begin, if the level of disturbance or fill encountered to depth is determined by the archaeological Principal Investigator to make the likelihood of archaeological

findings improbable, the Principal Investigator in consultation with the LADWP may recommend that archaeological monitoring be reduced as appropriate or discontinued within the segment or any portion thereof.

If human remains are discovered, work in the immediate vicinity of the discovery will be suspended and the Los Angeles County Coroner contacted. If the remains are deemed Native American in origin, the Coroner will contact the NAHC and identify a Most Likely Descendant (MLD) 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.

Upon completion of monitoring of ground disturbing activities associated with the identified segment of this project, an Archaeological Resources Monitoring Report shall be prepared documenting construction activities observed, including copies of all daily archaeological monitoring logs. If discoveries are made during ground disturbing activities, the report will also document the associated cultural materials and the methods of treatment as determined appropriate by the archaeologist. The report will be placed on file at the SCCIC upon its completion.

Historic Architectural Resources Recommendations

One historic architectural resource that is 45 years old or older, the Victory Pump Station, was identified as a result of the intensive survey. The Victory Pump Station was originally built ca. 1965 and has been altered and upgraded since; it is the site of the proposed project. The resource was evaluated and did not meet criteria for listing in the CRHR or local listing.

There are no significant historical resources within the APE for the purposes of CEQA. No further work is recommended concerning historic architectural resources.

Tribal Cultural Resources Recommendations

One tribe has requested consultation on the project regarding the potential sensitivity of the project area for tribal cultural resources, the Gabieleno Band of Mission Indians – Kizh Nation. Speaking on behalf of the tribe, Chairperson Salas indicated that the project area is within the territory of the ethnohistoric Gabrielino village Totongna, and in the vicinity of tribal trade routes and of utilized waterways.

During construction of the proposed project, unknown tribal cultural resources could potentially be encountered, particularly during ground-disturbing activities. To address potential impacts of the proposed project to unknown tribal cultural resources, the following recommendations are offered:

This project involves ground disturbing activities throughout the area defined as the project area. Because buried or otherwise obscured tribal cultural resources may be encountered, LADWP shall coordinate with interested Native American contacts during construction activities. Prior to

any ground-disturbing activities, LADWP shall inform interested Native American contacts of the construction schedule. Those contacts shall be permitted to monitor for tribal cultural resources during ground-disturbing activities. The frequency and duration of such monitoring shall be at the discretion of the Native American governmental representatives who indicated a desire to monitor construction activities during pre-construction consultation.

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APPENDIX A

RESUMES

AECOM

Marc Beherec, Ph.D., RPA

Archaeologist

Education

PhD, Anthropology, University of California, San Diego, 2011

MA, Anthropology, University of California, San Diego, 2004

BA, Anthropology (Geology minor), University of Texas, Austin, 2000

Registrations

Register of Professional Archaeologists, #989598

Training

Hazardous Waste Operations and Emergency Response (HAZWOPER) 40-hour Training

HAZWOPER Supervisor 8-hour Training

Occupational Safety and Health Administration (OSHA) 30-hour Outreach Training

Affiliations

Member, Society for American Archaeology

Member, Society for California Archaeology

Dr. Marc Beherec is an archaeologist who has been involved in the field of cultural resources management for nearly twenty years. He has worked in California, Texas, and other states on projects within Federal and State regulatory framework, and is experienced in the identification and analysis of both prehistoric and historic era artifacts. He has overseen monitoring on large construction projects and has written cultural resources assessments for both public agencies and developers to satisfy requirements of both the National Environmental Protection Act and the California Environmental Quality Act.

Experience

Archaeologist, Beacon Street Temporary Homeless Shelter Project, City of Los Angeles Bureau of Engineering, Los Angeles, California
Prepared Archaeological Survey Report (ASR) and Historic Properties Survey Report (HPSR) for the Beacon Street Temporary Housing Project, a City project on Caltrans property, to comply with CEQA and Section 106 of the National Historic Preservation Act (NHPA). Tasks included archival research including researching known sites at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton; conducting archaeological and built environment surveys; assessing archaeological sensitivity; writing reports of findings according to Caltrans specifications in compliance with the Standard Environmental Reference (SER).

Archaeologist and Monitoring Coordinator, Downtown Los Angeles Temporary Homeless Shelter Monitoring and Mitigation, City of Los Angeles Bureau of Engineering, Los Angeles, California.
Conducted cultural resources monitoring and resource impact mitigation for the City of Los Angeles within El Pueblo de Los Angeles Historic Monument to comply with CEQA. Tasks included archival research at the El Pueblo de Los Angeles archives; the University of California, Los Angeles and the SCCIC at California State University, Fullerton; overseeing archaeological monitoring; recovering and documenting artifacts; assessing finds for inclusion on the CRHR; writing reports of findings.

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Archaeologist, Windland Windfarm Improvement Project, Terra-Gen, LLC, Mojave, California
Conducted archaeological impact analysis in compliance with CEQA for improvements to existing windfarm. Tasks included archival research including researching known sites at the South San Joaquin Valley Information Center (SSJVIC) at California State University, Bakersfield; conducting archaeological survey; assessing archaeological sensitivity; writing report of findings.

Archaeologist, Point Wind Windfarm Improvement Project, Terra-Gen, LLC, Mojave, California
Conducted archaeological impact analysis in compliance with CEQA for improvements to existing windfarm. Tasks included archival research including researching known sites at the SSJVIC; conducting archaeological survey; assessing archaeological sensitivity; writing report of findings.

Archaeologist and Monitoring Coordinator, Crenshaw/LAX Rail Construction Project Cultural Resources Compliance Monitoring, Los Angeles County Metropolitan Transportation Authority (Metro), Los Angeles, California
Cultural resources compliance monitoring, including paleontological and archaeological monitoring, of the 8.5-mile Crenshaw light rail transit corridor and associated stations. Tasks involved instructing construction teams in cultural resources compliance; scheduling and coordination of multiple concurrent paleontological, archaeological, and Native American monitors on diverse construction efforts throughout the alignment; compilation, QA/QC, and delivery of daily monitoring logs and other documentation for all on-site monitors; serving as a liaison between archaeological monitors, construction crew, and client project team; assessing finds for inclusion on the CRHR and the NRHP; assisting client with Federal Transportation Administration and State Historic Preservation Office consultation; ensuring overall cultural resources compliance within the permitted conditions of the project.

Archaeologist and Monitoring Coordinator, Regional Connector Rail Construction Project Cultural Resources Compliance Monitoring, Los Angeles County Metropolitan Transportation Authority (Metro), Los Angeles, California
Cultural resources compliance monitoring, including paleontological and archaeological monitoring, of the 1.9-mile Regional Connector subway corridor and associated stations. Tasks involved included conducting archival research to determine probable locations of historic resources known to exist subsurface along the alignment; instructing construction teams in cultural resources compliance; scheduling and coordination of multiple concurrent archaeological monitors on diverse construction efforts throughout the alignment; compilation, QA/QC, and delivery of daily monitoring logs and other documentation for all on-site monitors; serving as a liaison between archaeological monitors, construction crew, and client project team; assessing finds for inclusion on the CRHR and the NRHP; assisting client with Federal Transportation Administration and State Historic Preservation Office consultation; ensuring overall cultural resources compliance within the permitted conditions of the project.

Field Director, Topanga Underground Utilities District Project Mitigation Excavation, County of Los Angeles Department of Public Works, Topanga, California
Oversaw field excavations and laboratory work at CA-LAN-008, a large prehistoric site in the Santa Monica Mountains. Tasks included directing excavations and processing of artifacts, serving as a liaison among archaeological crew, client representatives, construction workers, Most Likely Descendant, and other Native American groups.

Lead Archaeological Monitor, Genesis Solar Energy Project, NextEra, LLC, Blythe, California
Lead Monitor for the cultural resources compliance monitoring of a 2000-acre solar power project under the jurisdiction of the California Energy Commission and Bureau of Land Management (BLM) on BLM land in the western Colorado Desert. Tasks involve the scheduling and coordination of between 5 and 25 concurrent archaeological monitors on diverse construction efforts throughout the project site; compilation, QA/QC, and delivery of daily monitoring logs for all on-site monitors; attending project construction scheduling and Health and Safety meetings; conducting and documenting daily monitoring crew Health and Safety meetings; serving as liaison between archaeological monitors, construction crew and client project team; ensuring overall cultural resources compliance with the permitted conditions of the project.

APPENDIX B

SOUTH CENTRAL COASTAL INFORMATION CENTER RECORDS SEARCH RESULTS MAPS

(CONFIDENTIAL)

APPENDIX C

CALIFORNIA DEPARTMENT OF PARKS AND RECREATION 523 SERIES FORMS

(CONFIDENTIAL)

APPENDIX D

SACRED LANDS FILE SEARCH RESULTS

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

March 6, 2019

Marc Beherec
AECOM

VIA Email to: marc.beherec@aecom.com

RE: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Victory Pump Station Replacement Project, Los Angeles County

Dear Mr. Beherec:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;

- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;

- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measures.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the NAHC was negative.
4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
Los Angeles County
3/7/2019

Barbareno/Ventureno Band of Mission Indians
Julie Tumamait-Stennslie, Chairperson
365 North Poli Ave
Ojai, CA, 93023
Phone: (805) 646 - 6214
jtumamait@hotmail.com
Chumash

Chumash Council of Bakersfield
Julio Quair, Chairperson
729 Texas Street
Bakersfield, CA, 93307
Phone: (661) 322 - 0121
chumashtribe@sbcglobal.net
Chumash

Coastal Band of the Chumash Nation
Gino Altamirano, Chairperson
P. O. Box 4464
Santa Barbara, CA, 93140
cbcn.consultation@gmail.com
Chumash

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org
Gabrieleno

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com
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This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Victory Pump Station Replacement Project, Los Angeles County.

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This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Victory Pump Station Replacement Project, Los Angeles County.

APPENDIX D

Greenhouse Gas Emissions Assessment Technical Memorandum

Technical Memorandum

TO: AECOM

FROM: Terry A. Hayes Associates Inc.

DATE: November 19, 2019

RE: Victory Pump Station Replacement Project – Greenhouse Gas (GHG) Emissions Assessment

INTRODUCTION

Terry A. Hayes Associates Inc. (TAHA) has completed a GHG Emissions Assessment for the Victory Pump Station Replacement Project (proposed project) in accordance with the provisions of the California Environmental Quality Act (CEQA) Statutes and Guidelines. The project site is located in the City of Los Angeles and the South Coast Air Basin, which falls under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). This Assessment is organized as follows:

- Introduction
- Project Description
- GHG Topical Information
- Regulatory Framework
- Existing Setting
- Significance Thresholds
- Methodology
- Impact Assessment
- References

PROJECT DESCRIPTION

The Los Angeles Department of Water and Power (LADWP) proposes to implement the proposed project, which involves the construction of a new pump station to replace the existing aged, temporary underground pumping facility (the existing facility) at 24661 Victory Boulevard in West Hills. **Figure 1** illustrates the regional location of the proposed project and **Figure 2** shows the project components. To allow for optimum performance of the proposed new pump station, approximately 1,800 linear feet of pipeline would be installed along Calvert Street from Sylvan Street to Valley Circle Boulevard as part of the proposed project.

The proposed new pump station would be located on a 75-foot long by 50-foot wide permanent easement granted to LADWP in 1966 and on which the existing pump station is located. LADWP also proposes to acquire an additional undeveloped property in fee along Victory Boulevard to the east of the existing easement to provide room for an access drive to the pump station. The total pump station property would be located on two residential parcels on the northern side of Victory Boulevard, approximately 550 feet west of Pat Avenue in the West Hills community of the San Fernando Valley region of Los Angeles.

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Source: Esri Maps & Data, 2019.

Figure 1
Regional Map

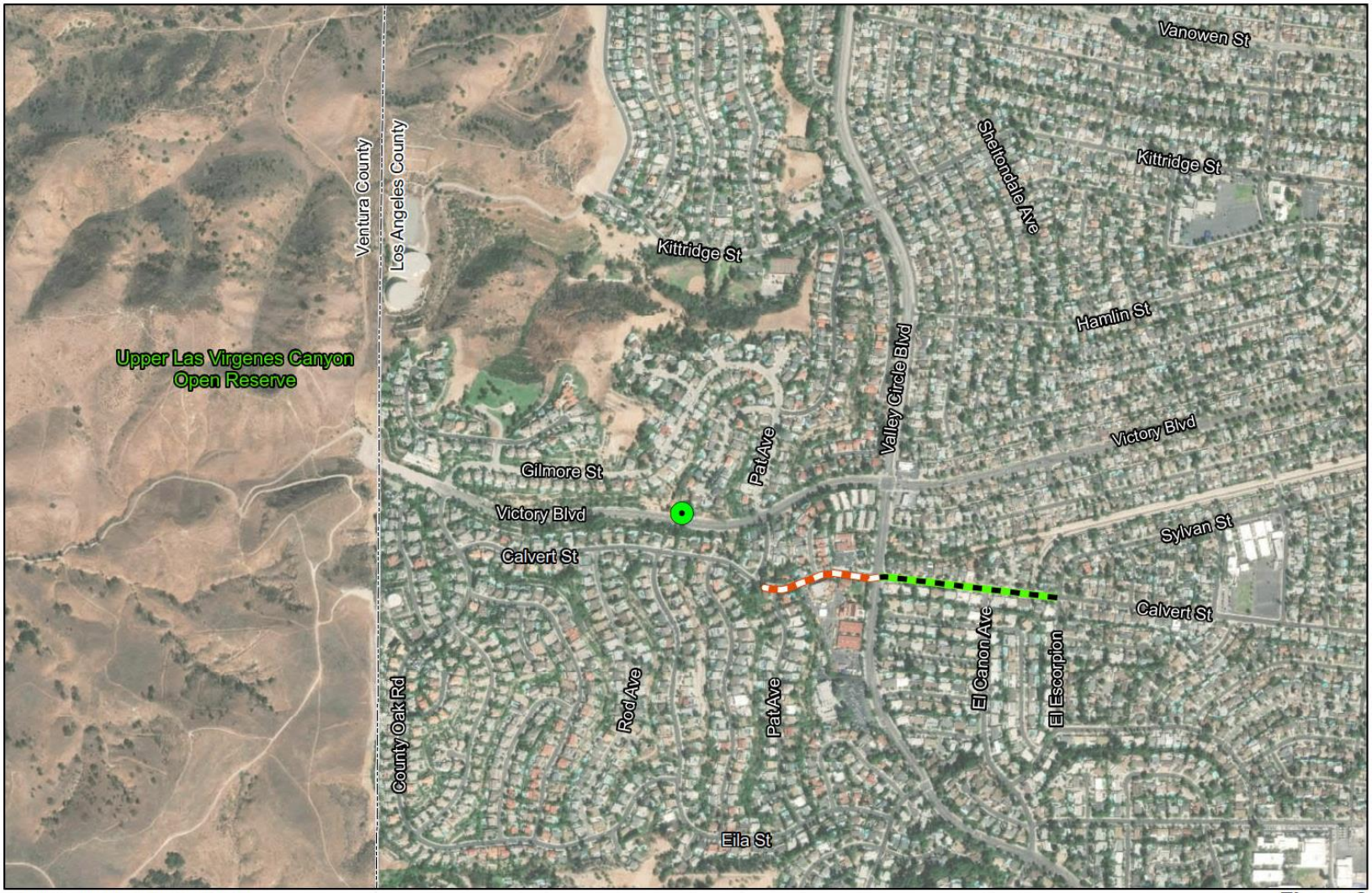

Figure 2
Project Vicinity Map

The pump station replacement would involve the construction of a new, permanent pump station building and the decommissioning of the existing, temporary underground pump station. The proposed new pump station building would be approximately 25 feet tall by 30.5 feet wide, consisting of concrete walls, windows, wood plank finishing, and metal roofing. The new pump station building would house a total of three new pumps. Construction of retaining walls surrounding the proposed new pump station building would be required to offset the difference between the existing ground elevation and the pump station building floor. Additionally, a new exterior concrete pad would be installed in the northwest corner of the pump station replacement site to accommodate a new transformer.

Pump Station Replacement Construction

Construction of the proposed pump station is anticipated to begin in October 2022 and take approximately 25 months to complete, concluding in November 2024. Construction activities would occur within the boundaries of the LADWP easement, except the construction staging and laydown area for the pump station replacement, which would be established immediately adjacent to the construction site, requiring the temporary occupation of one vehicular travel lane, the existing bicycle lane, and the existing parking lane, as well as the existing sidewalk on Victory Boulevard. The general location and extent of this construction site and associated laydown area is shown in **Figure 3**.

Construction vehicle access for the new pump station would be available via the existing driveway at 24661 Victory Boulevard. Any material that would be exported from the project site would follow a designated haul route for the proposed project, which commences at the proposed pump station site, travels eastbound to Valley Circle Boulevard, and southbound on Valley Circle Boulevard to US-101. For hauling of debris and excavated material, the route then continues along the freeway for approximately 17 miles before exiting to Lost Hills Road, Calabasas, toward the Calabasas Landfill Facility. Materials deliveries may come from either the westbound or eastbound 101, exiting at Valley Circle Boulevard. Peak construction vehicle movement is anticipated to occur during excavation activities, when two haul trucks may need to travel to and from the project site up to six times a day, resulting in approximately 24 haul truck trips a day.

At the peak of construction, the typical anticipated work force for the pump station replacement would comprise 15 construction workers a day. However, during peak construction, as many as 25 construction workers may be present. This would result in a maximum of approximately 50 construction worker trips per day, with an average of approximately 30 trips per day, accounting for one inbound and one outbound trip per worker. However, this does not account for any car pooling that may occur among workers, and as a result the number of daily worker vehicle trips may be lower. Construction equipment required for the pump station replacement includes two dirt haul trucks, one crane, two excavators, one bulldozer, one flatbed truck, and one front loader. Additionally, construction of the retaining wall would require the installation of approximately 12 drilled piles. A truck-mounted drill rig with 24-inch auger and a 30-ton crane would be used for pile installation.

Pipeline Installation

Installation of the proposed pipeline would begin in late 2020 and would be installed at a rate of approximately 30 linear feet per day, taking a total of approximately 60 working days to complete. Construction activities associated with the proposed pipeline installation would take place within the existing right-of-way (ROW) of Calvert Street between Pat Avenue and Sylvan Street (**Figure 4**). A construction laydown area would be established for this project component and would occupy an area of approximately 50 feet by 10 feet. The new pipeline would be installed underground using an open trenching method. The excavated trench would be five feet wide by seven feet deep, and would span the approximately 1,800 feet length of the proposed pipeline alignment. The majority of this excavated material would be used to backfill the trench following pipe installation. As such, only a minimal amount of excavated material would be generated for disposal.

Figure 3

Proposed Pump Station Replacement Site

Figure 4

Proposed Pipeline Alignment

GHG TOPICAL INFORMATION

GHG emissions refer to a group of emissions that are generally believed to affect global climate conditions. The greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass panes in a greenhouse let heat from sunlight in and reduce the amount of heat that escapes. GHGs, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), keep 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, 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. CO_2 is the most abundant pollutant that contributes to climate change through fossil fuel combustion. The other GHGs are less abundant but have higher global warming potential than CO_2. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent of CO_2, denoted as CO_2e. CO_2e is a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential (GWP) of a GHG, is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. **Table 1** shows various GWP.

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, *First Update to the Climate Change Scoping Plan*, 2014.

REGULATORY FRAMEWORK

In response to growing scientific and political concern with global climate change, a series of federal and state laws have been adopted to reduce GHG emissions. The following provides a brief summary of GHG regulations and policies. This is a not an exhaustive list of all regulations and policies.

[1]California Environmental Protection Agency Climate Action Team, *Climate Action Report to Governor Schwarzenegger and the California Legislator*, March 2006.

Federal

***Massachusetts vs. Environmental Protection Agency*, 127 S. Ct. 1438 (2007)**. A Supreme Court ruling that CO_2 and other GHGs are pollutants under the Clean Air Act.

Energy Independence and Security Act. This act set a Renewable Fuel Standard of 36 billion gallons of biofuel usage by 2022, increases Corporate Average Fuel Economy Standards of setting 35 miles per gallon of cars and light trucks by 2020 and sets new standards for lighting and residential and commercial appliance equipment.

National Fuel Efficiency Policy and Fuel Economy Standards. This 2009 policy was designed to increase fuel economy by more than five percent by 2016 starting with model year 2012 cars and trucks.

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

Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24 of the California Code of Regulations). Title 24 standards contain energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, additions to existing buildings, and alterations to existing buildings.

California Green Building Code. Also referred to as CalGreen, lays out minimum requirements for newly constructed buildings in California, which will reduce GHG emissions through improved efficiency and process improvements.

Senate Bill 1078 (SB 1078), Senate Bill 107 (SB 107), and Executive Order (E.O.) S-14-08 (Renewables Portfolio Standard). Signed on September 12, 2002, SB 1078 required California to generate 20 percent of its electricity from renewable energy by 2017. SB 107, signed on September 26, 2006 changed the due date for this goal from 2017 to 2010, which was achieved by the state. On November 17, 2008, E.O. S-14-08 established a Renewables Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020.

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 CARB to adopt rules and regulations that would achieve GHG emissions equivalent to Statewide levels in 1990 by 2020. The 2020 target reductions were estimated to be 174 million metric tons of CO2e. 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) 2016–2040 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 2016-2040 RTP/SCS includes commitments to reduce emissions from transportation sources to comply with SB 375. Goals and policies included in the 2016-2040 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

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.

Sustainable City pLAn. The pLAn is a roadmap to reducing GHG emissions by 45 percent by 2025, 60 percent by 2035, and 80 percent by 2050, all against a 1990 baseline.

Green Building Program. The purpose of the City's Green Building Program is to reduce the use of natural resources, create healthier living environments and minimize the negative impacts of development on local, regional, and global ecosystems. The program consists of a Standard of Sustainability and Standard of Sustainable Excellence.

Los Angeles Green Building Code. The Green Building Code is applicable to new buildings and alterations with building valuations over $200,000 (residential and non-residential). The Green Building Code is based on CalGreen and was developed to reduce energy use, water use, and waste.

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.

EXISTING SETTING

GHGs 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.

Table 2 shows GHG emissions from 2008 to 2017 in California. California's GHG emissions have followed a declining trend since 2008. In 2017, emissions from routine emitting activities statewide were 63 million metric tons of CO_2e ($MMTCO_2e$) lower than 2007 levels. 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 $MMTCO_2e$ of unanticipated emissions in 2015 and an additional 0.52 $MMTCO_2e$ in 2016. According to the California Air Resources Board (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.[2,3]

TABLE 2: CALIFORNIA GREENHOUSE GAS EMISSIONS INVENTORY TREND

Sector	CO_2e Emissions (Million Metric Tons)									
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Electricity Generation (In State)	55	54	47	41	51	50	52	50	42	39
Electricity Generation (Imports)	66	48	44	47	45	40	37	34	26	24
Transportation	182	175	170	167	166	166	167	171	173	174
Industrial	100	98	102	101	102	104	105	103	101	101
Commercial	18	19	20	21	21	22	21	22	23	23
Residential	31	31	32	33	31	32	27	28	29	30
Agriculture and Forestry	35	33	34	34	35	34	35	34	34	32
Emissions Total	**487**	**457**	**449**	**444**	**451**	**448**	**445**	**441**	**429**	**424**

SOURCE: CARB, *California Greenhouse Gas Emission Inventory - 2019 Edition*, August 12, 2019.

[2]CARB, *California Greenhouse Gas Inventory for 2000-2015 – Trends of Emissions and Other Indicators*, June 2017.
[3]CARB, *Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident*, October 2016.

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, and that the lead agency should consider the following factors when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and,
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The CEQA Guidelines require lead agencies to adopt GHG thresholds of significance. When adopting these thresholds, the amended Guideline allows lead agencies to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that the thresholds are supported by substantial evidence, and/or to develop their own significance threshold. Neither the City nor the SCAQMD has officially adopted a quantitative threshold value for determining the significance of GHG emissions that will be generated by projects under CEQA. The SCAQMD published the *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* in October 2008.[4]

The SCAQMD convened a GHG CEQA Significance Threshold Stakeholder Working Group beginning in April of 2008 to examine alternatives for establishing quantitative GHG thresholds. The Working Group proposed a 10,000 metric tons of carbon dioxide equivalents ($MTCO_2e$) per year threshold for industrial projects and a 3,000 $MTCO_2e$ annual threshold for commercial and residential projects, including mixed-use. Based on the available threshold concepts recommended by expert agencies, the assessment herein analyses operational emissions against SCAQMD's draft 3,000 $MTCO_2e$ bright-line threshold level. Per SCAQMD, projects below this bright-line significance criteria have a minimal contribution to cumulative global emissions and are considered to have less-than significant impacts.

[4]SCAQMD, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008.

METHODOLOGY

GHG emissions that will be generated by the proposed project were estimated using CalEEMod, as recommended by the SCAQMD. CalEEMod quantifies GHG emissions from construction activities and future operation of projects. Sources of GHG emissions during project construction includes heavy-duty off-road diesel equipment and vehicular travel to and from the project site. Sources of GHG emissions during project operation includes energy use. In accordance with SCAQMD methodology, the total amount of GHG emissions that would be generated by construction of the proposed project was amortized over a 30-year operational period to represent long-term impacts.

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 primarily from construction activities and electricity to operate the pump station. **Table 3** presents the estimated emissions of GHGs that would be released to the atmosphere on an annual basis. Construction of the proposed project would produce approximately 44.1 $MTCO_2e$ during pipeline construction and approximately 722.4 $MTCO_2e$ during pump station construction, which equates to approximately 25.5 $MTCO_2e$ annually when amortized over a 30-year period. The total annual operating emissions would be approximately 32.3 $MTCO_2e$ per year, including 5.7 $MTCO_2e$ attributed to electricity use and approximately 1.1 $MTCO_2e$ for fire pump testing. The total annual amortized mass rate is substantially below the most applicable quantitative draft interim threshold of 3,000 $MTCO_2e$ per year as recommended by the SCAQMD. Therefore, implementation of the proposed project will result in a less-than-significant impact related to GHG emissions.

TABLE 3: ESTIMATED ANNUAL GREENHOUSE GAS EMISSIONS

Scenario and Source	Annual GHG Emissions ($MTCO_2e$ per Year)
Pipeline Construction Emissions (Direct)	44.1
Pump Station Construction Emissions (Direct)	722.4
Total Construction GHG Emissions (Direct)	766.5
30-Year Amortized Annual Construction Emissions (Direct)/a/	25.5
Energy Source Emissions – Electricity (Indirect)	5.7
Stationary Source Emissions – Fire Pump Testing (Direct)	1.1
Total Annual GHG Emissions	**32.3**
SCAQMD Draft Interim Significance Threshold	3,000
Exceed Threshold?	**No**

/a/ Based on SCAQMD guidance, the emissions summary also includes construction emissions amortized over a 30-year span.
SOURCE: TAHA, 2019.

Mitigation Measure

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 water pipeline to conflict with GHG reduction plans. The pump station replacement would involve the construction of a new, permanent pump station building and the decommissioning of the existing, temporary underground pump station. As previously discussed, the proposed project would not permanently increase emissions. 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 construction of the proposed project would not conflict with GHG emissions reductions efforts.

Mitigation Measures

No mitigation measures are required.

REFERENCES

California Air Pollution Control Officers Association, *California Emissions Estimator Model (CalEEMod v2016.3.2) User's Guide*, November 2017.

California Air Resources Board, *California Greenhouse Gas Emission Inventory - 2019 Edition*, August 12, 2019.

California Air Resources Board, *California Greenhouse Gas Inventory for 2000-2015 – Trends of Emissions and Other Indicators*, June 2017.

California Air Resources Board, *Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident*, October 2016.

California Air Resources Board, *First Update to the Climate Change Scooping Plan*, May 2014.

California Environmental Quality Act Guidelines *Section 15064.4*.

South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993.

South Coast Air Quality Management District, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, October 2008

South Coast Air Quality Management District, *SCAQMD Air Quality Significance Thresholds*, March 2015.

Southern California Association of Governments, *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*, April 2016.

Appendix

- CalEEMod Output – Pipeline Construction Annual Emissions
- CalEEMod Output – Pump Station Construction Annual Emissions

LADWP Victory Pump Station Pipeline Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.00	1000sqft	0.21	9,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Construction Only

Land Use - Approximately 1,800 feet long by 5 feet wide.

Construction Phase - Trenching and re-paving activities will be occuring simulatenously along the pipeline corridor.

Off-road Equipment - Inventory from Project Description

Off-road Equipment - Inventory from Project Description

Trips and VMT - Inventory from Project Description

Energy Use -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	60.00
tblTripsAndVMT	HaulingTripNumber	0.00	360.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00

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					
2020	0.0183	0.1694	0.1276	3.6000e-004	9.1000e-003	5.9700e-003	0.0151	2.4600e-003	5.6500e-003	8.1100e-003	0.0000	32.3150	32.3150	4.4100e-003	0.0000	32.4253
2021	5.9700e-003	0.0568	0.0448	1.3000e-004	4.7900e-003	1.8400e-003	6.6300e-003	1.2600e-003	1.7400e-003	3.0000e-003	0.0000	11.6436	11.6436	1.5600e-003	0.0000	11.6827
Maximum	**0.0183**	**0.1694**	**0.1276**	**3.6000e-004**	**9.1000e-003**	**5.9700e-003**	**0.0151**	**2.4600e-003**	**5.6500e-003**	**8.1100e-003**	**0.0000**	**32.3150**	**32.3150**	**4.4100e-003**	**0.0000**	**32.4253**

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					
2020	0.0183	0.1694	0.1276	3.6000e-004	9.1000e-003	5.9700e-003	0.0151	2.4600e-003	5.6500e-003	8.1100e-003	0.0000	32.3150	32.3150	4.4100e-003	0.0000	32.4252
2021	5.9700e-003	0.0568	0.0448	1.3000e-004	4.7900e-003	1.8400e-003	6.6300e-003	1.2600e-003	1.7400e-003	3.0000e-003	0.0000	11.6436	11.6436	1.5600e-003	0.0000	11.6827
Maximum	**0.0183**	**0.1694**	**0.1276**	**3.6000e-004**	**9.1000e-003**	**5.9700e-003**	**0.0151**	**2.4600e-003**	**5.6500e-003**	**8.1100e-003**	**0.0000**	**32.3150**	**32.3150**	**4.4100e-003**	**0.0000**	**32.4252**

	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	11-2-2020	2-1-2021	0.2431	0.2431
		Highest	0.2431	0.2431

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	7.2000e-004	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004
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	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	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	**7.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.4000e-004**

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	7.2000e-004	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004
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	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	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	**7.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.4000e-004**

	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	Trenching	Trenching	11/2/2020	1/22/2021	5	60	
2	Paving	Paving	11/2/2020	1/22/2021	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.21

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Cranes	1	2.00	231	0.29
Trenching	Welders	2	4.00	46	0.45
Paving	Tractors/Loaders/Backhoes	1	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
Trenching	3	10.00	10.00	360.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	1	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Trenching - 2020

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	0.0100	0.0642	0.0505	9.0000e-005		3.1300e-003	3.1300e-003		3.0400e-003	3.0400e-003	0.0000	6.9289	6.9289	1.5100e-003	0.0000	6.9668
Total	**0.0100**	**0.0642**	**0.0505**	**9.0000e-005**		**3.1300e-003**	**3.1300e-003**		**3.0400e-003**	**3.0400e-003**	**0.0000**	**6.9289**	**6.9289**	**1.5100e-003**	**0.0000**	**6.9668**

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	1.1600e-003	0.0392	8.6400e-003	1.0000e-004	2.8900e-003	1.2000e-004	3.0100e-003	7.8000e-004	1.2000e-004	8.9000e-004	0.0000	10.1743	10.1743	7.1000e-004	0.0000	10.1920
Vendor	8.0000e-004	0.0238	6.4500e-003	6.0000e-005	1.3900e-003	1.1000e-004	1.5000e-003	4.0000e-004	1.1000e-004	5.1000e-004	0.0000	5.4654	5.4654	3.5000e-004	0.0000	5.4741
Worker	1.0200e-003	8.2000e-004	9.0600e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2470	2.2470	7.0000e-005	0.0000	2.2487
Total	**2.9800e-003**	**0.0639**	**0.0242**	**1.8000e-004**	**6.6900e-003**	**2.5000e-004**	**6.9400e-003**	**1.8200e-003**	**2.5000e-004**	**2.0600e-003**	**0.0000**	**17.8867**	**17.8867**	**1.1300e-003**	**0.0000**	**17.9148**

3.2 Trenching - 2020

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	0.0100	0.0642	0.0505	9.0000e-005		3.1300e-003	3.1300e-003		3.0400e-003	3.0400e-003	0.0000	6.9289	6.9289	1.5100e-003	0.0000	6.9668
Total	**0.0100**	**0.0642**	**0.0505**	**9.0000e-005**		**3.1300e-003**	**3.1300e-003**		**3.0400e-003**	**3.0400e-003**	**0.0000**	**6.9289**	**6.9289**	**1.5100e-003**	**0.0000**	**6.9668**

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	1.1600e-003	0.0392	8.6400e-003	1.0000e-004	2.8900e-003	1.2000e-004	3.0100e-003	7.8000e-004	1.2000e-004	8.9000e-004	0.0000	10.1743	10.1743	7.1000e-004	0.0000	10.1920
Vendor	8.0000e-004	0.0238	6.4500e-003	6.0000e-005	1.3900e-003	1.1000e-004	1.5000e-003	4.0000e-004	1.1000e-004	5.1000e-004	0.0000	5.4654	5.4654	3.5000e-004	0.0000	5.4741
Worker	1.0200e-003	8.2000e-004	9.0600e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2470	2.2470	7.0000e-005	0.0000	2.2487
Total	**2.9800e-003**	**0.0639**	**0.0242**	**1.8000e-004**	**6.6900e-003**	**2.5000e-004**	**6.9400e-003**	**1.8200e-003**	**2.5000e-004**	**2.0600e-003**	**0.0000**	**17.8867**	**17.8867**	**1.1300e-003**	**0.0000**	**17.9148**

3.2 Trenching - 2021

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	3.2500e-003	0.0218	0.0177	3.0000e-005		9.9000e-004	9.9000e-004		9.6000e-004	9.6000e-004	0.0000	2.5195	2.5195	5.2000e-004	0.0000	2.5326
Total	**3.2500e-003**	**0.0218**	**0.0177**	**3.0000e-005**		**9.9000e-004**	**9.9000e-004**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**2.5195**	**2.5195**	**5.2000e-004**	**0.0000**	**2.5326**

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	4.0000e-004	0.0133	3.1000e-003	4.0000e-005	2.5300e-003	4.0000e-005	2.5700e-003	6.5000e-004	4.0000e-005	6.8000e-004	0.0000	3.6590	3.6590	2.5000e-004	0.0000	3.6654
Vendor	2.5000e-004	7.9000e-003	2.1400e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004	0.0000	1.9720	1.9720	1.2000e-004	0.0000	1.9750
Worker	3.4000e-004	2.7000e-004	3.0300e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7911	0.7911	2.0000e-005	0.0000	0.7917
Total	**9.9000e-004**	**0.0215**	**8.2700e-003**	**7.0000e-005**	**3.9100e-003**	**7.0000e-005**	**3.9700e-003**	**1.0300e-003**	**7.0000e-005**	**1.0800e-003**	**0.0000**	**6.4221**	**6.4221**	**3.9000e-004**	**0.0000**	**6.4321**

3.2 Trenching - 2021

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	3.2500e-003	0.0218	0.0177	3.0000e-005		9.9000e-004	9.9000e-004		9.6000e-004	9.6000e-004	0.0000	2.5195	2.5195	5.2000e-004	0.0000	2.5326
Total	**3.2500e-003**	**0.0218**	**0.0177**	**3.0000e-005**		**9.9000e-004**	**9.9000e-004**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**2.5195**	**2.5195**	**5.2000e-004**	**0.0000**	**2.5326**

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	4.0000e-004	0.0133	3.1000e-003	4.0000e-005	2.5300e-003	4.0000e-005	2.5700e-003	6.5000e-004	4.0000e-005	6.8000e-004	0.0000	3.6590	3.6590	2.5000e-004	0.0000	3.6654
Vendor	2.5000e-004	7.9000e-003	2.1400e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004	0.0000	1.9720	1.9720	1.2000e-004	0.0000	1.9750
Worker	3.4000e-004	2.7000e-004	3.0300e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7911	0.7911	2.0000e-005	0.0000	0.7917
Total	**9.9000e-004**	**0.0215**	**8.2700e-003**	**7.0000e-005**	**3.9100e-003**	**7.0000e-005**	**3.9700e-003**	**1.0300e-003**	**7.0000e-005**	**1.0800e-003**	**0.0000**	**6.4221**	**6.4221**	**3.9000e-004**	**0.0000**	**6.4321**

3.3 Paving - 2020

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	4.0300e-003	0.0405	0.0439	6.0000e-005		2.5600e-003	2.5600e-003		2.3600e-003	2.3600e-003	0.0000	5.2524	5.2524	1.7000e-003	0.0000	5.2949
Paving	2.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2300e-003**	**0.0405**	**0.0439**	**6.0000e-005**		**2.5600e-003**	**2.5600e-003**		**2.3600e-003**	**2.3600e-003**	**0.0000**	**5.2524**	**5.2524**	**1.7000e-003**	**0.0000**	**5.2949**

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	1.0200e-003	8.2000e-004	9.0600e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2470	2.2470	7.0000e-005	0.0000	2.2487
Total	**1.0200e-003**	**8.2000e-004**	**9.0600e-003**	**2.0000e-005**	**2.4100e-003**	**2.0000e-005**	**2.4300e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.2470**	**2.2470**	**7.0000e-005**	**0.0000**	**2.2487**

3.3 Paving - 2020

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	4.0300e-003	0.0405	0.0439	6.0000e-005		2.5600e-003	2.5600e-003		2.3600e-003	2.3600e-003	0.0000	5.2524	5.2524	1.7000e-003	0.0000	5.2949
Paving	2.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.2300e-003**	**0.0405**	**0.0439**	**6.0000e-005**		**2.5600e-003**	**2.5600e-003**		**2.3600e-003**	**2.3600e-003**	**0.0000**	**5.2524**	**5.2524**	**1.7000e-003**	**0.0000**	**5.2949**

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	1.0200e-003	8.2000e-004	9.0600e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2470	2.2470	7.0000e-005	0.0000	2.2487
Total	**1.0200e-003**	**8.2000e-004**	**9.0600e-003**	**2.0000e-005**	**2.4100e-003**	**2.0000e-005**	**2.4300e-003**	**6.4000e-004**	**2.0000e-005**	**6.6000e-004**	**0.0000**	**2.2470**	**2.2470**	**7.0000e-005**	**0.0000**	**2.2487**

3.3 Paving - 2021

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	1.3100e-003	0.0133	0.0158	2.0000e-005		7.8000e-004	7.8000e-004		7.2000e-004	7.2000e-004	0.0000	1.9108	1.9108	6.2000e-004	0.0000	1.9263
Paving	7.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.3800e-003**	**0.0133**	**0.0158**	**2.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.2000e-004**	**7.2000e-004**	**0.0000**	**1.9108**	**1.9108**	**6.2000e-004**	**0.0000**	**1.9263**

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	3.4000e-004	2.7000e-004	3.0300e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7911	0.7911	2.0000e-005	0.0000	0.7917
Total	**3.4000e-004**	**2.7000e-004**	**3.0300e-003**	**1.0000e-005**	**8.8000e-004**	**1.0000e-005**	**8.8000e-004**	**2.3000e-004**	**1.0000e-005**	**2.4000e-004**	**0.0000**	**0.7911**	**0.7911**	**2.0000e-005**	**0.0000**	**0.7917**

3.3 Paving - 2021

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	1.3100e-003	0.0133	0.0158	2.0000e-005		7.8000e-004	7.8000e-004		7.2000e-004	7.2000e-004	0.0000	1.9108	1.9108	6.2000e-004	0.0000	1.9263
Paving	7.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.3800e-003**	**0.0133**	**0.0158**	**2.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.2000e-004**	**7.2000e-004**	**0.0000**	**1.9108**	**1.9108**	**6.2000e-004**	**0.0000**	**1.9263**

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	3.4000e-004	2.7000e-004	3.0300e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7911	0.7911	2.0000e-005	0.0000	0.7917
Total	**3.4000e-004**	**2.7000e-004**	**3.0300e-003**	**1.0000e-005**	**8.8000e-004**	**1.0000e-005**	**8.8000e-004**	**2.3000e-004**	**1.0000e-005**	**2.4000e-004**	**0.0000**	**0.7911**	**0.7911**	**2.0000e-005**	**0.0000**	**0.7917**

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
Other Asphalt Surfaces	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
Other Asphalt Surfaces	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
Other Asphalt Surfaces	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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					
Other Asphalt Surfaces	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					
Other Asphalt Surfaces	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			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**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	tons/yr										MT/yr					
Mitigated	7.2000e-004	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004
Unmitigated	7.2000e-004	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-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	1.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004
Total	**7.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.4000e-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	1.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2000e-004	2.2000e-004	0.0000	0.0000	2.4000e-004
Total	**7.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.4000e-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			
Other Asphalt Surfaces	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			
Other Asphalt Surfaces	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			
Other Asphalt Surfaces	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			
Other Asphalt Surfaces	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

LADWP Victory Pump Station Replacement Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.80	1000sqft	0.02	800.00	0
Other Non-Asphalt Surfaces	0.14	Acre	0.14	6,098.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Construction Only

Land Use - Pump Station building dimensions approximately 25 x 30.5.
Total project site area approximately 7,000 square feet (0.16 acres)

Construction Phase - Total Construction Duration: 25 months
Interpolated phase lenghts are approximated based on PD.

Off-road Equipment - PD Inventory:
Excavators (2)
Bulldozer (1)
Tractor (1)

Off-road Equipment - PD Inventory:
Excavators (2)
Bulldozer (1)

Tractor (1)
Crane (1)
Off-road Equipment - PD Inventory:
Excavators (2)
Bulldozer (1)
Tractor (1)
Crane (1)
Bore/Drill Rig (1)

Off-road Equipment - PD Inventory:
Excavators (2)
Bulldozer (1)
Tractor (1)

Off-road Equipment - PD Inventory:
Excavators (1)
Paver (1)
Roller (1)
Tractor (1)

Trips and VMT - 25 workers/day
4 material deliveries/day
Site Clearing: 1 load/truck/day = 4 one-way trips/day
Excavation: 4 loads/truck/day = 16 one-way trips/day
Shoring: 1 load/truck/day = 4 one-way trips/day

Grading - Total excavation & removal: 1,036 CY
Total import for geotech compliance: 152 CY

Construction Off-road Equipment Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Vehicle Trips - No daily trips.
Occasional maintenance trips would occur.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	110.00
tblConstructionPhase	NumDays	2.00	260.00
tblConstructionPhase	NumDays	5.00	110.00
tblConstructionPhase	NumDays	1.00	55.00
tblConstructionPhase	NumDays	1.00	15.00
tblGrading	MaterialExported	0.00	952.00

tblGrading	MaterialExported	0.00	30.00
tblGrading	MaterialExported	0.00	54.00
tblGrading	MaterialImported	0.00	152.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	1.00	4.00
tblSolidWaste	SolidWasteGenerationRate	0.99	0.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	500.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	6.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	6.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	4.00	220.00
tblTripsAndVMT	HaulingTripNumber	119.00	4,160.00
tblTripsAndVMT	HaulingTripNumber	26.00	60.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	1.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	WorkerTripNumber	10.00	50.00
tblTripsAndVMT	WorkerTripNumber	10.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	50.00
tblTripsAndVMT	WorkerTripNumber	3.00	50.00
tblTripsAndVMT	WorkerTripNumber	10.00	50.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00

tblWater	IndoorWaterUseRate	185,000.00	0.00

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					
2022	0.0380	0.3644	0.3703	8.8000e-004	0.1465	0.0143	0.1608	0.0662	0.0132	0.0794	0.0000	80.1483	80.1483	0.0160	0.0000	80.5488
2023	0.1490	1.4807	1.6300	4.6500e-003	0.5202	0.0506	0.5708	0.2541	0.0465	0.3006	0.0000	429.0457	429.0457	0.0770	0.0000	430.9698
2024	0.0996	0.8285	1.0830	2.3500e-003	0.0828	0.0353	0.1181	0.0264	0.0325	0.0589	0.0000	209.7068	209.7068	0.0469	0.0000	210.8803
Maximum	**0.1490**	**1.4807**	**1.6300**	**4.6500e-003**	**0.5202**	**0.0506**	**0.5708**	**0.2541**	**0.0465**	**0.3006**	**0.0000**	**429.0457**	**429.0457**	**0.0770**	**0.0000**	**430.9698**

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					
2022	0.0380	0.3644	0.3703	8.8000e-004	0.0867	0.0143	0.1011	0.0334	0.0132	0.0466	0.0000	80.1482	80.1482	0.0160	0.0000	80.5487
2023	0.1490	1.4807	1.6300	4.6500e-003	0.2722	0.0506	0.3228	0.1178	0.0465	0.1643	0.0000	429.0454	429.0454	0.0770	0.0000	430.9696
2024	0.0996	0.8285	1.0830	2.3500e-003	0.0736	0.0353	0.1089	0.0214	0.0325	0.0538	0.0000	209.7067	209.7067	0.0469	0.0000	210.8801
Maximum	**0.1490**	**1.4807**	**1.6300**	**4.6500e-003**	**0.2722**	**0.0506**	**0.3228**	**0.1178**	**0.0465**	**0.1643**	**0.0000**	**429.0454**	**429.0454**	**0.0770**	**0.0000**	**430.9696**

LADWP Victory Pump Station Replacement Project - Los Angeles-South Coast County, Annual

	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**	**42.29**	**0.00**	**37.30**	**50.24**	**0.00**	**39.68**	**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	**10-3-2022**	**1-2-2023**	0.3965	0.3965
2	**1-3-2023**	**4-2-2023**	0.3953	0.3953
3	**4-3-2023**	**7-2-2023**	0.3980	0.3980
4	**7-3-2023**	**10-2-2023**	0.4024	0.4024
5	**10-3-2023**	**1-2-2024**	0.4245	0.4245
6	**1-3-2024**	**4-2-2024**	0.3221	0.3221
7	**4-3-2024**	**7-2-2024**	0.2835	0.2835
8	**7-3-2024**	**9-30-2024**	0.1991	0.1991
		Highest	0.4245	0.4245

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	3.7400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	8.0000e-005	7.1000e-004	6.0000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	5.7185	5.7185	1.3000e-004	4.0000e-005	5.7332
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
Stationary	2.4600e-003	6.8800e-003	6.2800e-003	1.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	1.1424	1.1424	1.6000e-004	0.0000	1.1464
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	**6.2800e-003**	**7.5900e-003**	**6.8900e-003**	**1.0000e-005**	**0.0000**	**4.1000e-004**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**4.1000e-004**	**0.0000**	**6.8609**	**6.8609**	**2.9000e-004**	**4.0000e-005**	**6.8797**

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	3.7400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	8.0000e-005	7.1000e-004	6.0000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	5.7185	5.7185	1.3000e-004	4.0000e-005	5.7332
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
Stationary	2.4600e-003	6.8800e-003	6.2800e-003	1.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	1.1424	1.1424	1.6000e-004	0.0000	1.1464
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	**6.2800e-003**	**7.5900e-003**	**6.8900e-003**	**1.0000e-005**	**0.0000**	**4.1000e-004**	**4.1000e-004**	**0.0000**	**4.1000e-004**	**4.1000e-004**	**0.0000**	**6.8609**	**6.8609**	**2.9000e-004**	**4.0000e-005**	**6.8797**

	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	Site Clearing/Tree Removal	Site Preparation	10/3/2022	12/16/2022	5	55	
2	Excavation/Grading	Grading	12/19/2022	12/15/2023	5	260	
3	Shoring/Pile Driving	Site Preparation	12/18/2023	1/5/2024	5	15	
4	Pump Station Building Construction	Building Construction	1/8/2024	6/7/2024	5	110	
5	Site Finalization	Paving	6/10/2024	11/8/2024	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.14

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

OffRoad Equipment

LADWP Victory Pump Station Replacement Project - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Clearing/Tree Removal	Excavators	2	6.00	158	0.38
Site Clearing/Tree Removal	Rubber Tired Dozers	1	4.00	247	0.40
Site Clearing/Tree Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Excavation/Grading	Excavators	2	8.00	158	0.38
Excavation/Grading	Rubber Tired Dozers	1	4.00	247	0.40
Excavation/Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Shoring/Pile Driving	Bore/Drill Rigs	1	6.00	221	0.50
Shoring/Pile Driving	Cranes	1	4.00	231	0.29
Shoring/Pile Driving	Excavators	2	6.00	158	0.38
Shoring/Pile Driving	Rubber Tired Dozers	1	8.00	247	0.40
Shoring/Pile Driving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pump Station Building Construction	Cranes	1	4.00	231	0.29
Pump Station Building Construction	Excavators	2	4.00	158	0.38
Pump Station Building Construction	Rubber Tired Dozers	1	4.00	247	0.40
Pump Station Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Finalization	Excavators	1	4.00	158	0.38
Site Finalization	Pavers	1	7.00	130	0.42
Site Finalization	Rollers	1	7.00	80	0.38
Site Finalization	Tractors/Loaders/Backhoes	1	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
Site Clearing/Tree Removal	4	50.00	8.00	220.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Excavation/Grading	4	50.00	8.00	4,160.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Shoring/Pile Driving	6	50.00	8.00	60.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station Building Construction	5	50.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Finalization	4	50.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Clearing/Tree Removal - 2022

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					0.0828	0.0000	0.0828	0.0455	0.0000	0.0455	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0244	0.2403	0.2451	4.2000e-004		0.0118	0.0118		0.0108	0.0108	0.0000	36.5427	36.5427	0.0118	0.0000	36.8382
Total	**0.0244**	**0.2403**	**0.2451**	**4.2000e-004**	**0.0828**	**0.0118**	**0.0946**	**0.0455**	**0.0108**	**0.0563**	**0.0000**	**36.5427**	**36.5427**	**0.0118**	**0.0000**	**36.8382**

3.2 Site Clearing/Tree Removal - 2022

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	8.8000e-004	0.0283	7.0200e-003	8.0000e-005	1.8900e-003	8.0000e-005	1.9700e-003	5.2000e-004	8.0000e-005	5.9000e-004	0.0000	8.2855	8.2855	5.7000e-004	0.0000	8.2999
Vendor	6.4000e-004	0.0206	5.5700e-003	6.0000e-005	1.3900e-003	4.0000e-005	1.4200e-003	4.0000e-004	4.0000e-005	4.4000e-004	0.0000	5.3753	5.3753	3.2000e-004	0.0000	5.3833
Worker	5.5500e-003	4.1600e-003	0.0479	1.5000e-004	0.0151	1.2000e-004	0.0152	4.0000e-003	1.1000e-004	4.1100e-003	0.0000	13.1196	13.1196	3.6000e-004	0.0000	13.1287
Total	**7.0700e-003**	**0.0531**	**0.0605**	**2.9000e-004**	**0.0184**	**2.4000e-004**	**0.0186**	**4.9200e-003**	**2.3000e-004**	**5.1400e-003**	**0.0000**	**26.7805**	**26.7805**	**1.2500e-003**	**0.0000**	**26.8119**

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					0.0323	0.0000	0.0323	0.0178	0.0000	0.0178	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0244	0.2403	0.2451	4.2000e-004		0.0118	0.0118		0.0108	0.0108	0.0000	36.5427	36.5427	0.0118	0.0000	36.8381
Total	**0.0244**	**0.2403**	**0.2451**	**4.2000e-004**	**0.0323**	**0.0118**	**0.0441**	**0.0178**	**0.0108**	**0.0286**	**0.0000**	**36.5427**	**36.5427**	**0.0118**	**0.0000**	**36.8381**

3.2 Site Clearing/Tree Removal - 2022

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	8.8000e-004	0.0283	7.0200e-003	8.0000e-005	1.8900e-003	8.0000e-005	1.9700e-003	5.2000e-004	8.0000e-005	5.9000e-004	0.0000	8.2855	8.2855	5.7000e-004	0.0000	8.2999
Vendor	6.4000e-004	0.0206	5.5700e-003	6.0000e-005	1.3900e-003	4.0000e-005	1.4200e-003	4.0000e-004	4.0000e-005	4.4000e-004	0.0000	5.3753	5.3753	3.2000e-004	0.0000	5.3833
Worker	5.5500e-003	4.1600e-003	0.0479	1.5000e-004	0.0151	1.2000e-004	0.0152	4.0000e-003	1.1000e-004	4.1100e-003	0.0000	13.1196	13.1196	3.6000e-004	0.0000	13.1287
Total	**7.0700e-003**	**0.0531**	**0.0605**	**2.9000e-004**	**0.0184**	**2.4000e-004**	**0.0186**	**4.9200e-003**	**2.3000e-004**	**5.1400e-003**	**0.0000**	**26.7805**	**26.7805**	**1.2500e-003**	**0.0000**	**26.8119**

3.3 Excavation/Grading - 2022

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					0.0151	0.0000	0.0151	8.2800e-003	0.0000	8.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7300e-003	0.0460	0.0499	8.0000e-005		2.2400e-003	2.2400e-003		2.0600e-003	2.0600e-003	0.0000	7.4365	7.4365	2.4100e-003	0.0000	7.4967
Total	**4.7300e-003**	**0.0460**	**0.0499**	**8.0000e-005**	**0.0151**	**2.2400e-003**	**0.0174**	**8.2800e-003**	**2.0600e-003**	**0.0103**	**0.0000**	**7.4365**	**7.4365**	**2.4100e-003**	**0.0000**	**7.4967**

3.3 Excavation/Grading - 2022

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	6.4000e-004	0.0206	5.1100e-003	6.0000e-005	0.0272	6.0000e-005	0.0273	6.7200e-003	6.0000e-005	6.7800e-003	0.0000	6.0259	6.0259	4.2000e-004	0.0000	6.0363
Vendor	1.2000e-004	3.7500e-003	1.0100e-003	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9773	0.9773	6.0000e-005	0.0000	0.9788
Worker	1.0100e-003	7.6000e-004	8.7100e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.3854	2.3854	7.0000e-005	0.0000	2.3870
Total	**1.7700e-003**	**0.0251**	**0.0148**	**1.0000e-004**	**0.0302**	**9.0000e-005**	**0.0303**	**7.5200e-003**	**9.0000e-005**	**7.6100e-003**	**0.0000**	**9.3886**	**9.3886**	**5.5000e-004**	**0.0000**	**9.4021**

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					5.8900e-003	0.0000	5.8900e-003	3.2300e-003	0.0000	3.2300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7300e-003	0.0460	0.0499	8.0000e-005		2.2400e-003	2.2400e-003		2.0600e-003	2.0600e-003	0.0000	7.4365	7.4365	2.4100e-003	0.0000	7.4967
Total	**4.7300e-003**	**0.0460**	**0.0499**	**8.0000e-005**	**5.8900e-003**	**2.2400e-003**	**8.1300e-003**	**3.2300e-003**	**2.0600e-003**	**5.2900e-003**	**0.0000**	**7.4365**	**7.4365**	**2.4100e-003**	**0.0000**	**7.4967**

3.3 Excavation/Grading - 2022

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	6.4000e-004	0.0206	5.1100e-003	6.0000e-005	0.0272	6.0000e-005	0.0273	6.7200e-003	6.0000e-005	6.7800e-003	0.0000	6.0259	6.0259	4.2000e-004	0.0000	6.0363
Vendor	1.2000e-004	3.7500e-003	1.0100e-003	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9773	0.9773	6.0000e-005	0.0000	0.9788
Worker	1.0100e-003	7.6000e-004	8.7100e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.3854	2.3854	7.0000e-005	0.0000	2.3870
Total	**1.7700e-003**	**0.0251**	**0.0148**	**1.0000e-004**	**0.0302**	**9.0000e-005**	**0.0303**	**7.5200e-003**	**9.0000e-005**	**7.6100e-003**	**0.0000**	**9.3886**	**9.3886**	**5.5000e-004**	**0.0000**	**9.4021**

3.3 Excavation/Grading - 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					0.3764	0.0000	0.3764	0.2069	0.0000	0.2069	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1042	0.9766	1.2178	2.1200e-003		0.0461	0.0461		0.0424	0.0424	0.0000	185.9609	185.9609	0.0601	0.0000	187.4644
Total	**0.1042**	**0.9766**	**1.2178**	**2.1200e-003**	**0.3764**	**0.0461**	**0.4226**	**0.2069**	**0.0424**	**0.2493**	**0.0000**	**185.9609**	**185.9609**	**0.0601**	**0.0000**	**187.4644**

3.3 Excavation/Grading - 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	tons/yr										MT/yr					
Hauling	0.0105	0.3371	0.1158	1.4600e-003	0.0354	6.0000e-004	0.0360	9.6900e-003	5.8000e-004	0.0103	0.0000	144.3722	144.3722	9.6700e-003	0.0000	144.6141
Vendor	2.1600e-003	0.0708	0.0227	2.4000e-004	6.3000e-003	8.0000e-005	6.3800e-003	1.8200e-003	8.0000e-005	1.9000e-003	0.0000	23.6682	23.6682	1.2900e-003	0.0000	23.7005
Worker	0.0237	0.0171	0.2003	6.4000e-004	0.0685	5.3000e-004	0.0690	0.0182	4.9000e-004	0.0187	0.0000	57.4525	57.4525	1.4800e-003	0.0000	57.4894
Total	**0.0364**	**0.4251**	**0.3388**	**2.3400e-003**	**0.1102**	**1.2100e-003**	**0.1114**	**0.0297**	**1.1500e-003**	**0.0309**	**0.0000**	**225.4929**	**225.4929**	**0.0124**	**0.0000**	**225.8040**

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					0.1468	0.0000	0.1468	0.0807	0.0000	0.0807	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1042	0.9766	1.2178	2.1200e-003		0.0461	0.0461		0.0424	0.0424	0.0000	185.9606	185.9606	0.0601	0.0000	187.4642
Total	**0.1042**	**0.9766**	**1.2178**	**2.1200e-003**	**0.1468**	**0.0461**	**0.1929**	**0.0807**	**0.0424**	**0.1231**	**0.0000**	**185.9606**	**185.9606**	**0.0601**	**0.0000**	**187.4642**

3.3 Excavation/Grading - 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	tons/yr										MT/yr					
Hauling	0.0105	0.3371	0.1158	1.4600e-003	0.0354	6.0000e-004	0.0360	9.6900e-003	5.8000e-004	0.0103	0.0000	144.3722	144.3722	9.6700e-003	0.0000	144.6141
Vendor	2.1600e-003	0.0708	0.0227	2.4000e-004	6.3000e-003	8.0000e-005	6.3800e-003	1.8200e-003	8.0000e-005	1.9000e-003	0.0000	23.6682	23.6682	1.2900e-003	0.0000	23.7005
Worker	0.0237	0.0171	0.2003	6.4000e-004	0.0685	5.3000e-004	0.0690	0.0182	4.9000e-004	0.0187	0.0000	57.4525	57.4525	1.4800e-003	0.0000	57.4894
Total	**0.0364**	**0.4251**	**0.3388**	**2.3400e-003**	**0.1102**	**1.2100e-003**	**0.1114**	**0.0297**	**1.1500e-003**	**0.0309**	**0.0000**	**225.4929**	**225.4929**	**0.0124**	**0.0000**	**225.8040**

3.4 Shoring/Pile Driving - 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					0.0301	0.0000	0.0301	0.0166	0.0000	0.0166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2800e-003	0.0721	0.0633	1.5000e-004		3.2000e-003	3.2000e-003		2.9400e-003	2.9400e-003	0.0000	12.9033	12.9033	4.1700e-003	0.0000	13.0077
Total	**7.2800e-003**	**0.0721**	**0.0633**	**1.5000e-004**	**0.0301**	**3.2000e-003**	**0.0333**	**0.0166**	**2.9400e-003**	**0.0195**	**0.0000**	**12.9033**	**12.9033**	**4.1700e-003**	**0.0000**	**13.0077**

3.4 Shoring/Pile Driving - 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	tons/yr										MT/yr					
Hauling	1.1000e-004	3.3700e-003	1.1600e-003	1.0000e-005	4.7000e-004	1.0000e-005	4.8000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	1.4437	1.4437	1.0000e-004	0.0000	1.4461
Vendor	9.0000e-005	2.8300e-003	9.1000e-004	1.0000e-005	2.5000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.9467	0.9467	5.0000e-005	0.0000	0.9480
Worker	9.5000e-004	6.8000e-004	8.0100e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.2981	2.2981	6.0000e-005	0.0000	2.2996
Total	**1.1500e-003**	**6.8800e-003**	**0.0101**	**5.0000e-005**	**3.4600e-003**	**3.0000e-005**	**3.5000e-003**	**9.3000e-004**	**3.0000e-005**	**9.6000e-004**	**0.0000**	**4.6886**	**4.6886**	**2.1000e-004**	**0.0000**	**4.6937**

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					0.0118	0.0000	0.0118	6.4600e-003	0.0000	6.4600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2800e-003	0.0721	0.0633	1.5000e-004		3.2000e-003	3.2000e-003		2.9400e-003	2.9400e-003	0.0000	12.9033	12.9033	4.1700e-003	0.0000	13.0077
Total	**7.2800e-003**	**0.0721**	**0.0633**	**1.5000e-004**	**0.0118**	**3.2000e-003**	**0.0150**	**6.4600e-003**	**2.9400e-003**	**9.4000e-003**	**0.0000**	**12.9033**	**12.9033**	**4.1700e-003**	**0.0000**	**13.0077**

3.4 Shoring/Pile Driving - 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	tons/yr										MT/yr					
Hauling	1.1000e-004	3.3700e-003	1.1600e-003	1.0000e-005	4.7000e-004	1.0000e-005	4.8000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	1.4437	1.4437	1.0000e-004	0.0000	1.4461
Vendor	9.0000e-005	2.8300e-003	9.1000e-004	1.0000e-005	2.5000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.9467	0.9467	5.0000e-005	0.0000	0.9480
Worker	9.5000e-004	6.8000e-004	8.0100e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.2981	2.2981	6.0000e-005	0.0000	2.2996
Total	**1.1500e-003**	**6.8800e-003**	**0.0101**	**5.0000e-005**	**3.4600e-003**	**3.0000e-005**	**3.5000e-003**	**9.3000e-004**	**3.0000e-005**	**9.6000e-004**	**0.0000**	**4.6886**	**4.6886**	**2.1000e-004**	**0.0000**	**4.6937**

3.4 Shoring/Pile Driving - 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					0.0151	0.0000	0.0151	8.2800e-003	0.0000	8.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5800e-003	0.0347	0.0317	7.0000e-005		1.5300e-003	1.5300e-003		1.4100e-003	1.4100e-003	0.0000	6.4559	6.4559	2.0900e-003	0.0000	6.5081
Total	**3.5800e-003**	**0.0347**	**0.0317**	**7.0000e-005**	**0.0151**	**1.5300e-003**	**0.0166**	**8.2800e-003**	**1.4100e-003**	**9.6900e-003**	**0.0000**	**6.4559**	**6.4559**	**2.0900e-003**	**0.0000**	**6.5081**

3.4 Shoring/Pile Driving - 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	tons/yr										MT/yr					
Hauling	5.0000e-005	1.6700e-003	5.9000e-004	1.0000e-005	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.7186	0.7186	5.0000e-005	0.0000	0.7198
Vendor	4.0000e-005	1.4100e-003	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.4715	0.4715	3.0000e-005	0.0000	0.4721
Worker	4.5000e-004	3.1000e-004	3.7300e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1134	1.1134	3.0000e-005	0.0000	1.1141
Total	**5.4000e-004**	**3.3900e-003**	**4.7600e-003**	**2.0000e-005**	**1.9300e-003**	**1.0000e-005**	**1.9400e-003**	**5.1000e-004**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**2.3035**	**2.3035**	**1.1000e-004**	**0.0000**	**2.3060**

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					5.8800e-003	0.0000	5.8800e-003	3.2300e-003	0.0000	3.2300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5800e-003	0.0347	0.0317	7.0000e-005		1.5300e-003	1.5300e-003		1.4100e-003	1.4100e-003	0.0000	6.4559	6.4559	2.0900e-003	0.0000	6.5081
Total	**3.5800e-003**	**0.0347**	**0.0317**	**7.0000e-005**	**5.8800e-003**	**1.5300e-003**	**7.4100e-003**	**3.2300e-003**	**1.4100e-003**	**4.6400e-003**	**0.0000**	**6.4559**	**6.4559**	**2.0900e-003**	**0.0000**	**6.5081**

3.4 Shoring/Pile Driving - 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	tons/yr										MT/yr					
Hauling	5.0000e-005	1.6700e-003	5.9000e-004	1.0000e-005	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.7186	0.7186	5.0000e-005	0.0000	0.7198
Vendor	4.0000e-005	1.4100e-003	4.4000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.4715	0.4715	3.0000e-005	0.0000	0.4721
Worker	4.5000e-004	3.1000e-004	3.7300e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1134	1.1134	3.0000e-005	0.0000	1.1141
Total	**5.4000e-004**	**3.3900e-003**	**4.7600e-003**	**2.0000e-005**	**1.9300e-003**	**1.0000e-005**	**1.9400e-003**	**5.1000e-004**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**2.3035**	**2.3035**	**1.1000e-004**	**0.0000**	**2.3060**

3.5 Pump Station Building Construction - 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	0.0461	0.4492	0.4374	8.5000e-004		0.0203	0.0203		0.0187	0.0187	0.0000	74.5896	74.5896	0.0241	0.0000	75.1927
Total	**0.0461**	**0.4492**	**0.4374**	**8.5000e-004**		**0.0203**	**0.0203**		**0.0187**	**0.0187**	**0.0000**	**74.5896**	**74.5896**	**0.0241**	**0.0000**	**75.1927**

3.5 Pump Station Building Construction - 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	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	9.3000e-004	0.0311	9.6900e-003	1.1000e-004	2.7700e-003	4.0000e-005	2.8100e-003	8.0000e-004	3.0000e-005	8.3000e-004	0.0000	10.3725	10.3725	5.6000e-004	0.0000	10.3865
Worker	9.8800e-003	6.8600e-003	0.0821	2.7000e-004	0.0301	2.3000e-004	0.0304	8.0000e-003	2.1000e-004	8.2200e-003	0.0000	24.4953	24.4953	6.0000e-004	0.0000	24.5102
Total	**0.0108**	**0.0379**	**0.0917**	**3.8000e-004**	**0.0329**	**2.7000e-004**	**0.0332**	**8.8000e-003**	**2.4000e-004**	**9.0500e-003**	**0.0000**	**34.8678**	**34.8678**	**1.1600e-003**	**0.0000**	**34.8967**

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	0.0461	0.4492	0.4374	8.5000e-004		0.0203	0.0203		0.0187	0.0187	0.0000	74.5895	74.5895	0.0241	0.0000	75.1926
Total	**0.0461**	**0.4492**	**0.4374**	**8.5000e-004**		**0.0203**	**0.0203**		**0.0187**	**0.0187**	**0.0000**	**74.5895**	**74.5895**	**0.0241**	**0.0000**	**75.1926**

3.5 Pump Station Building Construction - 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	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	9.3000e-004	0.0311	9.6900e-003	1.1000e-004	2.7700e-003	4.0000e-005	2.8100e-003	8.0000e-004	3.0000e-005	8.3000e-004	0.0000	10.3725	10.3725	5.6000e-004	0.0000	10.3865
Worker	9.8800e-003	6.8600e-003	0.0821	2.7000e-004	0.0301	2.3000e-004	0.0304	8.0000e-003	2.1000e-004	8.2200e-003	0.0000	24.4953	24.4953	6.0000e-004	0.0000	24.5102
Total	**0.0108**	**0.0379**	**0.0917**	**3.8000e-004**	**0.0329**	**2.7000e-004**	**0.0332**	**8.8000e-003**	**2.4000e-004**	**9.0500e-003**	**0.0000**	**34.8678**	**34.8678**	**1.1600e-003**	**0.0000**	**34.8967**

3.6 Site Finalization - 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	0.0277	0.2655	0.4256	6.4000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	56.6222	56.6222	0.0183	0.0000	57.0800
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0277**	**0.2655**	**0.4256**	**6.4000e-004**		**0.0129**	**0.0129**		**0.0119**	**0.0119**	**0.0000**	**56.6222**	**56.6222**	**0.0183**	**0.0000**	**57.0800**

3.6 Site Finalization - 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	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	9.3000e-004	0.0311	9.6900e-003	1.1000e-004	2.7700e-003	4.0000e-005	2.8100e-003	8.0000e-004	3.0000e-005	8.3000e-004	0.0000	10.3725	10.3725	5.6000e-004	0.0000	10.3865
Worker	9.8800e-003	6.8600e-003	0.0821	2.7000e-004	0.0301	2.3000e-004	0.0304	8.0000e-003	2.1000e-004	8.2200e-003	0.0000	24.4953	24.4953	6.0000e-004	0.0000	24.5102
Total	**0.0108**	**0.0379**	**0.0917**	**3.8000e-004**	**0.0329**	**2.7000e-004**	**0.0332**	**8.8000e-003**	**2.4000e-004**	**9.0500e-003**	**0.0000**	**34.8678**	**34.8678**	**1.1600e-003**	**0.0000**	**34.8967**

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	0.0277	0.2655	0.4256	6.4000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	56.6221	56.6221	0.0183	0.0000	57.0799
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0277**	**0.2655**	**0.4256**	**6.4000e-004**		**0.0129**	**0.0129**		**0.0119**	**0.0119**	**0.0000**	**56.6221**	**56.6221**	**0.0183**	**0.0000**	**57.0799**

3.6 Site Finalization - 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	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	9.3000e-004	0.0311	9.6900e-003	1.1000e-004	2.7700e-003	4.0000e-005	2.8100e-003	8.0000e-004	3.0000e-005	8.3000e-004	0.0000	10.3725	10.3725	5.6000e-004	0.0000	10.3865
Worker	9.8800e-003	6.8600e-003	0.0821	2.7000e-004	0.0301	2.3000e-004	0.0304	8.0000e-003	2.1000e-004	8.2200e-003	0.0000	24.4953	24.4953	6.0000e-004	0.0000	24.5102
Total	**0.0108**	**0.0379**	**0.0917**	**3.8000e-004**	**0.0329**	**2.7000e-004**	**0.0332**	**8.8000e-003**	**2.4000e-004**	**9.0500e-003**	**0.0000**	**34.8678**	**34.8678**	**1.1600e-003**	**0.0000**	**34.8967**

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
General Light Industry	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	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
General Light Industry	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Other Non-Asphalt Surfaces	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
General Light Industry	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Non-Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

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	4.9458	4.9458	1.2000e-004	2.0000e-005	4.9559
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.9458	4.9458	1.2000e-004	2.0000e-005	4.9559
NaturalGas Mitigated	8.0000e-005	7.1000e-004	6.0000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7727	0.7727	1.0000e-005	1.0000e-005	0.7773
NaturalGas Unmitigated	8.0000e-005	7.1000e-004	6.0000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7727	0.7727	1.0000e-005	1.0000e-005	0.7773

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					
General Light Industry	14480	8.0000e-005	7.1000e-004	6.0000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7727	0.7727	1.0000e-005	1.0000e-005	0.7773
Other Non-Asphalt Surfaces	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		**8.0000e-005**	**7.1000e-004**	**6.0000e-004**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.7727**	**0.7727**	**1.0000e-005**	**1.0000e-005**	**0.7773**

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					
General Light Industry	14480	8.0000e-005	7.1000e-004	6.0000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7727	0.7727	1.0000e-005	1.0000e-005	0.7773
Other Non-Asphalt Surfaces	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		**8.0000e-005**	**7.1000e-004**	**6.0000e-004**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.7727**	**0.7727**	**1.0000e-005**	**1.0000e-005**	**0.7773**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	8880	4.9458	1.2000e-004	2.0000e-005	4.9559
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**4.9458**	**1.2000e-004**	**2.0000e-005**	**4.9559**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	8880	4.9458	1.2000e-004	2.0000e-005	4.9559
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**4.9458**	**1.2000e-004**	**2.0000e-005**	**4.9559**

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	3.7400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	3.7400e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**3.7500e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**3.7500e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	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			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	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			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	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			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	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
Fire Pump	1	6	6	500	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Fire Pump - Diesel (300 - 600 HP)	2.4600e-003	6.8800e-003	6.2800e-003	1.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	1.1424	1.1424	1.6000e-004	0.0000	1.1464
Total	**2.4600e-003**	**6.8800e-003**	**6.2800e-003**	**1.0000e-005**		**3.6000e-004**	**3.6000e-004**		**3.6000e-004**	**3.6000e-004**	**0.0000**	**1.1424**	**1.1424**	**1.6000e-004**	**0.0000**	**1.1464**

11.0 Vegetation

APPENDIX E
Noise and Vibration Assessment Technical Memorandum

taha
environmental planners

Technical Memorandum

TO: AECOM

FROM: Terry A. Hayes Associates Inc.

DATE: November 19, 2019

RE: Victory Pump Station Replacement Project – Noise and Vibration Assessment

INTRODUCTION

Terry A. Hayes Associates Inc. (TAHA) has completed a Noise and Vibration Assessment for the Victory Pump Station Replacement 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
- Regulatory Framework
- Significance Thresholds and Local Standards
- Existing Setting
- Impact Assessment
- References

PROJECT DESCRIPTION

The Los Angeles Department of Water and Power (LADWP) proposes to implement the proposed project, which involves the construction of a new pump station to replace the existing aged, temporary underground pumping facility (the existing facility) at 24661 Victory Boulevard in West Hills. **Figure 1** illustrates the regional location of the proposed project and **Figure 2** shows the project components. To allow for optimum performance of the proposed new pump station, approximately 1,800 linear feet of pipeline would be installed along Calvert Street from Sylvan Street to Valley Circle Boulevard as part of the proposed project.

The proposed new pump station would be located on a 75-foot long by 50-foot wide permanent easement granted to LADWP in 1966 and on which the existing pump station is located. LADWP also proposes to acquire an additional undeveloped property in fee along Victory Boulevard to the east of the existing easement to provide room for an access drive to the pump station. The total pump station property would be located on two residential parcels on the northern side of Victory Boulevard, approximately 550 feet west of Pat Avenue in the West Hills community of the San Fernando Valley region of Los Angeles.

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Source: Esri Maps & Data, 2019.

Figure 1
Regional Map

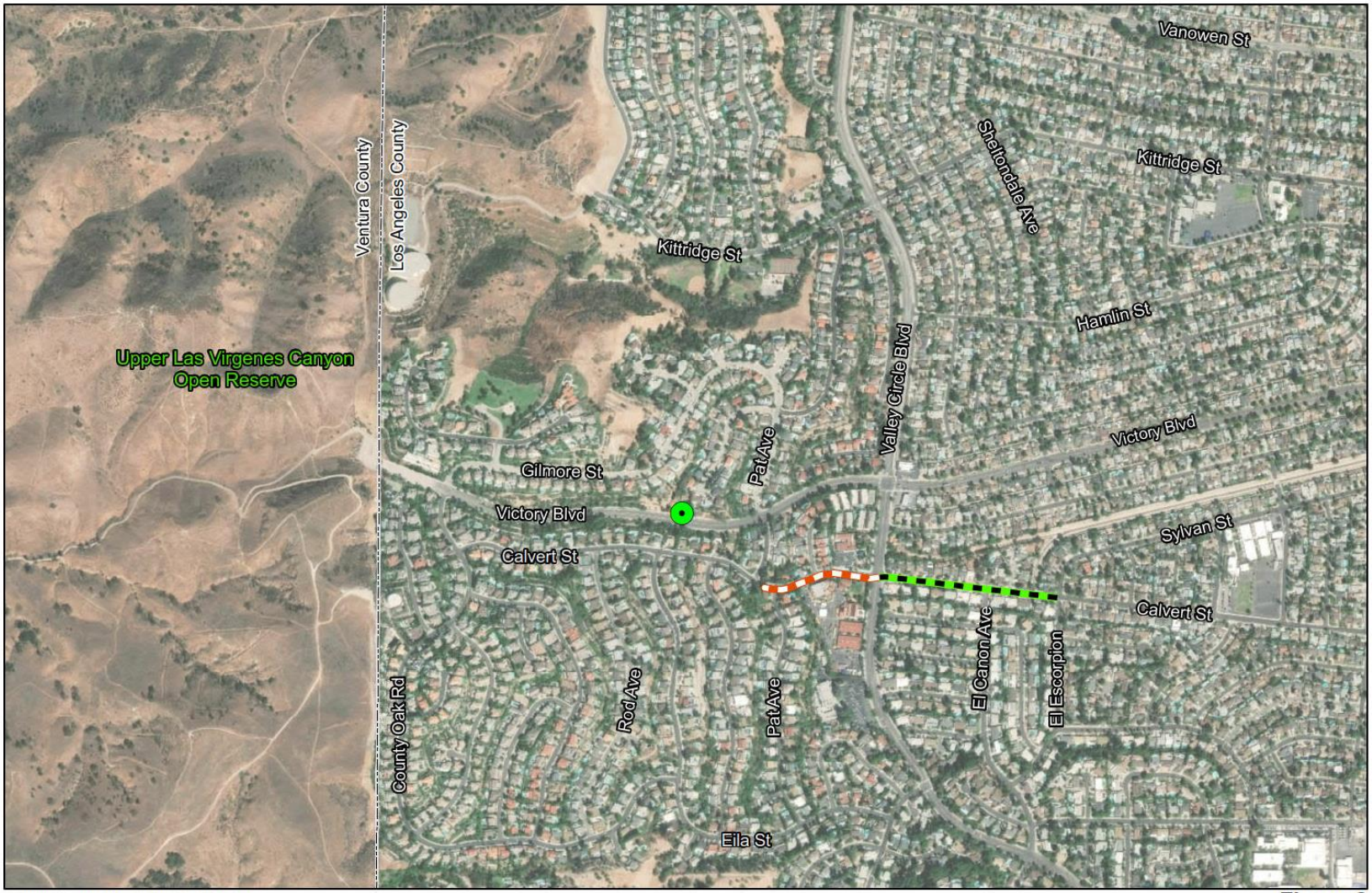


Figure 2
Project Vicinity Map

The pump station replacement would involve the construction of a new, permanent pump station building and the decommissioning of the existing, temporary underground pump station. The proposed new pump station building would be approximately 25 feet tall by 30.5 feet wide, consisting of concrete walls, windows, wood plank finishing, and metal roofing. The new pump station building would house a total of three new pumps. Construction of retaining walls surrounding the proposed new pump station building would be required to offset the difference between the existing ground elevation and the pump station building floor. Additionally, a new exterior concrete pad would be installed in the northwest corner of the pump station replacement site to accommodate a new transformer.

Pump Station Replacement Construction

Construction of the proposed pump station is anticipated to begin in October 2022 and take approximately 25 months to complete, concluding in November 2024. Construction activities would occur within the boundaries of the LADWP easement, except the construction staging and laydown area for the pump station replacement, which would be established immediately adjacent to the construction site, requiring the temporary occupation of one vehicular travel lane, the existing bicycle lane, and the existing parking lane, as well as the existing sidewalk on Victory Boulevard. The general location and extent of this construction site and associated laydown area is shown in **Figure 3**.

Construction vehicle access for the new pump station would be available via the existing driveway at 24661 Victory Boulevard. Any material that would be exported from the project site would follow a designated haul route for the proposed project, which commences at the pump station site, travels eastbound to Valley Circle Boulevard, and southbound on Valley Circle Boulevard to US-101. For hauling of debris and excavated material, the route then continues along the freeway for approximately 17 miles before exiting to Lost Hills Road, Calabasas, toward the Calabasas Landfill Facility. Materials deliveries may come from either the westbound or eastbound 101, exiting at Valley Circle Boulevard. Peak construction vehicle movement is anticipated to occur during excavation activities, when two haul trucks may need to travel to and from the project site up to six times a day, resulting in approximately 24 haul truck trips a day.

At the peak of construction, the typical anticipated work force for the pump station replacement would comprise 15 construction workers a day. However, during peak construction, as many as 25 construction workers may be present. This would result in a maximum of approximately 50 construction worker trips per day, with an average of approximately 30 trips per day, accounting for one inbound and one outbound trip per worker. However, this does not account for any car pooling that may occur among workers, and as a result the number of daily worker vehicle trips may be lower. Construction equipment required for the pump station replacement includes two dirt haul trucks, one crane, two excavators, one bulldozer, one flatbed truck, and one front loader. Additionally, construction of the retaining wall would require the installation of approximately 12 drilled piles. A truck-mounted drill rig with 24-inch auger and a 30-ton crane would be used for pile installation.

Pipeline Installation

Installation of the proposed pipeline would begin in late 2020 and would be installed at a rate of approximately 30 linear feet per day, taking a total of approximately 60 working days to complete. Construction activities associated with the proposed pipeline installation would take place within the existing right-of-way (ROW) of Calvert Street between Pat Avenue and Sylvan Street (**Figure 4**). A construction laydown area would be established for this project component and would occupy an area of approximately 50 feet by 10 feet. The new pipeline would be installed underground using an open trenching method. The excavated trench would be five feet wide by seven feet deep, and would span the approximately 1,800 feet length of the proposed pipeline alignment. The majority of this excavated material would be used to backfill the trench following pipe installation. As such, only a minimal amount of excavated material would be generated for disposal.

Source: Esri 2019; Created by: AECOM, 2019.

0 50 100 Feet

1" = 100'

Approximate Pump Station Replacement Site

Proposed Construction Laydown Area

Figure 3

Proposed Pump Station Replacement Site

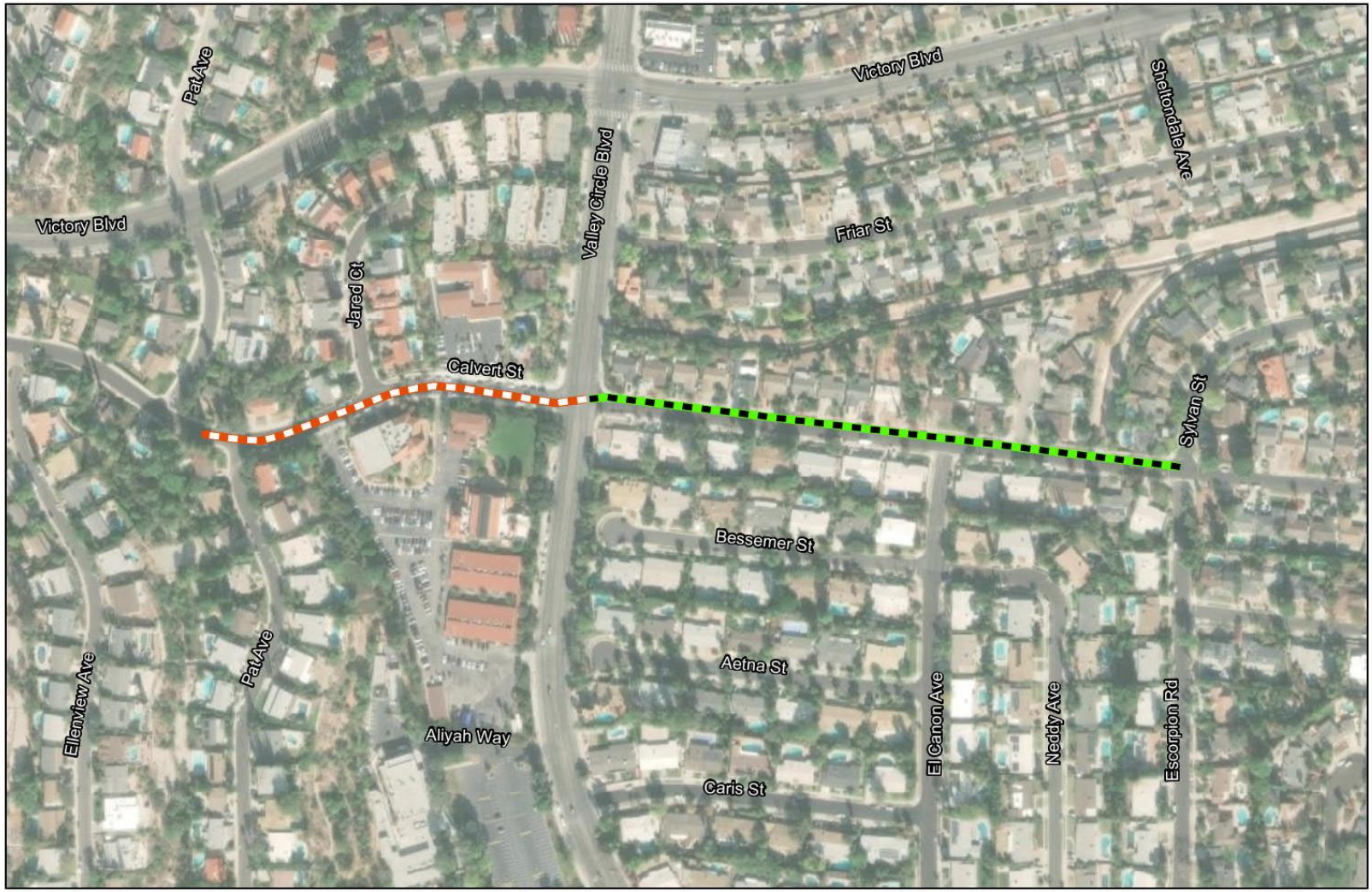


Figure 4

Proposed Pipeline Alignment

The typical anticipated daily work force for the pipeline installation would be approximately 10 construction workers. This would result in an average of approximately 20 construction worker one-way trips per day. Construction equipment required for the pipeline installation includes two pickup trucks, three dump trucks, one Pittman hoist, one backhoe with carrier, one flatbed truck, two weld trucks, one utility truck, and one gang truck.

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. Barriers, such as walls, berms, or buildings that break the line-of-sight between the source and the receiver greatly reduce noise levels from the source since sound can only reach the receiver by bending over the top of the barrier. However, if a barrier is not sufficiently high or long to break the line-of-sight from the source to the receiver, its effectiveness is greatly reduced.

Studies have shown that the smallest perceptible change in sound level for a person with normal hearing sensitivity is approximately 3 dBA. A change of at least 5 dBA would be noticeable and may evoke a community reaction. A 10-dBA increase is subjectively heard as a doubling in loudness and would likely cause a negative community reaction.

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]

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. 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, 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 home owner 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.

LAMC Section 112.04 (Powered Equipment Intended for Repetitive Use in Residential Areas and Other Machinery, Equipment, and Devices) specifies that no person shall operate any lawn mower, backpack blower, lawn edger, riding tractor, or any other machinery, equipment, or other mechanical or electrical device, or any hand tool which creates a loud, raucous or impulsive sound, within any residential zone or within 500 feet of a residence between the hours of 10:00 p.m. and. 7:00 a.m. of the following day.

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 at a distance of 50 feet is prohibited. However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means the above

[1]Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment*, September 2018.

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.

LAMC Section 116.01 (Loud, Unnecessary, and Unusual Noise) states that it shall be unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary, and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.

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 the buildings near the project site are constructed with non-engineered timber and masonry. Vibration levels that exceed a PPV of 0.2 inches per second could potentially damage these types of buildings. The most stringent impact criteria related to annoyance is 65 VdB for buildings subject to frequent vibration events (e.g., multiple equipment passbys).

SIGNIFICANCE THRESHOLDS AND LOCAL STANDARDS

Noise

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

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
b) Generation of excessive ground-borne vibration or ground-borne noise levels; 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 Los Angeles Municipal Code (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} at 50 feet unless technically infeasible. For permanent operational noise, a significant impact would result if the proposed project would increase noise levels at sensitive receptors by 5 dBA.

[2]Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment*, September 2018.

EXISTING SETTING

The project site is located in a developed environment surrounded by residential and institutional uses. As shown in **Figure 5**, sensitive receptors are located within 500 feet of both the pump installation site and the pipeline installation site. Sensitive receptors include residences, Saint Bernardine of Siena Children's Center Pre-School, Saint Bernardine Catholic Church, and St Bernardine of Siena School.

To characterize the existing noise environment around the project site, short-term noise measurements were taken using a SoundPro DL Sound Level Meter on Tuesday, October 15, 2019 between 9:30 a.m. and 1:00 p.m. Hourly noise levels within the project area ranged from 48.4 to 70.1 dBA L_{eq}. Roadway noise was the most significant source of noise in the project area. Monitoring locations are shown in **Figure 4** and existing noise levels are shown in **Table 1**. Monitoring data is included in **Appendix A**.

TABLE 1: EXISTING AMBIENT NOISE LEVELS

Key to Figure 4	Noise Monitoring Location	Sound Level (dBA, L_{eq})
1	Residence (24106 Calvert St.)	51.8
2	Residence (24300 Bessemer St.)	48.4
3	Valley Circle Blvd. at Calvert St.	70.1
4	Saint Bernardine of Sienna Catholic Church (24110 Calvert St.)	55.3
5	Residence (6126 Pat Ave.)	51.9
6	Victory Pump Project Site (Victory Blvd.)	58.7
7	Residence (6216 Ellenview Ave.)	49.1
8	Residence (24666 Gilmore St.)	51.7

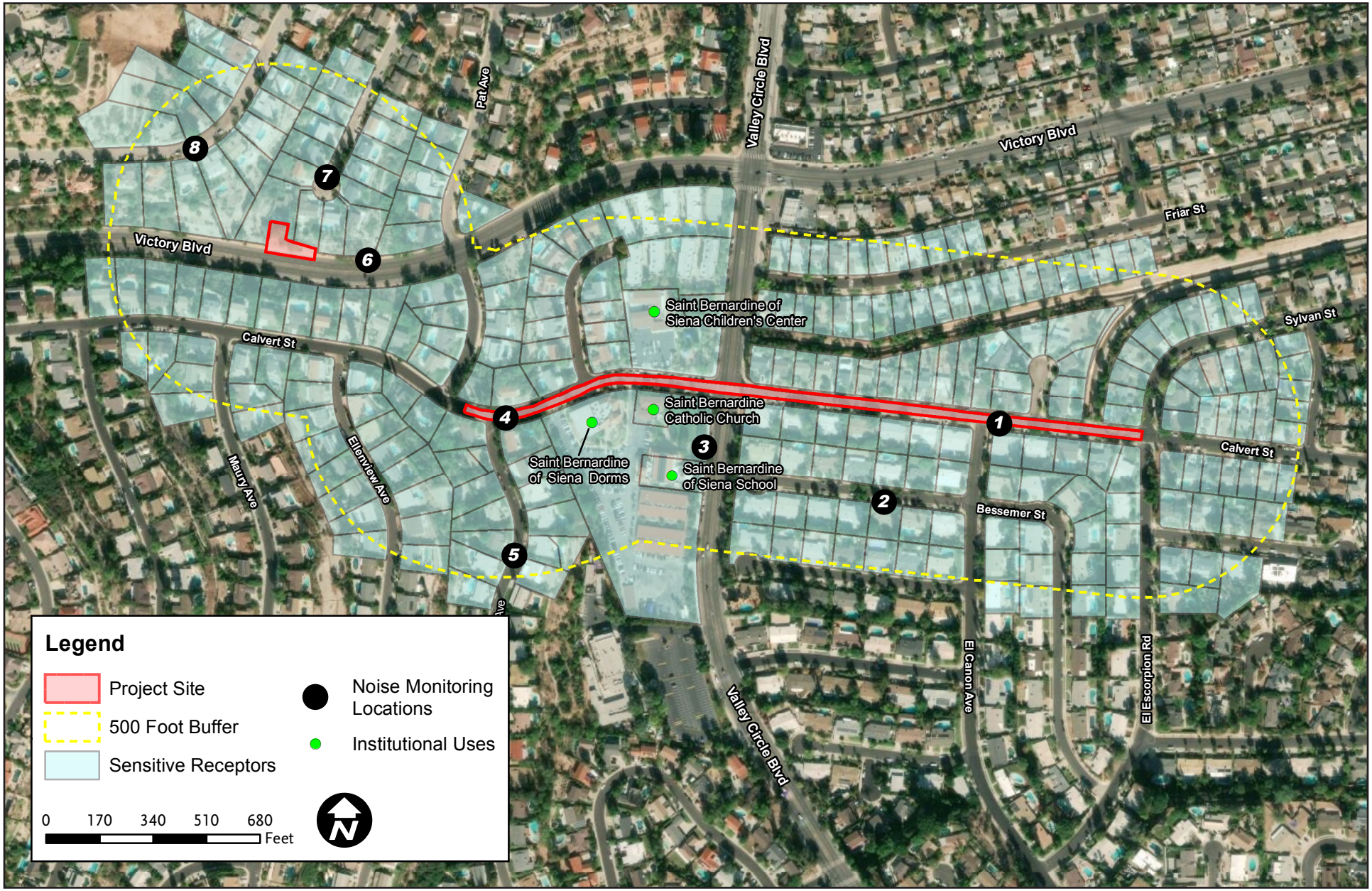
SOURCE: TAHA, 2019.

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)

Construction

Noise impacts from construction of the proposed project would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receptor, and presence or absence of noise attenuation barriers. Construction activities typically require the use of numerous pieces of noise-generating equipment. Typical noise levels from various types of equipment that would be used during construction are listed in **Table 2**. Noise levels from individual pieces of equipment typically are between 70.3 and 80.0 dBA L_{eq} at 50 feet. To more accurately characterize construction-period noise levels, the noise levels shown in **Table 3** take into account the likelihood that multiple pieces of construction equipment would be operating simultaneously and the typical overall noise levels that would be expected for each phase of construction during pump station installation. **Table 4** shows equipment anticipated to be used during each phase of pipeline installation. When considered as an entire process with multiple pieces of equipment, site preparation would generate the loudest noise level of approximately 84.1 dBA L_{eq} at 50 feet during pump installation. The loudest phase during pipeline installation would be pipe installation. Pipeline installation would typically only have two pieces of equipment operating at a time and the loudest noise level is anticipated to be 76.1 dBA L_{eq} at 50 feet.



Source: TAHA, 2019.

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Noise & Vibration Study

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FIGURE 5

SENSITIVE RECEPTORS AND NOISE MONITORING LOCATIONS

TABLE 2: NOISE LEVEL RANGES OF TYPICAL CONSTRUCTION EQUIPMENT	
Construction Equipment	**Noise Level at 50 feet (dBA)**
Auger Drill Rig	77.4
Backhoe	73.6
Crane	72.6
Tractor	80.0
Dozer	77.7
Dump Truck	72.5
Excavator	76.7
Flat Bed Truck	70.3
Pickup Truck	71.0
Paver	74.2
Roller	73.0
Welder	70.0
SOURCE: Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, 2008.	

TABLE 3: PHASED CONSTRUCTION NOISE LEVELS (PUMP INSTALLATION)	
Construction Method	**Noise Level at 50 feet (dBA, L_{eq})**
SITE PREPARATION	
Backhoe	73.6
Tractor	80.0
Dozer	77.7
Dump Truck	72.5
Excavator	76.7
Pickup Truck	71.0
Site Preparation Combined	84.1
RETAINING WALL INSTALLATION	
Auger Drill Rig	77.4
Dump Truck	72.5
Excavator	76.7
Backhoe	73.6
Flat Bed Truck	70.3
Crane	72.6
Pickup Truck	71.0
Retaining Wall Installation Combined	82.6
BUILDING CONSTRUCTION	
Crane	72.6
Backhoe	73.6
Flat Bed Truck	70.3
Crane	72.6
Pickup Truck	71.0
Building Construction Combined	79.2
PAVING	
Paver	74.2
Roller	73.0
Paving Combined	76.7
SOURCE: Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, 2008.	

TABLE 4: PHASED CONSTRUCTION NOISE LEVELS (PIPELINE INSTALLATION)	
Construction Method	**Noise Level at 50 feet (dBA, L_{eq})**
SITE PREPARATION	
Backhoe	73.6
Crane	72.6
Dump Truck	72.5
Flat Bed Truck	70.3
Pickup Truck	71.0
Site Preparation Combined	76.1 /a/
PIPE INSTALLATION	
Backhoe	73.6
Crane	72.6
Dump Truck	72.5
Flat Bed Truck	70.3
Pickup Truck	71.0
Welder Truck	70.0
Pipe Installation Combined	76.1 /a/
/a/ Based on two pieces of equipment operating (Backhoe and Crane).	
SOURCE: Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, 2008.	

Table 5 presents the estimated noise levels at the sensitive receptors nearest to the project site for informational purposes. The impact analysis is based on the construction limits in the LAMC. Construction activities would occur Monday through Friday, and workers would typically be onsite for eight hours per day from 7:00 a.m. to 3:00 p.m. 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. The LAMC limits equipment noise levels to 75 dBA L_{eq} at 50 feet unless technically infeasible. Unmitigated noise levels would typically exceed the allowable noise level stated in the LAMC. Therefore, without mitigation, the proposed project would result in a significant impact related to on-site construction noise.

In addition to on-site construction activities, noise would be generated off-site by construction-related trucks. The proposed project would require the export of 1,036 cubic yards of soil and the import of 152 cubic yards of suitable material for the pump installation site. Pipeline installation would not require significant amounts of material export. It is not anticipated that there would be more than 24 truck trips per day or three trucks per hour needed at the pump installation site. A doubling of traffic volume is typically needed to audibly increase noise levels along a roadway segment. According to the City of Los Angeles Department of Transportation, Victory Boulevard within the vicinity of the development site experiences approximately 5,273 trips a day.[3] Valley Circle Boulevard experiences approximately 10,643 trips per day.[4] An additional 24 truck trips per day would not double the volume on any roadway segment. It is not anticipated that off-site vehicle activity would audibly change average daily noise levels due to the low volume of haul truck trips per day. The proposed project would not result in a short-term and temporary noise impact from construction trucks.

[3]City of Los Angeles Department of Transportation, *Manual Traffic Count Summary for Victory Boulevard and Lockhurst Drive*, September 26, 2018.

[4]City of Los Angeles Department of Transportation, *Manual Traffic Count Summary for Valley Circle Boulevard and Calvert Street*, April 29, 2015.

TABLE 5: TYPICAL CONSTRUCTION NOISE LEVELS AT RECEPTORS			
Sensitive Receptor	**Distance (feet) /a/**	**Existing Noise Level (dBA)**	**Noise Level at Sensitive Receptor (dBA)**
PUMP INSTALLATION			
Residences to the north along Ellenview Ave.	50	49.1	84.1
Residences to the south along Victory Blvd.	175	70.1	74.9
Residences to the northwest along Gilmroe St.	200	51.7	72.1
Residences to the south along Calvert St.	330	55.3	63.9 /b/
Residences to the north along Ellenview Ave.	400	49.1	61.8 /b/
Residences to the east along Pat Ave.	400	55.3	66.4
PIPE INSTALLATION			
Residences adjacent to the north and south along Calvert St. east of Valley Circle Blvd.	50	51.8	76.1
Residences adjacent to the north and south along Calvert St. west of Valley Circle Blvd.	50	55.3	76.1
Residences adjacent to the north and south along Valley Circle Blvd.	50	70.1	77.1
Saint Bernardine Catholic Church	50	55.3	76.1
Saint Bernardine of Siena Dorms	50	55.3	76.1
Saint Bernardine of Sienna Children's Center	60	55.3	74.6
Residences to the south along Pat Ave.	140	51.9	67.3
Residences adjacent to the north and south along Valley Circle Blvd.	170	70.1	70.6 /b/
Residences to the south along Bessemer St.	180	48.4	60.7 /b/
Saint Bernardine of Siena School	230	70.1	70.8

/a/ Measured from the project site to the nearest structure.
/b/ Includes a 4.5 dB reduction for intervening rows of buildings.
SOURCE: TAHA, 2019.

Operations

Operational sources of noise would include mechanical equipment and periodic maintenance activities. Pump noise would not be audible as the pump would be enclosed in a new pump station building consisting of concrete walls, windows, and metal roofing. The pipeline would be underground and would not produce audible operational noise. Therefore, the proposed project would result in a less-than-significant impact related to operational noise.

Mitigation Measures

N1 For construction activities lasting more than one month in one location and within 500 feet of a sensitive receptor, temporary barriers (e.g., noise blankets) shall be placed between the equipment and sensitive receptor.

N2 Construction equipment shall be properly maintained and equipped with mufflers.

N3 Rubber-tired equipment shall be used rather than tracked equipment when feasible.

N4 Equipment shall be turned off when not in use for an excess of five minutes, except for equipment that requires idling to maintain performance.

N5 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.

N6 Prior to initiating construction activity, LADWP shall coordinate with the site administrator for the Saint Bernardine of Sienna Children's Center to discuss construction activities that generate high noise levels. Coordination between the site administrator and LADWP shall continue on an as-needed basis throughout the construction phase of the project to mitigate potential disruption of classroom activities.

N7 The public shall be notified in advance of the location and dates of construction hours and activities.

N8 Truck routes shall be limited to major arterial roads located within non-residential areas when feasible.

Significance After Mitigation

Construction. Mitigation Measures **N1** through **N8** are designed to reduce construction noise levels. When the line-of-sight would be blocked from the equipment to the receptor, the barriers associated with Mitigation Measure **N1** would reduce construction noise levels by approximately 10 dBA. The equipment mufflers associated with Mitigation Measure **N2** would reduce construction noise levels by approximately 5 dBA. Mitigation Measures **N3** through **N8**, although difficult to quantify, would also reduce and/or control construction noise levels. Temporary noise barriers were considered for placement along the pipe installation work zone. However, such barriers were determined to be infeasible for multiple reasons, including safety at intersections and cost effectiveness given the transient and short-term nature of the proposed construction activity in any one location. **Table 6** show mitigated noise levels by project component.

Based on compliance with the LAMC, construction equipment noise would be mitigated to the greatest extent feasible. The implementation of Mitigation Measures **N1** through **N8** would reduce noise impacts associated with the proposed project to a less-than-significant level. Therefore, the proposed project would result in a less-than-significant impact related to construction noise with mitigation incorporated.

Operations. No significant impacts have been identified related to operational noise. Therefore, no mitigation measures are required.

TABLE 6: MITIGATED CONSTRUCTION NOISE LEVELS AT RECEPTORS				
Sensitive Receptor	**Distance (feet) /a/**	**Existing Noise Level (dBA)**	**Attenuation /c,d/**	**Noise Level at Sensitive Receptor (dBA)**
PUMP INSTALLATION				
Residences to the north along Ellenview Ave.	50	49.1	15	69.1
Residences to the south along Victory Blvd.	175	70.1	5	72.3
Residences to the northwest along Gilmroe St.	200	51.7	5	67.2
Residences to the south along Calvert St.	330	55.3	5	60.0 /b/
Residences to the north along Ellenview Ave.	400	49.1	5	57.3 /b/
Residences to the east along Pat Ave.	400	55.3	5	62.1
PIPE INSTALLATION				
Residences adjacent to the north and south along Calvert St. east of Valley Circle Blvd.	50	51.8	5	71.2
Residences adjacent to the north and south along Calvert St. west of Valley Circle Blvd.	50	55.3	5	71.2
Residences adjacent to the north and south along Valley Circle Blvd.	50	70.1	5	73.6
Saint Bernardine Catholic Church	50	55.3	5	71.2
Saint Bernardine of Siena Dorms	50	55.3	5	71.2
Saint Bernardine of Sienna Children's Center	60	55.3	5	69.7
Residences to the south along Pat Ave.	140	51.9	5	62.5
Residences adjacent to the north and south along Valley Circle Blvd.	170	70.1	5	70.3 /b/
Residences to the south along Bessemer St.	180	48.4	5	56.3 /b/
Saint Bernardine of Siena School	230	70.1	5	70.4

/a/ Measured from the project site to the nearest structure.
/b/ Includes a 4.5-dB reduction for intervening rows of buildings.
/c/ Includes a 5-dB reduction for equipment mufflers
/d/ Includes a 10-dB reduction for temporary noise barrier or blankets.
SOURCE: TAHA, 2019.

b) Would the proposed project result in generation of excessive ground-borne vibration or ground-borne noise levels? (Less-than-Significant Impact)

Construction

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

The FTA provides vibration levels for various types of construction equipment with an average source level reported in terms of velocity.[5] Typical equipment anticipated to be used during construction and their associated vibration levels are shown in **Table 7**. The most vibration intensive equipment that would be utilized at the pump installation site would be an auger drill, which is most similar to caisson drilling. Caisson drilling generates a vibration level of 0.089 inches per second at 25 feet. Pipe installation would utilize equipment similar to a large bulldozer, which generates a vibration level of 0.089 inches per second. During pump installation the nearest structure would be located approximately 50 feet to the north. At this distance an auger drill would generate a vibration level of approximately 0.031 inches per second. This would be below the 0.2 inches per second building damage criterion. Pipeline installation would occur within the street right-of-way and structures would typically be located approximately 50 feet away. At this distance a large bulldozer would generate a vibration level of approximately 0.031 inches per second, which would be below the 0.2 inches per second building damage criterion. Therefore, the proposed project would result in a less-than-significant impact related to on-site construction vibration.

TABLE 7: VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Vibration Level at 25 feet (Inches/Second)
Caisson Drilling	0.089
Loaded Trucks	0.076
Large Bulldozer	0.089
Small Bulldozer	0.003

SOURCE: FTA, *Transit Noise and Vibration Impact Assessment*, September 2018.

Operations

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

Mitigation Measures

No significant impacts have been identified related to construction or operational vibration. Therefore, no mitigation measures are required.

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 project site is not located within an airport land use plan or is it located two miles of a public airport or private airstrip. Therefore, no impact related to airport or airstrip noise would occur.

Mitigation Measures

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

[5]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

REFERENCES

California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

City of Los Angeles Department of Transportation, *Manual Traffic Count Summary for Victory Boulevard and Lockhurst Drive*, September 26, 2018.

City of Los Angeles Department of Transportation, *Manual Traffic Count Summary for Valley Circle Boulevard and Calvert Street*, April 29, 2015.

Cowan, James P., *Handbook of Environmental Acoustics*, 1994.

Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, 2008.

Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment*, September 2018.

Los Angeles Municipal Code, *Section 112.04 (Powered Equipment Intended for Repetitive Use in Residential Areas and Other Machinery, Equipment, and Devices)*, September 30, 2019.

Los Angeles Municipal Code, *Section 112.05 (Maximum Noise Level of Powered Equipment or Hand Powered Tools)*, September 30, 2019.

Los Angeles Municipal Code, *Section 116.01 (Loud, Unnecessary, and Unusual Noises)*, September 30, 2019.

Los Angeles Municipal Code, *Section 41.40 (Noise Due to Construction, Excavation Work – When Prohibited)*, September 30, 2019.

APPENDIX A

Monitoring Data

Victory Pump_Site 1

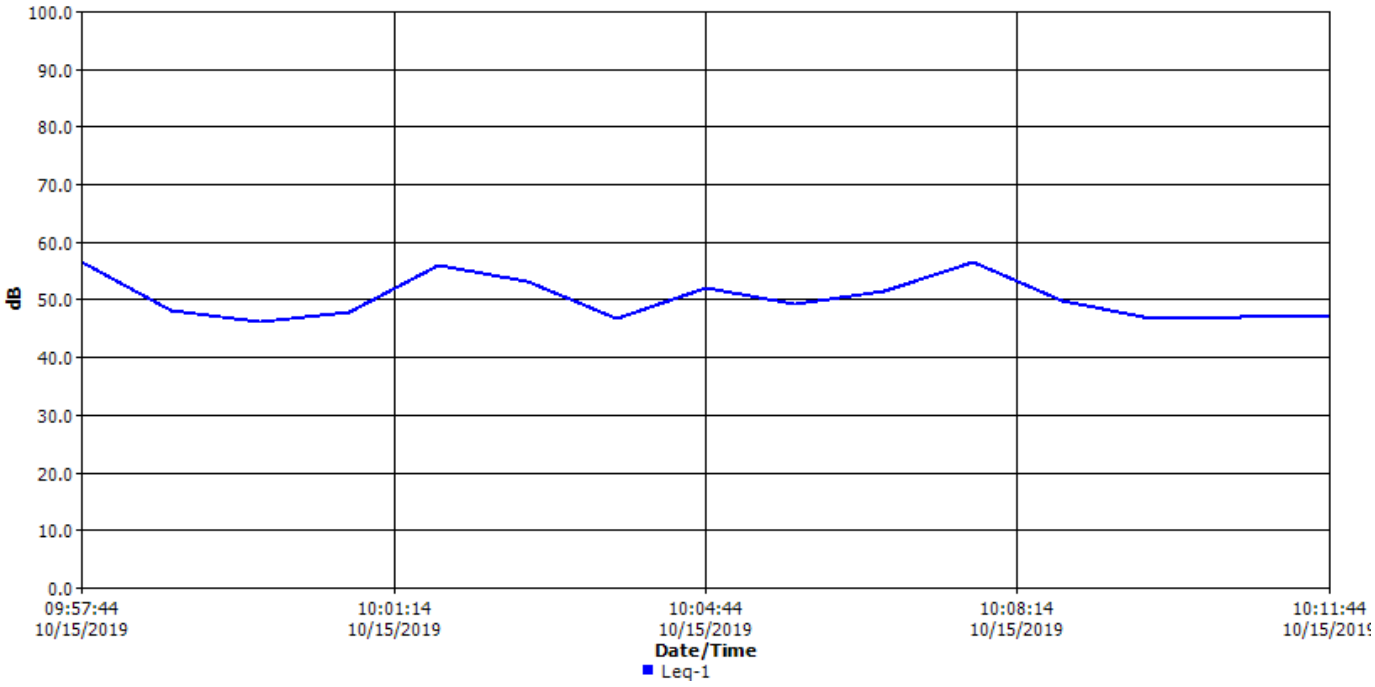
Information Panel

Name	Victory Pump_Site 1
Start Time	Tuesday, October 15, 2019 09:56:44
Stop Time	Tuesday, October 15, 2019 10:11:44
Device Model Type	SoundPro DL
Comments	

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	51.8 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 Chart



Logged Data Table

Timestamp	Leq-1
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10/15/2019 9:58:44 AM	47.9
10/15/2019 9:59:44 AM	46.1
10/15/2019 10:00:44 AM	47.8
10/15/2019 10:01:44 AM	55.8
10/15/2019 10:02:44 AM	53.2
10/15/2019 10:03:44 AM	46.6
10/15/2019 10:04:44 AM	52.0
10/15/2019 10:05:44 AM	49.1
10/15/2019 10:06:44 AM	51.3
10/15/2019 10:07:44 AM	56.5
10/15/2019 10:08:44 AM	49.8
10/15/2019 10:09:44 AM	46.7
10/15/2019 10:10:44 AM	46.9
10/15/2019 10:11:44 AM	47.1

Noise Measurement Report Form

Project: LADWP Victory Pump Contract No (s): _____

Date: 12-15-14 Day of Week: Tuesday Time: 0954

Monitoring Site Number: 1 Monitoring Site Address: 24106 Calvert St

Measurement Taken By: KB

Approximate Wind Speed: 2 mph [km/hr] Approximate Wind Direction: From the _____

Approximate distance of Sound Level Meter from Receptor Location: 25 ft

Approximate distance of Sound Level Meter from Construction Site:: 25 ft
(Leave Blank for Baseline Ambient)

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

During of Measurement: 15 min

Check the measurement purpose: _____

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

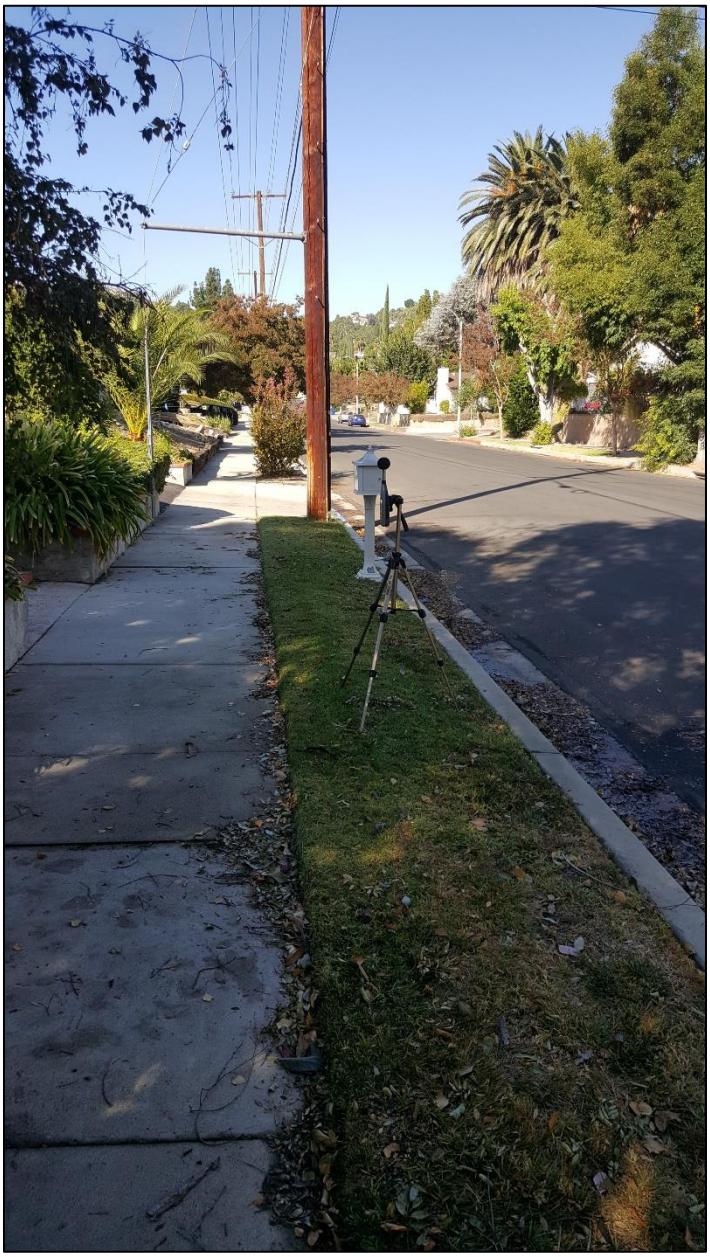
Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	51.9		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Some aircraft noise, minimal traffic
2. _____
3. _____
4. _____

Noise Monitoring Location Site 1



Victory Pump_Site 2

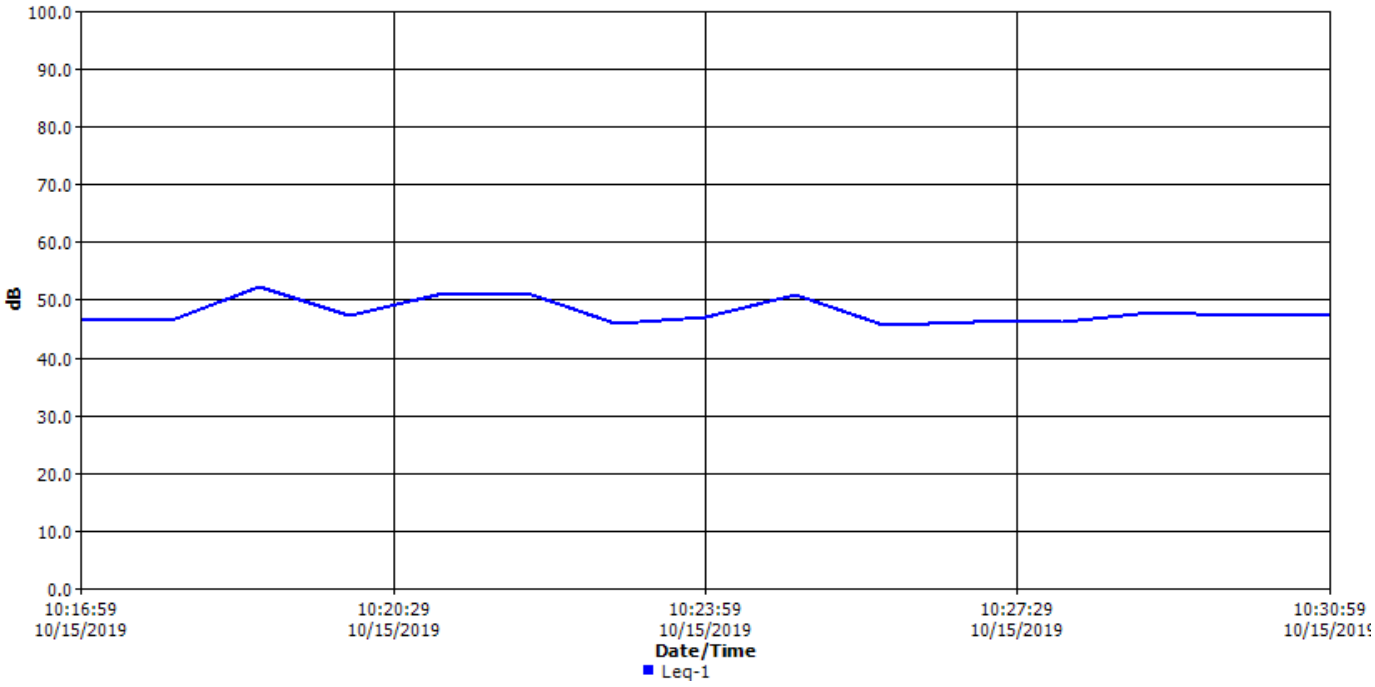
Information Panel

Name	Victory Pump_Site 2
Start Time	Tuesday, October 15, 2019 10:15:59
Stop Time	Tuesday, October 15, 2019 10:30:59
Device Model Type	SoundPro DL
Comments	

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	48.4 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 Chart



Logged Data Table

Timestamp	Leq-1
10/15/2019 10:16:59 AM	46.8
10/15/2019 10:17:59 AM	46.5
10/15/2019 10:18:59 AM	52.3
10/15/2019 10:19:59 AM	47.2
10/15/2019 10:20:59 AM	50.7
10/15/2019 10:21:59 AM	51.0
10/15/2019 10:22:59 AM	45.8
10/15/2019 10:23:59 AM	46.9
10/15/2019 10:24:59 AM	50.7
10/15/2019 10:25:59 AM	45.6
10/15/2019 10:26:59 AM	46.1
10/15/2019 10:27:59 AM	46.1
10/15/2019 10:28:59 AM	47.7
10/15/2019 10:29:59 AM	47.1
10/15/2019 10:30:59 AM	47.5

Noise Measurement Report Form

Project: Victory Pump Contract No (s):

Date: 10-15-19 Day of Week: Tuesday Time: 1014

Monitoring Site Number: 2 Monitoring Site Address: 4300 Bessemer St

Measurement Taken By: KB

Approximate Wind Speed: 1 mph [km/hr] Approximate Wind Direction: From the

Approximate distance of Sound Level Meter from Receptor Location: 30 ft

Approximate distance of Sound Level Meter from Construction Site:: 400 ft
(Leave Blank for Baseline Ambient)

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

During 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}	48.84		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Valley Circle traffic somewhat audible, aircraft flyovers
2. Less traffic than Culvert St
3.
4.

Noise Monitoring Location Site 2

Victory Pump_Site 3

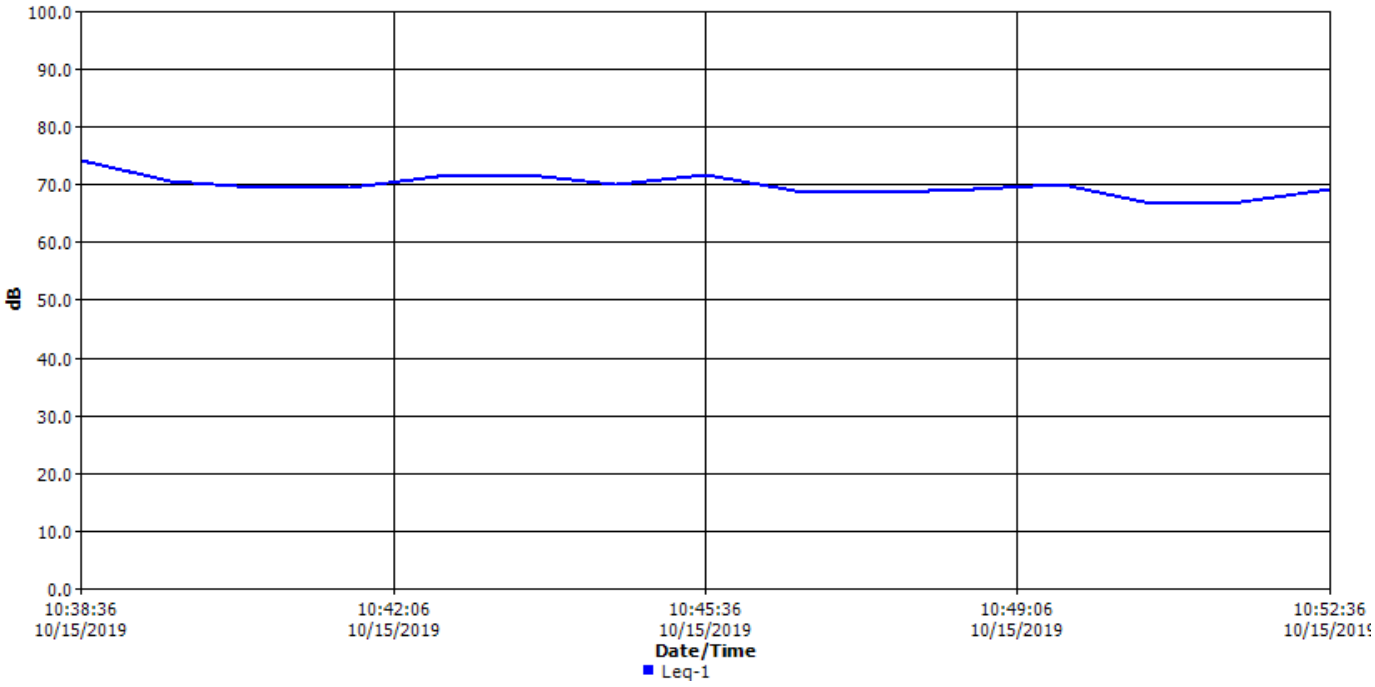
Information Panel

Name	Victory Pump_Site 3
Start Time	Tuesday, October 15, 2019 10:37:36
Stop Time	Tuesday, October 15, 2019 10:52:36
Device Model Type	SoundPro DL
Comments	

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	70.1 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 Chart



Logged Data Table

Timestamp	Leq-1
10/15/2019 10:38:36 AM	74.1
10/15/2019 10:39:36 AM	70.4
10/15/2019 10:40:36 AM	69.4
10/15/2019 10:41:36 AM	69.3
10/15/2019 10:42:36 AM	71.4
10/15/2019 10:43:36 AM	71.5
10/15/2019 10:44:36 AM	69.9
10/15/2019 10:45:36 AM	71.7
10/15/2019 10:46:36 AM	68.9
10/15/2019 10:47:36 AM	68.5
10/15/2019 10:48:36 AM	69.1
10/15/2019 10:49:36 AM	69.9
10/15/2019 10:50:36 AM	66.7
10/15/2019 10:51:36 AM	67.0
10/15/2019 10:52:36 AM	69.0

Noise Measurement Report Form

Project: Victory Pump Contract No (s): ______

Date: 10-15-14 Day of Week: Tuesday Time: 1035

Monitoring Site Number: 3 Monitoring Site Address: Valley Circle Blvd

Measurement Taken By: KD

Approximate Wind Speed: 2 mph [km/hr] Approximate Wind Direction: From the south

Approximate distance of Sound Level Meter from Receptor Location: 50 ft

Approximate distance of Sound Level Meter from Construction Site:: 25 ft
(Leave Blank for Baseline Ambient)

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

During 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}	70.2		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Busy street, speeds approx 50mph
kids playing at playground nearby
2.
Side 3B at St Bernardine Preschool 5 min measurement
3. - noise level 56.0
4.

playground / kids playing, noise from Valley circle dominant

Noise Monitoring Location Site 3

Victory Pump_Site 4

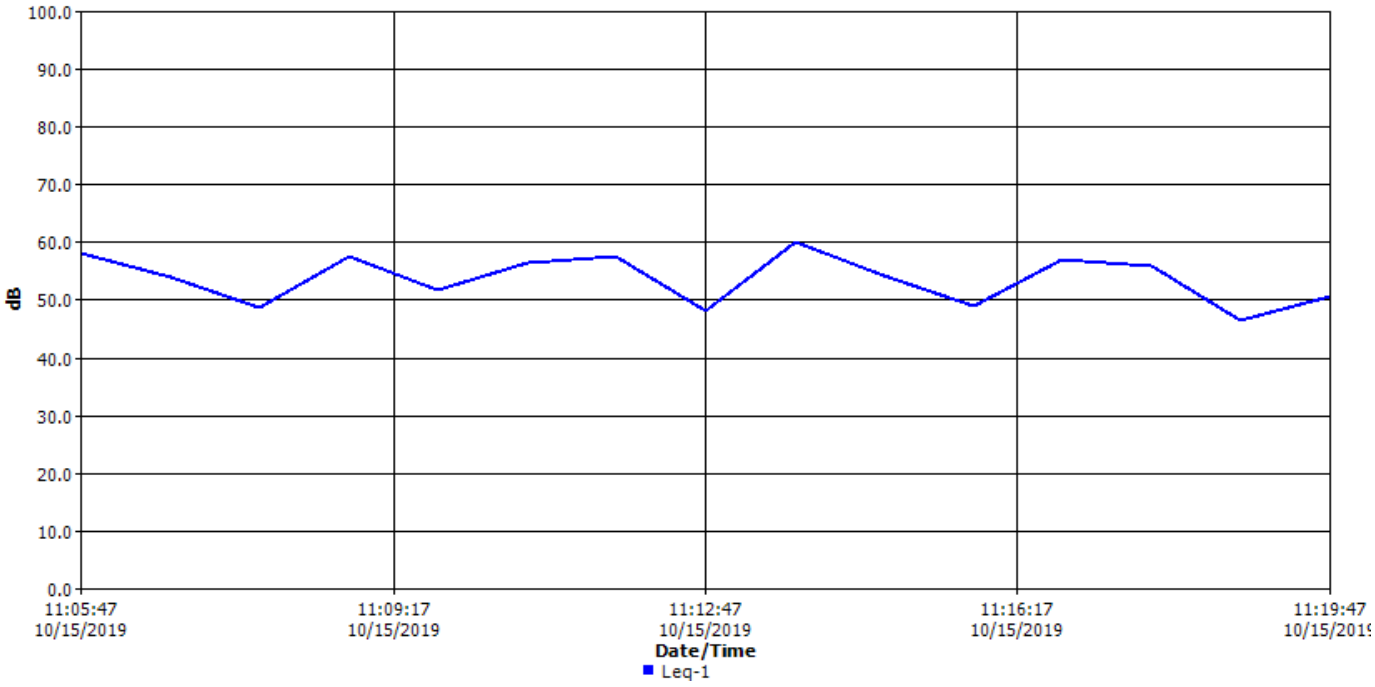
Information Panel

Name	Victory Pump_Site 4
Start Time	Tuesday, October 15, 2019 11:04:47
Stop Time	Tuesday, October 15, 2019 11:19:47
Device Model Type	SoundPro DL
Comments	

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	55.3 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 Chart



Logged Data Table

Timestamp	Leq-1
10/15/2019 11:05:47 AM	58.1
10/15/2019 11:06:47 AM	53.9
10/15/2019 11:07:47 AM	48.6
10/15/2019 11:08:47 AM	57.4
10/15/2019 11:09:47 AM	51.8
10/15/2019 11:10:47 AM	56.5
10/15/2019 11:11:47 AM	57.6
10/15/2019 11:12:47 AM	48.1
10/15/2019 11:13:47 AM	59.9
10/15/2019 11:14:47 AM	54.2
10/15/2019 11:15:47 AM	48.8
10/15/2019 11:16:47 AM	56.8
10/15/2019 11:17:47 AM	55.8
10/15/2019 11:18:47 AM	46.5
10/15/2019 11:19:47 AM	50.6

Noise Measurement Report Form

Project: Victory Pump Contract No (s): _____

Date: 12-15-11 Day of Week: Tuesday Time: 11:02

Monitoring Site Number: 4 Monitoring Site Address: 24461 Calvert St

Measurement Taken By: KB

Approximate Wind Speed: 4 mph [km/hr] Approximate Wind Direction: From the South

Approximate distance of Sound Level Meter from Receptor Location: _____

Approximate distance of Sound Level Meter from Construction Site:: _____
(Leave Blank for Baseline Ambient)

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 During of Measurement: _____

Check the measurement purpose: _____

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

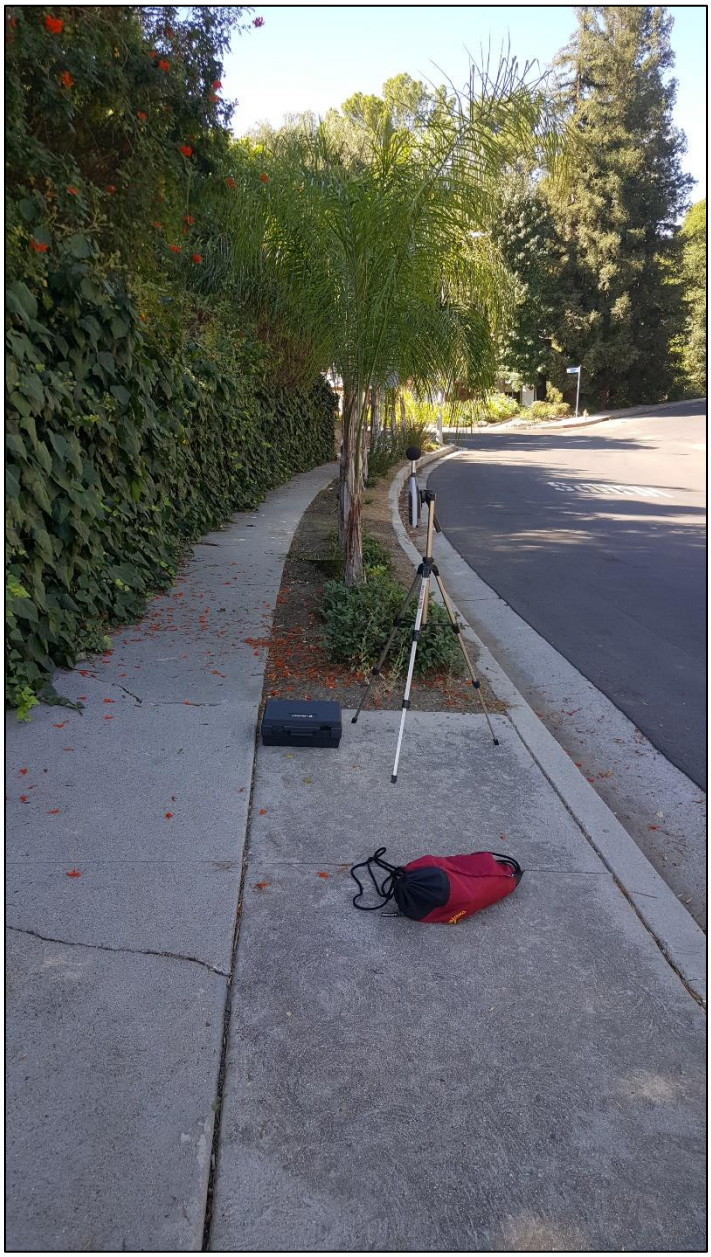
Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	55.3		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Light traffic, uphill acceleration
2. _____
3. _____
4. _____

Noise Monitoring Location Site 4



Victory Pump_Site 5

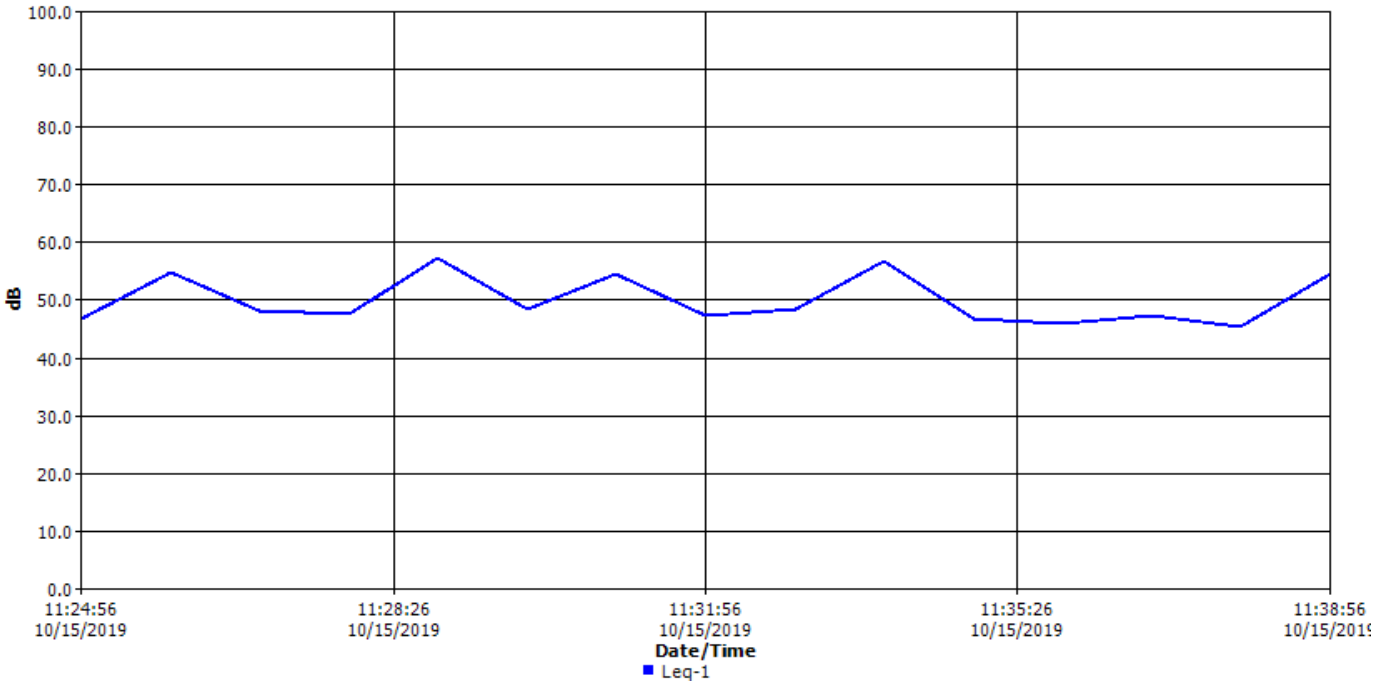
Information Panel

Name	Victory Pump_Site 5
Start Time	Tuesday, October 15, 2019 11:23:56
Stop Time	Tuesday, October 15, 2019 11:38:56
Device Model Type	SoundPro DL
Comments	

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	51.9 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 Chart



Logged Data Table

Timestamp	Leq-1
10/15/2019 11:24:56 AM	46.8
10/15/2019 11:25:56 AM	54.8
10/15/2019 11:26:56 AM	48.0
10/15/2019 11:27:56 AM	47.6
10/15/2019 11:28:56 AM	57.2
10/15/2019 11:29:56 AM	48.2
10/15/2019 11:30:56 AM	54.5
10/15/2019 11:31:56 AM	47.2
10/15/2019 11:32:56 AM	48.4
10/15/2019 11:33:56 AM	56.6
10/15/2019 11:34:56 AM	46.6
10/15/2019 11:35:56 AM	45.8
10/15/2019 11:36:56 AM	47.1
10/15/2019 11:37:56 AM	45.2
10/15/2019 11:38:56 AM	54.3

Noise Measurement Report Form

Project: Victory Pump Contract No (s): ______

Date: 10-15-19 Day of Week: Tuesday Time: 10:22

Monitoring Site Number: 5 Monitoring Site Address: 6126 Pat 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: 25 ft

Approximate distance of Sound Level Meter from Construction Site:: 300 ft
(Leave Blank for Baseline Ambient)

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

During 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. Dogs barking in background, main source of noise is Calvert St
2. Light aircraft flyover
3.
4.

HH

Noise Monitoring Location Site 5

Victory Pump_Site 6

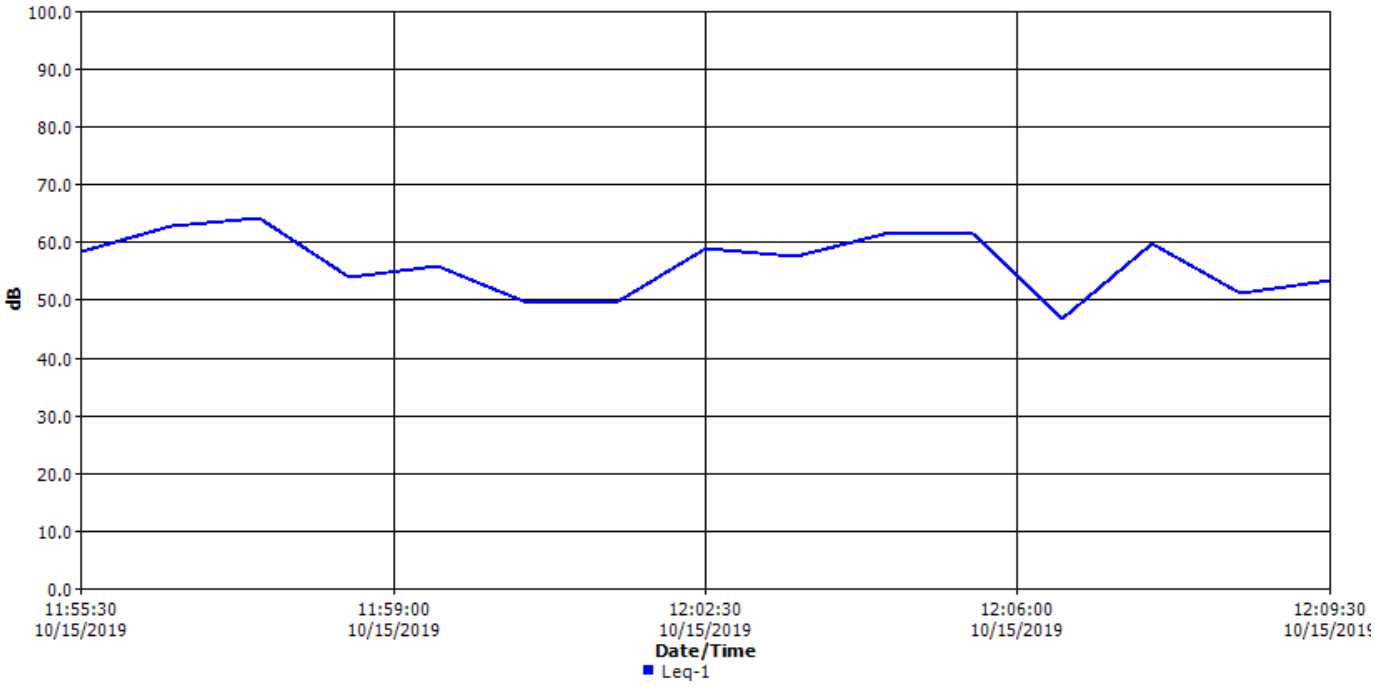
Information Panel

Name	Victory Pump_Site 6
Start Time	Tuesday, October 15, 2019 11:54:30
Stop Time	Tuesday, October 15, 2019 12:09:30
Device Model Type	SoundPro DL
Comments	

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	58.7 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 Chart



Logged Data Table

Timestamp	Leq-1
10/15/2019 11:55:30 AM	58.4
10/15/2019 11:56:30 AM	62.7
10/15/2019 11:57:30 AM	64.2
10/15/2019 11:58:30 AM	53.9
10/15/2019 11:59:30 AM	55.8
10/15/2019 12:00:30 PM	49.4
10/15/2019 12:01:30 PM	49.5
10/15/2019 12:02:30 PM	58.9
10/15/2019 12:03:30 PM	57.4
10/15/2019 12:04:30 PM	61.4
10/15/2019 12:05:30 PM	61.4
10/15/2019 12:06:30 PM	46.6
10/15/2019 12:07:30 PM	59.6
10/15/2019 12:08:30 PM	51.0
10/15/2019 12:09:30 PM	53.3

Noise Measurement Report Form

Project: Victory Pump Contract No (s):

Date: 10-15-19 Day of Week: Tuesday Time: 11:53

Monitoring Site Number: 6 Monitoring Site Address: Pump site (Victory Blvd)

Measurement Taken By:

Approximate Wind Speed: 6 mph [km/hr] Approximate Wind Direction: From the east

Approximate distance of Sound Level Meter from Receptor Location:

Approximate distance of Sound Level Meter from Construction Site::

(Leave Blank for Baseline Ambient)

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

During 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}	58.8		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Pump slightly audible, 45 db or less, fan is approx 60 dB Victory Blvd main noise source

2. Light traffic 45 to 50 mph

3.

4.

Noise Monitoring Location Site 6

Victory Pump_Site 7

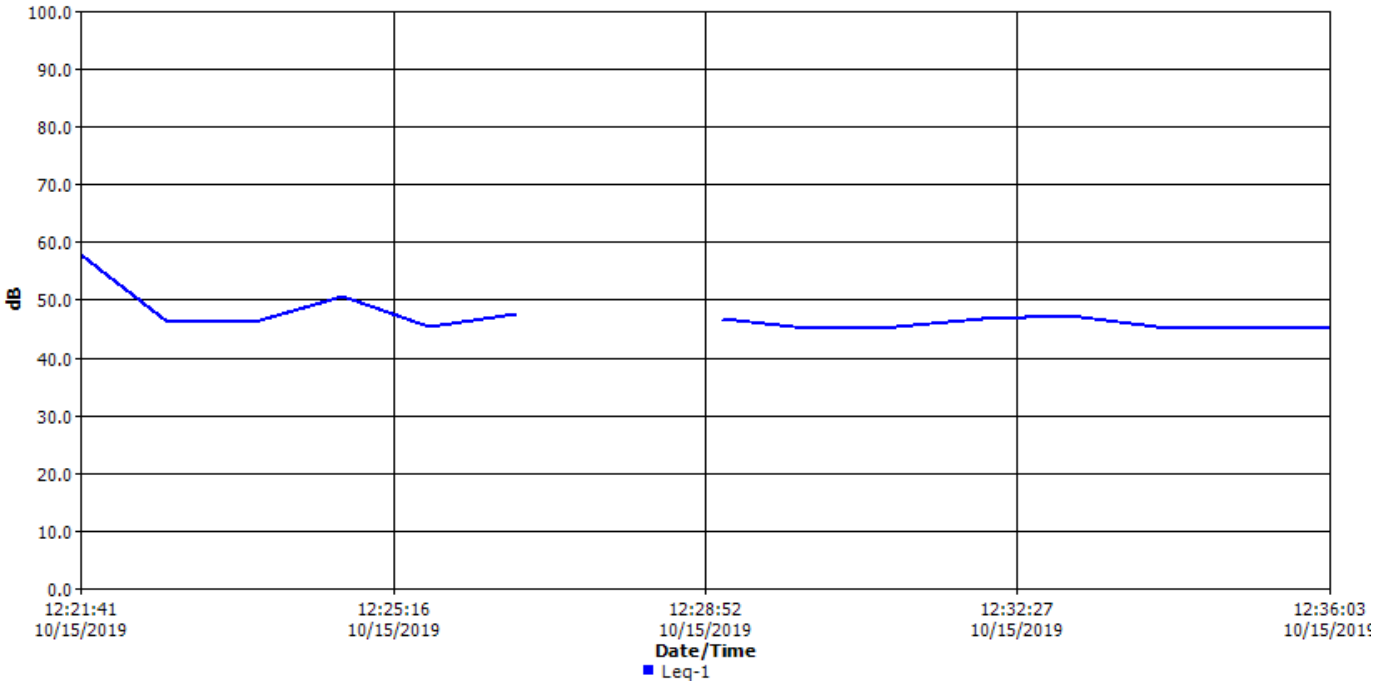
Information Panel

Name	Victory Pump_Site 7
Start Time	Tuesday, October 15, 2019 12:20:41
Stop Time	Tuesday, October 15, 2019 12:36:05
Device Model Type	SoundPro DL
Comments	

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	49.1 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 Chart



Logged Data Table

Timestamp	Leq-1
10/15/2019 12:21:41 PM	57.7
10/15/2019 12:22:41 PM	46.2
10/15/2019 12:23:41 PM	46.0
10/15/2019 12:24:41 PM	50.6
10/15/2019 12:25:41 PM	45.2
10/15/2019 12:26:41 PM	47.6
10/15/2019 12:29:03 PM	46.8
10/15/2019 12:30:03 PM	45.1
10/15/2019 12:31:03 PM	45.3
10/15/2019 12:32:03 PM	46.7
10/15/2019 12:33:03 PM	47.2
10/15/2019 12:34:03 PM	45.4
10/15/2019 12:35:03 PM	45.1
10/15/2019 12:36:03 PM	45.2

Noise Measurement Report Form

Project: Victory Pump Contract No (s): _____

Date: 10-15-19 Day of Week: Tuesday Time: 1219

Monitoring Site Number: 7 Monitoring Site Address: 6216 Ellenview Ave

Measurement Taken By: KB

Approximate Wind Speed: 3 mph [km/hr] Approximate Wind Direction: From the South

Approximate distance of Sound Level Meter from Receptor Location: 30 ft

Approximate distance of Sound Level Meter from Construction Site:: 200 ft
(Leave Blank for Baseline Ambient)

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

During of Measurement: 15 min

Check the measurement purpose: _____

☒ Baseline condition ☐ Ongoing construction ☐ Major change ☐ Complaint response

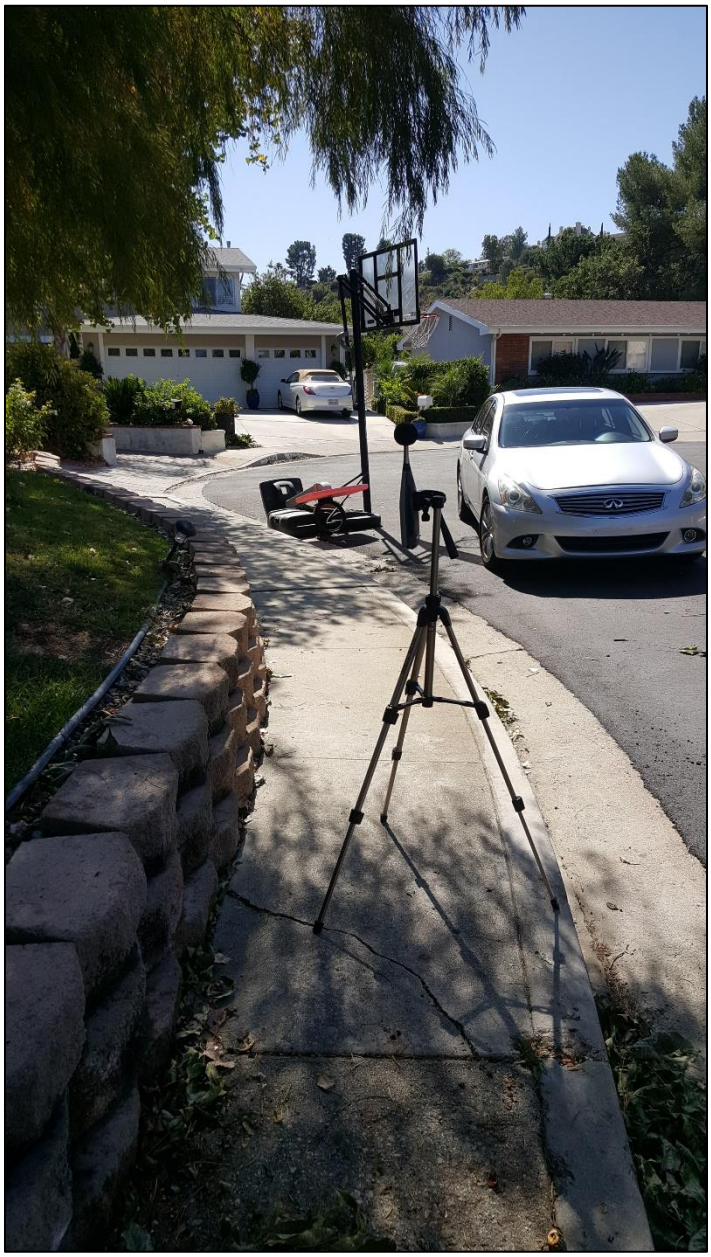
Measurement Results:

Measurement Type	Measured Level	Noise Criteria Threshold	Exceedance
Calibration	114.0	n/a	n/a
L_{eq}	45.2		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Little to no traffic
2. paused at 7 minutes
3. _____
4. _____

Noise Monitoring Location Site 7



Victory Pump_Site 8

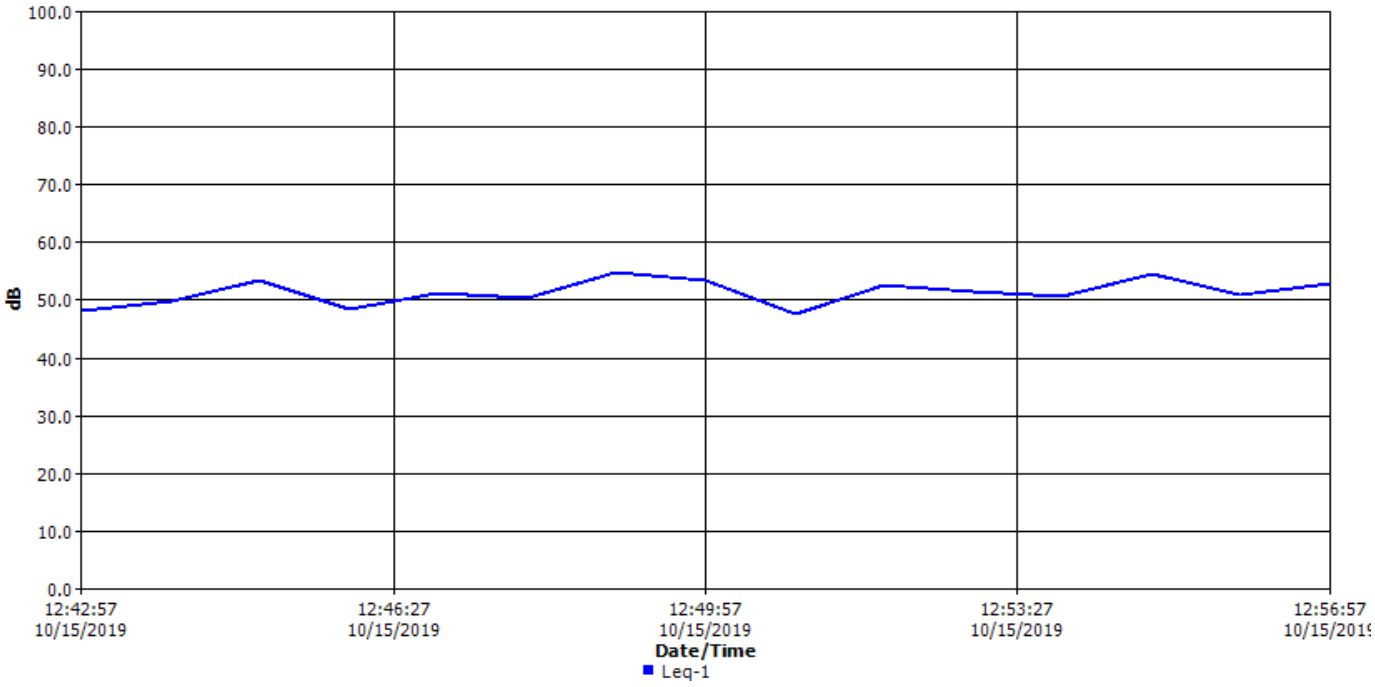
Information Panel

Name	Victory Pump_Site 8
Start Time	Tuesday, October 15, 2019 12:41:57
Stop Time	Tuesday, October 15, 2019 12:56:57
Device Model Type	SoundPro DL
Comments	

General Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	51.7 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 Chart



Logged Data Table

Timestamp	Leq-1
10/15/2019 12:42:57 PM	48.1
10/15/2019 12:43:57 PM	49.6
10/15/2019 12:44:57 PM	53.3
10/15/2019 12:45:57 PM	48.4
10/15/2019 12:46:57 PM	51.2
10/15/2019 12:47:57 PM	50.3
10/15/2019 12:48:57 PM	54.7
10/15/2019 12:49:57 PM	53.3
10/15/2019 12:50:57 PM	47.6
10/15/2019 12:51:57 PM	52.6
10/15/2019 12:52:57 PM	51.5
10/15/2019 12:53:57 PM	50.5
10/15/2019 12:54:57 PM	54.3
10/15/2019 12:55:57 PM	50.7
10/15/2019 12:56:57 PM	52.9

Noise Measurement Report Form

Project: Victory Pump Contract No (s): N/A

Date: 10-15-19 Day of Week: Tuesday Time: 12:40

Monitoring Site Number: 8. Monitoring Site Address: 24666 Gilmore Ave

Measurement Taken By: KD

Some gusts of 7 mph

Approximate Wind Speed: 4 mph [km/hr] Approximate Wind Direction: From the South

Approximate distance of Sound Level Meter from Receptor Location: 25 ft

Approximate distance of Sound Level Meter from Construction Site:: 350 ft

(Leave Blank for Baseline Ambient)

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

During 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}	51.8		
L_{max}			
L_{dn}			
CNEL			

Field Notes:

1. Little traffic, residential street
2. Birds Singing Loudly
3.
4.

111

Noise Monitoring Location Site 8

APPENDIX B

Noise and Vibration Calculations

Noise Formulas

Noise Distance Attenuation

Hard Site

Equation: Ni = No - 20 X (log Di/Do)

Di = distance to receptor (Di>Do)

Ni = attenuated noise level of interest
No = reference noise level

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

Source: California Department of Transportation, *Technical Noise Supplement* , 2013

Construction Noise Analysis

Pump Installation Phased Construction Noise Levels		
Construction Equipment	**Noise Level at 50 feet (dBA)**	
Site Preparartion		
Backhoe	73.6	
Tractor	80	
Dozer	77.7	
Dump Truck	72.5	
Excavator	76.7	
Pickup Truck	71	**Two Piece**
Site Preparation Combined	**84.1**	**82.0**
Retaining Wall Construction		
Auger Drill Rig	77.4	
Dump Truck	72.5	
Excavator	76.7	
Backhoe	73.6	
Flat Bed Truck	70.3	
Crane	72.6	
Pickup Truck	71	**Two Piece**
Retaining Wall Construction Combined	**82.6**	**80.1**
Building Construction		
Crane	72.6	
Backhoe	73.6	
Flat Bed Truck	70.3	
Crane	72.6	
Pickup Truck	71	**Two Piece**
Building Construction Combined	**79.2**	**76.1**
Paving		
Pavers	74.2	
Rollers	73	**Two Piece**
Paving Combined	**76.7**	**79.8**

Source: FHWA, Roadway Construction Noise Model, 2008.

PipelineInstallation Phased Construction Noise Levels		
Construction Equipment	**Noise Level at 50 feet (dBA)**	
Site Preparartion		
Backhoe	73.6	
Crane	72.6	
Dump Truck	72.5	
Flat Bed Truck	70.3	
Pickup Truck	71	**Two Piece**
Site Preparation Combined	**79.1**	**76.1**
Pipeline Installation		
Backhoe	73.6	
Crane	72.6	
Dump Truck	72.5	
Flat Bed Truck	70.3	
Pickup Truck	71	
Welder Truck	70	
Pipeline Installation Combined	**79.6**	**76.1**

Source: FHWA, Roadway Construction Noise Model, 2008.

On-Site Construction Noise: Resulting Noise Level Increases - Unmitigated

Sensitive Receptor	Distance (feet) /a/	Reference Noise Level (dBA)	Intervening Building	Max Construction Noise (dBA, Leq)	Existing Ambient (dBA, Leq)	New Ambient (dBA, Leq)	Exceed?
Pump Installation							
Residences to the north along Ellenview Ave.	50	84.1	0	84.1	49.1	84.1	Yes
Residences to the south along Victory Blvd.	175	84.1	0	73.2	70.1	74.9	No
Residences to the northwest along Gilmroe St.	200	84.1	0	72.1	51.7	72.1	No
Residences to the south along Calvert St.	330	84.1	4.5	63.2	55.3	63.9	No
Residences to the north along Ellenview Ave.	400	84.1	4.5	61.5	49.1	61.8	No
Residences to the east along Pat Ave.	400	84.1	0	66.0	55.3	66.4	No
Pipe Installation							
Residences adjacent to the north and south along Calvert Street East of Valley Circle Blvd.	50	76.1	0	76.1	51.8	76.1	Yes
Residences adjacent to the north and south along Calvert Street West of Valley Circle Blvd.	50	76.1	0	76.1	55.3	76.1	Yes
Residences adjacent to the north and south along Valley Circle Blvd.	50	76.1	0	76.1	70.1	77.1	Yes
Saint Bernardine Catholic Church	50	76.1	0	76.1	55.3	76.1	Yes
Saint Bernardine of Siena Dorms	50	76.1	0	76.1	55.3	76.1	Yes
Saint Bernardine of Sienna Children's Center	60	76.1	0	74.5	55.3	74.6	No
Residences to the south along Pat Ave.	140	76.1	0	67.2	51.9	67.3	No
Residences adjacent to the north and south along Valley Circle Blvd.	170	76.1	4.5	61.0	70.1	70.6	No
Residences to the south along Bessemer St.	180	76.1	4.5	60.5	48.4	60.7	No
Saint Bernardine of Siena School	230	76.1	0	62.8	70.1	70.8	No

/a/ distance is the sloped distance from the location of the suite to ground level noise

On-Site Construction Noise: Resulting Noise Level Increases - Mitigated

Sensitive Receptor	Distance (feet)	Attenuation /b/ /c/	Intervening Building	Reference Noise Level (dBA)	Max Construction Noise (dBA, Leq)	Existing Ambient (dBA, Leq)	New Ambient (dBA, Leq)	Exceed?
Pump Installation								
Residences to the north along Ellenview Ave.	50	15	0	69.1	69.1	49.1	69.1	No
Residences to the south along Victory Blvd.	175	5	0	79.1	68.2	70.1	72.3	No
Residences to the northwest along Gilmroe St.	200	5	0	79.1	67.1	51.7	67.2	No
Residences to the south along Calvert St.	330	5	4.5	74.6	58.2	55.3	60.0	No
Residences to the north along Ellenview Ave.	400	5	4.5	74.6	56.5	49.1	57.3	No
Residences to the east along Pat Ave.	400	5	0	79.1	61.0	55.3	62.1	No
Pipe Installation								
Residences adjacent to the north and south along Calvert Street East of Valley Circle Blvd.	50	5	0	71.1	71.1	51.8	71.2	No
Residences adjacent to the north and south along Calvert Street West of Valley Circle Blvd.	50	5	0	71.1	71.1	55.3	71.2	No
Residences adjacent to the north and south along Valley Circle Blvd.	50	5	0	71.1	71.1	70.1	73.6	No
Saint Bernardine Catholic Church	50	5	0	71.1	71.1	55.3	71.2	No
Saint Bernardine of Siena Dorms	50	5	0	71.1	71.1	55.3	71.2	No
Saint Bernardine of Sienna Children's Center	60	5	0	71.1	69.5	55.3	69.7	No
Residences to the south along Pat Ave.	140	5	0	71.1	62.2	51.9	62.5	No
Residences adjacent to the north and south along Valley Circle Blvd.	170	5	4.5	66.6	56.0	70.1	70.3	No
Residences to the south along Bessemer St.	180	5	4.5	66.6	55.5	48.4	56.3	No
Saint Bernardine of Siena School	230	5	0	71.1	57.8	70.1	70.4	No

/a/ distance is the sloped distance from the location of the suite to ground level noise
/b/ Includes 5 dBA reduction for mufflers
/c/ Includes 15 dBA reduction for soundwall

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.

APPENDIX F
Study Roadway Segment 24-Hour Traffic Count Summaries

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Los Angeles
Calvert Street
E/ Valley Circle Boulevard
24 Hour Directional Volume Count

LAC003
Site Code: 041-19358

Start Time	05-Jun-19 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		2	**6**			2	6				
12:15		0	**9**			0	9				
12:30		0	**23**			2	**21**				
12:45		0	**17**	2	55	1	**61**	5	97	7	152
01:00		0	5			0	**25**				
01:15		0	4			1	**10**				
01:30		0	7			0	13				
01:45		0	6	0	22	0	5	1	53	1	75
02:00		0	5			0	5				
02:15		0	7			0	4				
02:30		0	6			0	9				
02:45		0	8	0	26	0	18	0	36	0	62
03:00		0	7			0	10				
03:15		0	4			1	12				
03:30		0	4			0	7				
03:45		0	4	0	19	1	10	2	39	2	58
04:00		0	5			1	8				
04:15		0	2			2	2				
04:30		0	9			0	15				
04:45		0	12	0	28	1	8	4	33	4	61
05:00		0	9			0	11				
05:15		0	4			3	13				
05:30		0	9			3	9				
05:45		0	10	0	32	2	8	8	41	8	73
06:00		5	4			3	16				
06:15		1	4			3	6				
06:30		1	5			3	6				
06:45		5	9	12	22	10	9	19	37	31	59
07:00		11	6			11	10				
07:15		**9**	8			7	5				
07:30		**39**	11			**24**	8				
07:45		**51**	6	110	31	**38**	3	80	26	190	57
08:00		**16**	3			**35**	2				
08:15		4	7			**11**	1				
08:30		3	3			3	4				
08:45		9	4	32	17	10	3	59	10	91	27
09:00		5	2			5	2				
09:15		7	11			6	1				
09:30		5	1			6	3				
09:45		6	3	23	17	9	3	26	9	49	26
10:00		3	1			7	2				
10:15		2	2			10	2				
10:30		5	0			11	1				
10:45		6	0	16	3	5	0	33	5	49	8
11:00		7	2			6	0				
11:15		5	0			5	3				
11:30		7	0			8	2				
11:45		3	0	22	2	8	1	27	6	49	8
Total		217	274	217	274	264	392	264	392	481	666
Combined Total		491		491		656		656		1147	
AM Peak	-	07:15	-	-	-	07:30	-	-	-	-	-
Vol.	-	115	-	-	-	108	-	-	-	-	-
P.H.F.		0.564				0.711					
PM Peak	-	-	12:00	-	-	-	00:30	-	-	-	-
Vol.	-	-	55	-	-	-	117	-	-	-	-
P.H.F.			0.598				0.480				
Percentage		44.2%	55.8%			40.2%	59.8%				
ADT/AADT		ADT 1,147		AADT 1,147							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Los Angeles
Calvert Street
W/ Valley Circle Boulevard
24 Hour Directional Volume Count

LAC002
Site Code: 041-19358

Start Time	05-Jun-19 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		4	15			1	11				
12:15		1	10			2	12				
12:30		0	11			1	11				
12:45		0	13	5	49	1	25	5	59	10	108
01:00		0	16			2	14				
01:15		0	11			1	15				
01:30		0	13			0	18				
01:45		0	9	0	49	0	18	3	65	3	114
02:00		1	9			1	**19**				
02:15		1	13			0	**26**				
02:30		0	8			0	**58**				
02:45		0	**41**	2	71	0	**26**	1	129	3	200
03:00		0	**17**			0	14				
03:15		0	**18**			0	17				
03:30		1	**11**			0	21				
03:45		2	10	3	56	0	18	0	70	3	126
04:00		2	12			0	12				
04:15		2	13			2	20				
04:30		0	13			0	24				
04:45		0	11	4	49	1	19	3	75	7	124
05:00		4	13			1	18				
05:15		4	10			0	22				
05:30		3	15			1	24				
05:45		3	8	14	46	3	19	5	83	19	129
06:00		7	10			7	19				
06:15		2	7			11	11				
06:30		5	8			12	16				
06:45		8	7	22	32	6	19	36	65	58	97
07:00		9	8			7	23				
07:15		11	9			18	18				
07:30		21	5			**38**	17				
07:45		31	2	72	24	**31**	12	94	70	166	94
08:00		17	3			**21**	14				
08:15		9	7			**32**	13				
08:30		13	10			29	9				
08:45		14	8	53	28	26	16	108	52	161	80
09:00		**25**	7			15	14				
09:15		**25**	7			17	11				
09:30		**13**	6			15	3				
09:45		**20**	3	83	23	18	13	65	41	148	64
10:00		10	1			10	11				
10:15		7	3			12	6				
10:30		15	4			13	7				
10:45		12	3	44	11	18	2	53	26	97	37
11:00		16	4			18	2				
11:15		15	2			13	3				
11:30		14	2			13	4				
11:45		12	4	57	12	20	2	64	11	121	23
Total		359	450	359	450	437	746	437	746	796	1196
Combined Total		809		809		1183		1183		1992	
AM Peak	-	09:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	83	-	-	-	122	-	-	-	-	-
P.H.F.		0.669				0.803					
PM Peak	-	-	02:45	-	-	-	02:00	-	-	-	-
Vol.	-	-	87	-	-	-	129	-	-	-	-
P.H.F.			0.530				0.556				
Percentage		44.4%	55.6%			36.9%	63.1%				
ADT/AADT		ADT 1,992		AADT 1,992							

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
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City of Los Angeles
Victory Boulevard
W/ Pat Avenue
24 Hour Directional Volume Count

LAC001
Site Code: 041-19358

Start Time	05-Jun-19 Wed	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	22			4	17				
12:15		1	14			2	18				
12:30		2	18			5	13				
12:45		1	12	5	66	6	24	17	72	22	138
01:00		1	16			1	23				
01:15		0	14			2	12				
01:30		0	15			1	23				
01:45		2	17	3	62	1	20	5	78	8	140
02:00		0	11			0	14				
02:15		0	22			1	27				
02:30		0	14			1	22				
02:45		2	10	2	57	0	22	2	85	4	142
03:00		0	10			0	17				
03:15		0	18			1	18				
03:30		0	19			0	16				
03:45		2	7	2	54	2	32	3	83	5	137
04:00		0	12			1	22				
04:15		0	15			0	26				
04:30		0	12			0	17				
04:45		0	22	0	61	1	25	2	90	2	151
05:00		3	21			0	25				
05:15		5	15			1	25				
05:30		3	**19**			2	21				
05:45		5	**29**	16	84	0	24	3	95	19	179
06:00		5	**25**			6	24				
06:15		4	**22**			4	**26**				
06:30		5	18			1	**24**				
06:45		10	16	24	81	3	**26**	14	100	38	181
07:00		20	20			6	**26**				
07:15		18	12			9	9				
07:30		24	12			**16**	23				
07:45		16	9	78	53	**30**	15	61	73	139	126
08:00		29	14			**28**	18				
08:15		19	20			**20**	11				
08:30		24	6			15	16				
08:45		17	12	89	52	13	12	76	57	165	109
09:00		**31**	9			22	14				
09:15		**31**	6			14	7				
09:30		**25**	5			23	11				
09:45		**20**	9	107	29	20	18	79	50	186	79
10:00		22	5			13	9				
10:15		21	2			15	8				
10:30		26	4			14	6				
10:45		16	4	85	15	22	3	64	26	149	41
11:00		19	1			20	5				
11:15		22	1			14	2				
11:30		21	5			16	8				
11:45		14	2	76	9	12	1	62	16	138	25
Total		487	623	487	623	388	825	388	825	875	1448
Combined Total		1110		1110		1213		1213		2323	
AM Peak	-	09:00	-	-	-	07:30	-	-	-	-	-
Vol.	-	107	-	-	-	94	-	-	-	-	-
P.H.F.		0.863				0.783					
PM Peak	-	-	05:30	-	-	-	06:15	-	-	-	-
Vol.	-	-	95	-	-	-	102	-	-	-	-
P.H.F.			0.819				0.981				
Percentage		43.9%	56.1%			32.0%	68.0%				
ADT/AADT		ADT 2,323		AADT 2,323							