Final Mitigated Negative Declaration

San Fernando Valley Water Recycling Project

(State Clearinghouse No. 2012111053)

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

June 2013

California Environmental Quality Act (CEQA)
Initial Study and Mitigated Negative Declaration

San Fernando Valley Water Recycling Project

June 2013

General Manager
Ronald O. Nichols

Senior Assistant General Manager
Water Systems
James B. McDaniel

Director of Environmental Affairs
Mark J. Sedlacek

Manager of Environmental Planning and Assessment
Charles C. Holloway

Prepared by
Los Angeles Department of Water and Power
111 North Hope Street
Los Angeles, CA 90012

Technical Assistance Provided by
AECOM
515 South Flower Street, 9th Floor
Los Angeles, CA 90071

COUNTY CLERK'S USE

CITY CLERK'S USE

CITY OF LOS ANGELES
OFFICE OF THE CITY CLERK
ROOM 395, CITY HALL
LOS ANGELES, CALIFORNIA 90012
CALIFORNIA ENVIRONMENTAL QUALITY ACT
PROPOSED
MITIGATED NEGATIVE DECLARATION
(Article I, City CEQA Guidelines)

LEAD CITY AGENCY:	**COUNCIL DISTRICT**
Los Angeles Department of Water and Power (LADWP) 111 North Hope Street, Room 1044 Los Angeles, CA 90012	2, 3, 5, 6, and 12
PROJECT TITLE: San Fernando Valley Water Recycling Project	**CASE NO.**

PROJECT LOCATION: The proposed project would be located within the Valley Service Area and supplied with recycled water from the Donald C. Tillman Water Reclamation Plant. Additionally, the proposed project would include a connection to the City of Burbank recycled water system, which receives recycled water from the Burbank Water Reclamation Plant. The proposed project would consist of six segments: North Hollywood Park, Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, VA Hospital, and Pierce College. The construction of these six segments would expand the supply of recycled water to customers located throughout the San Fernando Valley. These customers have committed to using recycled water for non-potable uses. All segments would connect to existing recycled water pipeline systems in the area using a 16-inch connection and 16-inch diameter distribution lines. The North Hollywood Park segment would connect to the existing City of Burbank recycled water pipeline; four segments would connect to the existing LADWP recycled water pipeline; the Pierce College segment would connect to the Reseda Park segment. In total, approximately 109,800 linear feet of new recycled water pipeline would be installed with implementation of the proposed project.

DESCRIPTION: The Los Angeles Department of Water and Power (LADWP) proposes to maximize the use of recycled water to replace potable water sources for irrigation and industrial uses by extending the recycled water pipeline network to the San Fernando Valley. The San Fernando Valley Water Recycling Project (WRP) (proposed project) is being undertaken in accordance with the 2010 Urban Water Management Plan.

NAME AND ADDRESS OF APPLICANT IF OTHER THAN CITY AGENCY: n/a

FINDING:

SEE ATTACHED INITIAL STUDY

SEE INITIAL STUDY FOR MITIGATION MEASURES IMPOSED

THE INITIAL STUDY PREPARED FOR THIS DOCUMENT IS ATTACHED

NAME OF PERSON PREPARING THIS FORM:	**TITLE:**	**PHONE:**
Irene Paul	Environmental Project Manager	(213) 367-3509
ADDRESS: 111 N. Hope Street, Room 1044 Los Angeles, CA 90012	**SIGNATURE (Official)** Charles C. Holloway Charles C. Holloway, Manager of Environmental Planning and Assessment	**DATE** July 19, 2012

Form Gen. 157 (Appendix C)

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Acronyms and Abbreviations

AFY	Acre-feet per year
AQMP	Air Quality Management Plan
BMP	Best Management Practices
Caltrans	California Department of Transportation
CARB	California Air Resources Board
~~CDFG~~	~~California Department of Fish and Game~~
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH_4	Methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DBA	A-weighted decibel
GHG	Greenhouse gas emissions
I-405	Interstate 405
LAA	Los Angeles Aqueduct
LADOT	City of Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAPD	Los Angeles Police Department
L_{eq}	Community noise equivalent level
LOS	Level of service
Metro	Los Angeles County Metropolitan Transportation Authority
$\mu g/m^3$	Microgram per cubic meter
MND	Mitigated Negative Declaration
MWD	Metropolitan Water District of Southern California
N_2O	Nitrous oxide
NO_x	Nitrogen oxide
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
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SO_x	Sulfur oxide
SR 134	State Route 134, Glendale Freeway
SR 170	State Route 170, Hollywood Freeway
SWPPP	Stormwater Pollution Prevention Plan
TAC	Toxic air contaminant
TMP	Traffic Management Plan
US 101	United States Route 101, Ventura Freeway
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
VA	Veteran's Administration
V/C	Volume-to-capacity
VOC	Volatile organic compound
WRP	Water Recycling Project

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SECTION 1
PROJECT DESCRIPTION

1.1 Overview of the Project

The Los Angeles Department of Water and Power (LADWP) proposes to maximize the use of recycled water to replace potable water sources for irrigation and industrial uses by extending the existing recycled water pipeline network within the San Fernando Valley area of the City of Los Angeles. The San Fernando Valley Water Recycling Project (WRP) (proposed project) is being undertaken in accordance with the 2010 Urban Water Management Plan. Construction of the proposed project would occur in six segments. This document will examine all six segments.

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. The proposed water recycling project constitutes a project as defined by CEQA (California Public Resources Code Section 21000 et seq.). The CEQA Guidelines Section 15367 states that a "Lead Agency" is "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 was 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, concluded that a Mitigated Negative Declaration (MND) was the proper level of environmental documentation for this project. The Initial Study shows that impacts caused by the proposed project are either less than significant or significant but mitigable with incorporation of appropriate mitigation measures as defined herein. This conclusion is supported by CEQA Guidelines Section 15070, which states that an MND can be prepared when "(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."

The MND was circulated for public review from November 16, 2012 to December 17, 2012. The purpose of the public review period was to provide interested public agencies, organizations, and individuals the opportunity to comment on the contents and accuracy of the document. The MND and the Notice of Completion were distributed to the California Office of Planning and Research, State Clearinghouse. A Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration was distributed to approximately 68 agencies and community stakeholders, as well as approximately 2,000 property owners and residents. The NOI informed them of where the MND could be reviewed and how to comment. Copies

of the MND were made available to the public for review at seven local libraries, as well as the LADWP John Ferraro Building. A copy of the document was also posted online. This Final MND contains comments and responses to comments received on the Draft MND. These comments and responses are presented in Section 5, Response to Comments on the Mitigated Negative Declaration. Revisions and clarifications made in response to comments and information received on the Draft MND, as well as other changes necessitated by modifications to the proposed project, are listed in Section 4, Clarifications and Modifications. Text which has been removed is shown with a ~~strikethrough~~ line, while text that has been added is shown as underlined.

Following the public review of the Draft MND, LADWP has made several minor modifications to the proposed project. These project modifications have been incorporated into Sections 1.3 and 1.6, and are included in the environmental analysis presented in Section 3. The modifications to the proposed project are also discussed in Section 4, Clarifications and Modifications. In accordance with CEQA Guidelines Section 15073.5, the modifications and revisions to the proposed project and the environmental analysis in this Final MND would not result in a requirement to recirculate the MND.

LADWP would construct approximately 4,280 linear feet of additional recycled water pipeline within the North Hollywood Park segment. The justification for this modification to the proposed project is that additional irrigation meters and non-potable water customers were identified in the vicinity of the North Hollywood Park segment after the Draft MND was made available for public review. The major irrigation meter for North Hollywood High School was found to be located on Chandler Boulevard west of Colfax Avenue. The additional length of recycled water pipeline required to extend to this meter also made feasible the pipeline extension to a California Department of Transportation (Caltrans) facility located on Chandler Boulevard at California State Route 170 (SR 170, Hollywood Freeway). Recycled water pipelines were also added to extend to portions of the North Hollywood Park segment located on Westpark Drive, south of Hartsook Street.

The lead agency is required to adopt a Mitigation Monitoring and Reporting Program (MMRP) along with the Final MND describing the changes that were incorporated into the proposed project or made a condition of project approval in order to mitigate or avoid significant effects on the environment (Pub. Res. Code Section 21081.6). The MMRP is adopted at the time of project approval and is designed to ensure compliance during project implementation. Upon approval of the proposed project, LADWP will be responsible for implementation of the proposed project's MMRP. The MMRP for the proposed project is included as Appendix E of this Final MND.

1.3 Project Location and Setting

The proposed project would consist of six segments, which would be located within public street rights-of-way in urbanized and fully developed areas within the San Fernando Valley area of the City of Los Angeles. The six segments would extend to North Hollywood Park, Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, the Veteran's Administration Hospital (VA Hospital), and Pierce College. All six segments abut residential, commercial, public facilities, and recreational or open space uses. Additionally, the VA Hospital segment would run adjacent to industrial uses. Figure 1 shows the regional location of the proposed project, while Figure 2 shows an overview of the proposed alignments.

The North Hollywood Park segment would connect to an existing City of Burbank pipeline on the City of Los Angeles border at Verdugo Avenue and Clybourn Avenue. From the Burbank pipeline connection point, this segment would extend approximately 600 feet west on Verdugo Avenue to Camarillo Street, approximately 5,200 feet west on Camarillo Street to Vineland Avenue, approximately 2,600 feet north on Vineland Avenue to Magnolia Boulevard, and approximately 5,800 ~~5,600~~ feet west on Magnolia Boulevard. It would terminate at approximately 620 feet west of Colfax Avenue, in front of North Hollywood High School, which is located at 5231 Colfax Avenue on the corner of Magnolia Boulevard and Colfax Avenue ~~(see Figure 3)~~. Two extensions would connect to this main segment. The first extension would travel approximately 1,400 feet north on Colfax Avenue from Magnolia Boulevard to Chandler Boulevard. The Los Angeles County Metropolitan Transportation Authority (Metro) Orange Line Busway operates in the median of Chandler Boulevard in this area. This extension would then split into two legs. One leg would travel approximately 480 feet west on Chandler Boulevard terminating at North Hollywood High School; and the other leg would travel approximately 800 feet east on Chandler Boulevard terminating at SR 170. The second extension would travel approximately 350 feet south on Irvine Avenue from Magnolia Boulevard to Hartsook Street, approximately 800 feet east on Hartsook Street to Westpark Drive, and approximately 250 feet south on Westpark Drive terminating at North Hollywood Park (see Figure 3).

The following four segments would connect to and extend from the existing LADWP recycled water pipeline in the San Fernando Valley, as described below.

The Valley Plaza Park segment would connect to the existing LADWP pipeline at the intersection of Sherman Way and Woodman Avenue. This segment would extend approximately 8,800 feet east on Sherman Way from the connection point to SR 170 ~~California State Route 170 (SR 170, Hollywood Freeway)~~. Two extensions would connect to this main segment. One extension would travel approximately 2,200 feet south on Ethel Avenue from Sherman Way and terminate at James Madison Middle School, located at 13000 Hart Street. The second extension would travel approximately 2,600 feet south on Whitsett Avenue from Sherman Way to Vanowen Street, and approximately 1,100 feet east on Vanowen Street terminating at Valley Plaza Park, located at 12240 Archwood Street (see Figure 4).

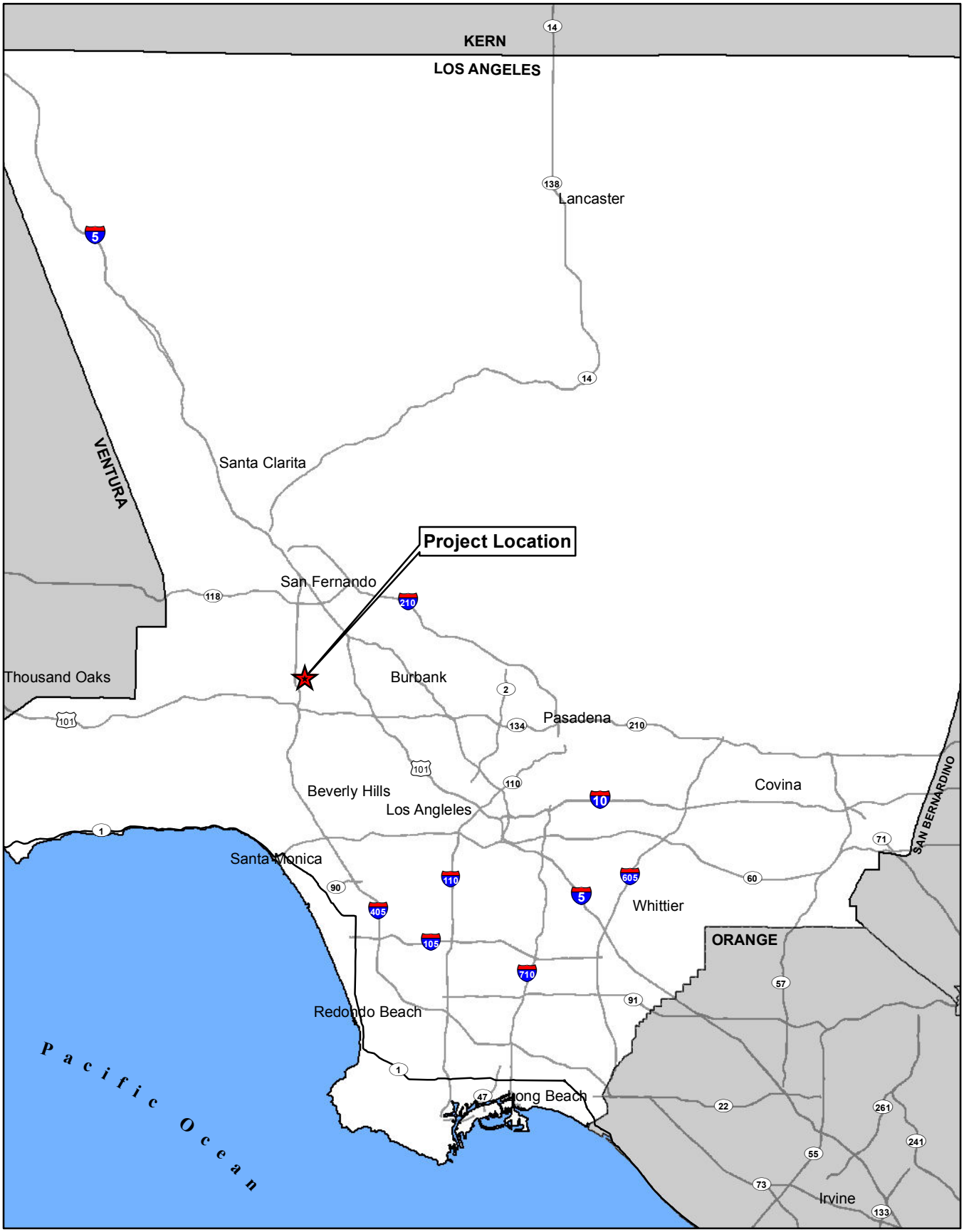
The Van Nuys Sherman Oaks Park segment would connect to the existing LADWP pipeline on Kester Avenue just south of the Metro ~~Los Angeles County Metropolitan Transportation Authority (Metro)~~ Orange Line Busway. This segment would extend approximately 360 feet south on Kester Avenue from the connection point to Oxnard Street, approximately 2,600 feet east on Oxnard Street to Van Nuys Boulevard, and approximately 6,940 feet south on Van Nuys Boulevard terminating at Sherman Oaks Hospital, located at 4929 Van Nuys Boulevard. This segment would also include two east extensions. One of these extensions would travel approximately 10,000 feet east on Burbank Boulevard from Van Nuys Boulevard and terminate at Los Angeles Valley College, located at 5800 Fulton Avenue. The other extension would travel approximately 1,900 feet east on Magnolia Boulevard from Van Nuys Boulevard and terminate at Van Nuys Sherman Oaks Park, located at 14201 Huston Street (see Figure 5).

The Reseda Park segment would connect to the existing LADWP pipeline at the intersection of Victory Boulevard and Woodley Avenue. This segment would extend approximately 15,800 feet west on Victory Boulevard from the connection point terminating at the intersection of Victory Boulevard and Reseda Boulevard. Three extensions would connect to

this main segment. One extension would travel approximately 1,000 feet south on Balboa Boulevard from Victory Boulevard and terminate at the Sepulveda Basin Sports Complex, located at 6200 North Louise Avenue. Another extension would travel approximately 2,650 feet north on Balboa Boulevard from Victory Boulevard to Vanowen Street, and approximately 1,350 feet west on Vanowen Street terminating at Mulholland Middle School, located at 17120 Vanowen Street. A third extension would travel approximately 1,400 feet north on Lindley Avenue from Victory Boulevard to Kittridge Street, and approximately 2,100 feet west on Kittridge Street and terminate on the north side of Reseda Park just east of the intersection of Kittridge Street and Reseda Boulevard (see Figure 6).

The VA Hospital segment would connect to the existing LADWP pipeline at the intersection of Sherman Way and Woodley Avenue. This segment would extend approximately 7,300 feet north on Woodley Avenue from the connection point and terminate at the intersection of Woodley Avenue and Roscoe Boulevard. Two extensions would branch off of this main segment. One extension would travel approximately 1,800 feet west on Roscoe Boulevard from Woodley Avenue to Gothic Avenue, and approximately 600 feet north on Gothic Avenue terminating at Valley Sod Farms, located at 16405 Chase Street. Another extension would travel approximately 2,200 feet east on Roscoe Boulevard from Woodley Avenue to Haskell Avenue, then approximately 9,500 feet north on Haskell Avenue and terminate at the VA Hospital, located at 16111 Plummer Street (see Figure 7).

The Pierce College segment would connect to the westernmost termination point of the Reseda Park segment at the intersection of Reseda Boulevard and Victory Boulevard and travel approximately 13,600 feet west on Victory Boulevard, terminating at Pierce College, located at 6201 Winnetka Avenue (see Figure 8).



Source: ESRI 2012 Imagery

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0 5 10 15 20 Miles

Figure 1
Regional Location Map

San Fernando Valley Water Recycling Project

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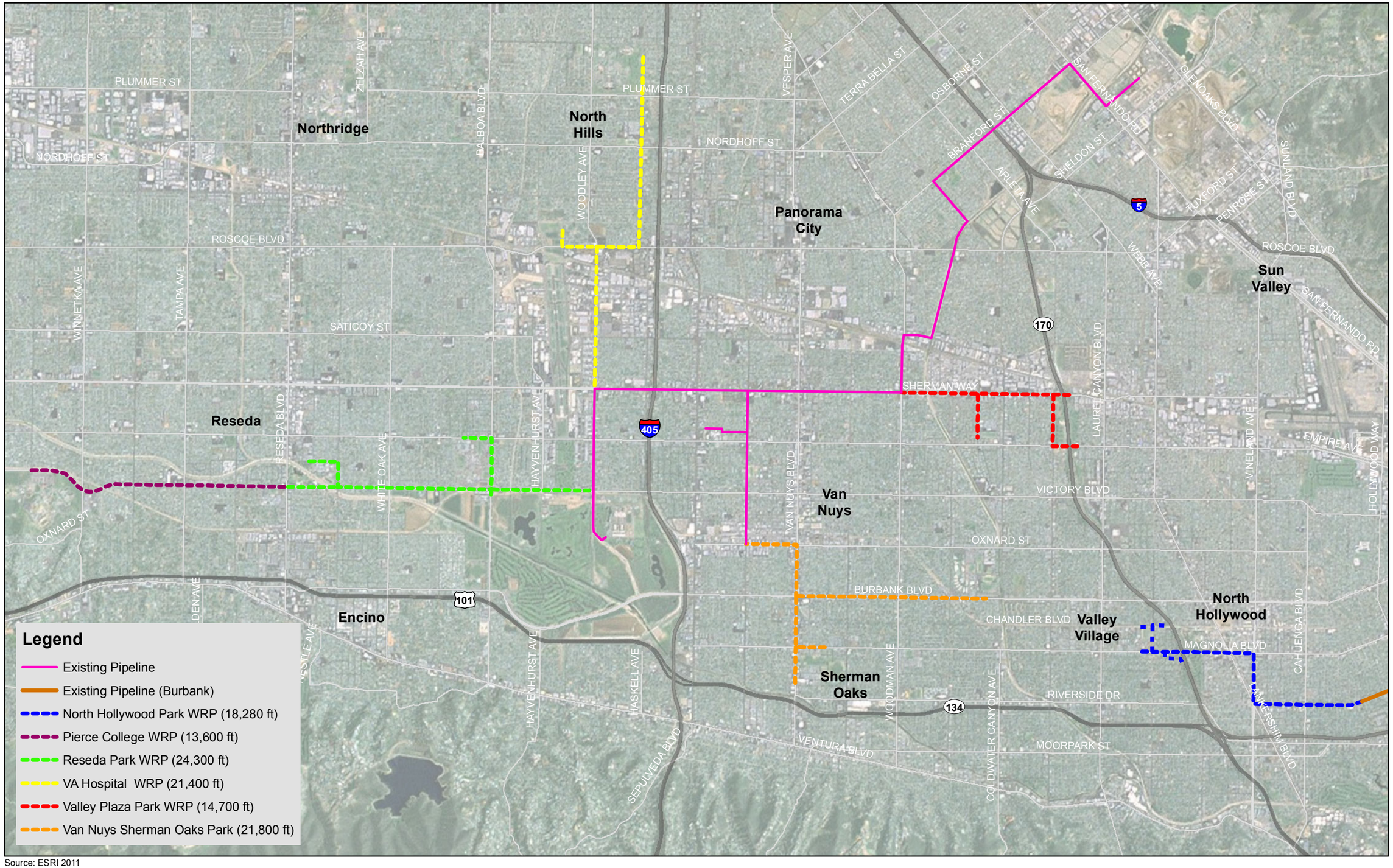

Source: ESRI 2011

N

0 0.5 1 1.5 2 Miles

Figure 2

Project Location Map

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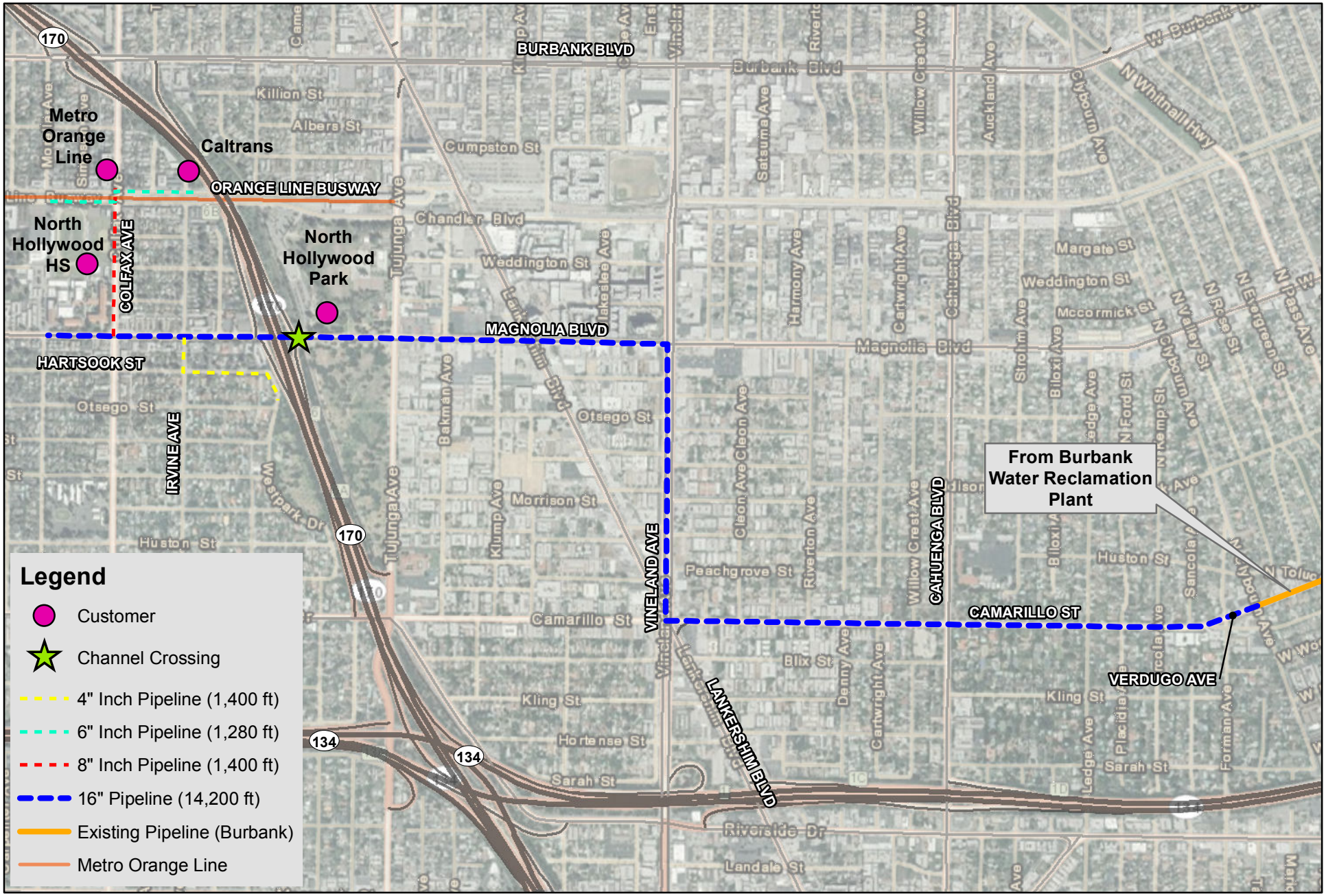


Source: ESRI 2011

Figure 3

North Hollywood Park Segment

San Fernando Valley Water Recycling Project

Source: ESRI 2011

N

0 0.25 0.5 Miles

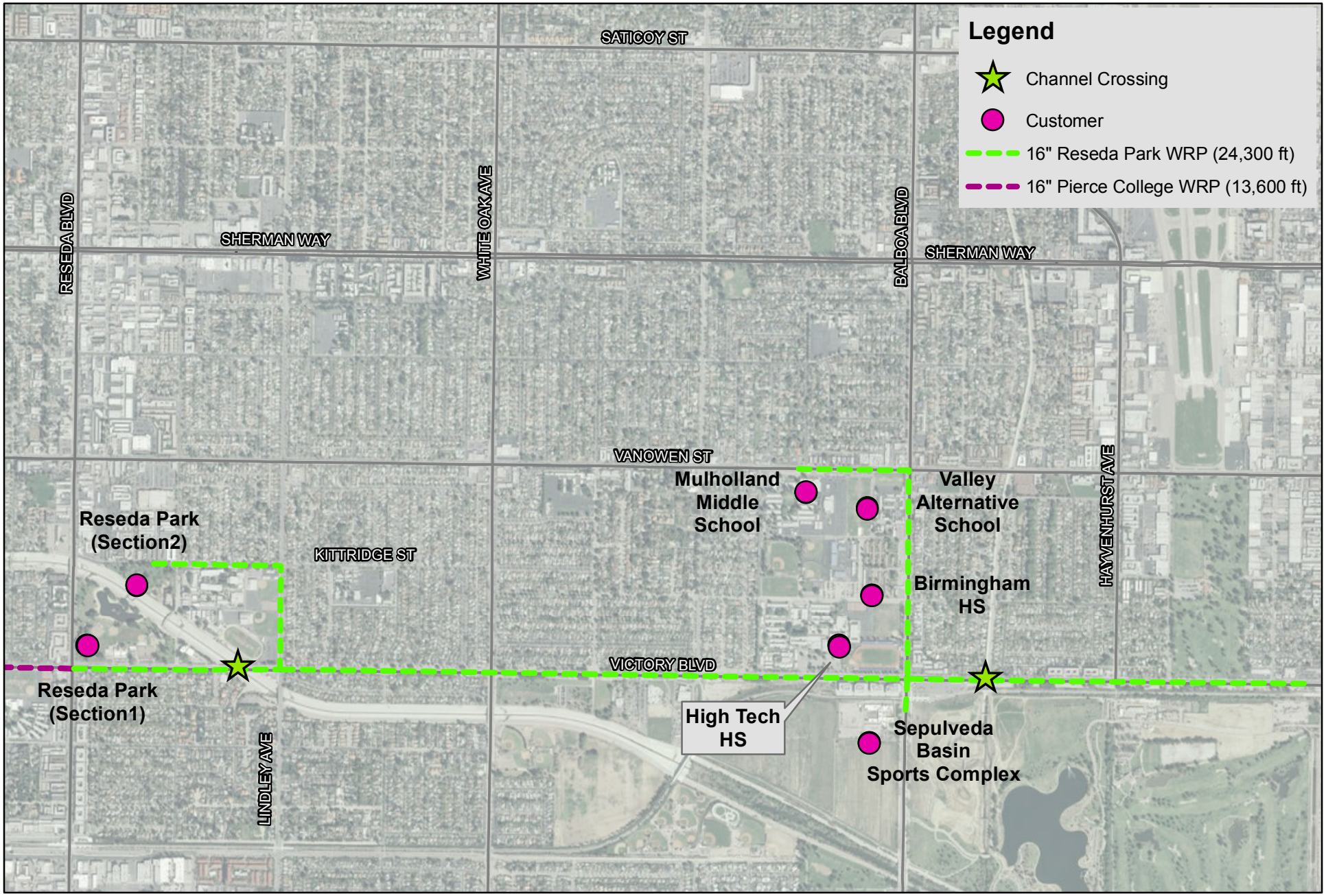
Figure 4

Valley Plaza Park Segment

Source: ESRI 2011

Figure 5

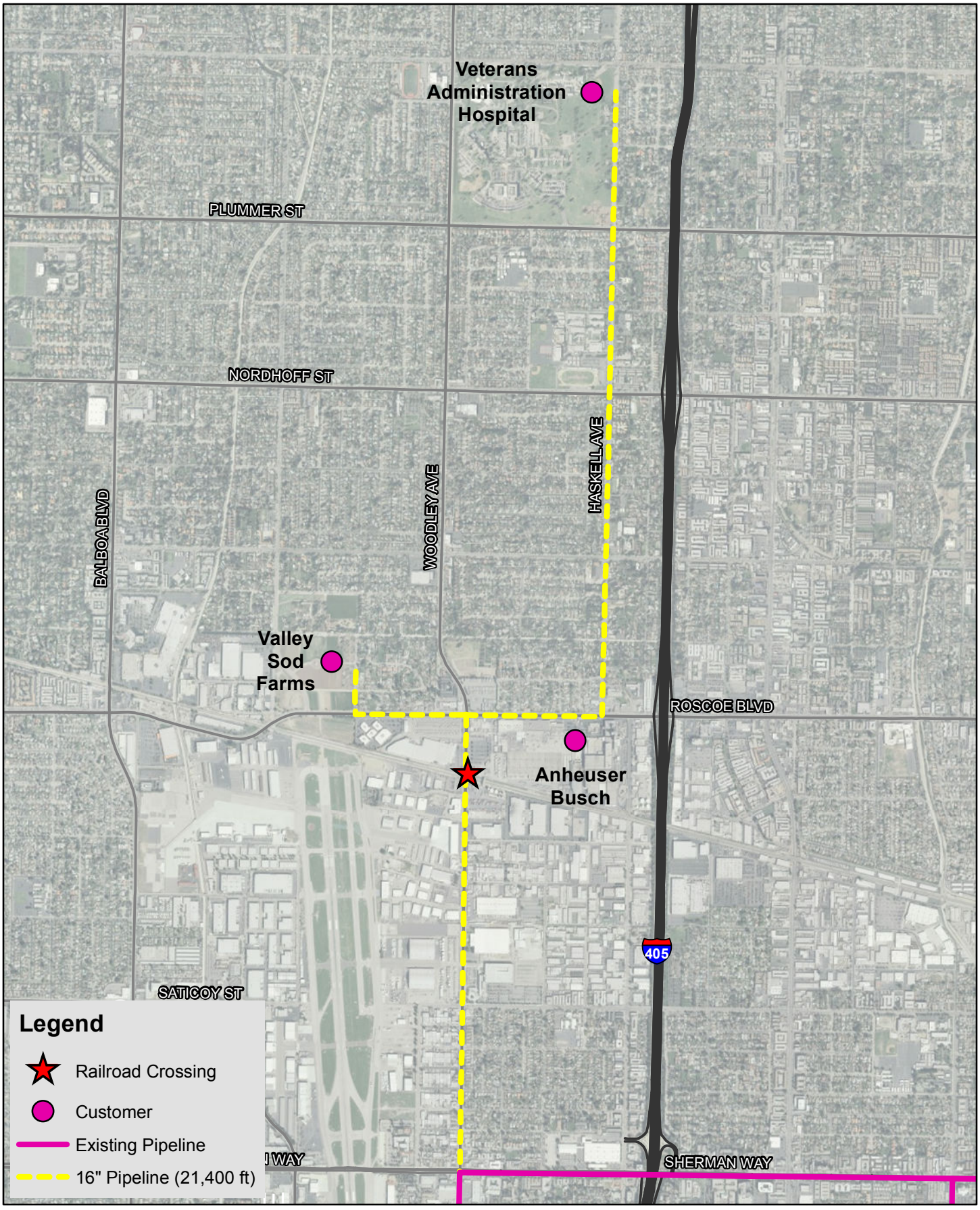
Van Nuys Sherman Oaks Park Segment



Source: ESRI 2011

Figure 6

Reseda Park Segment

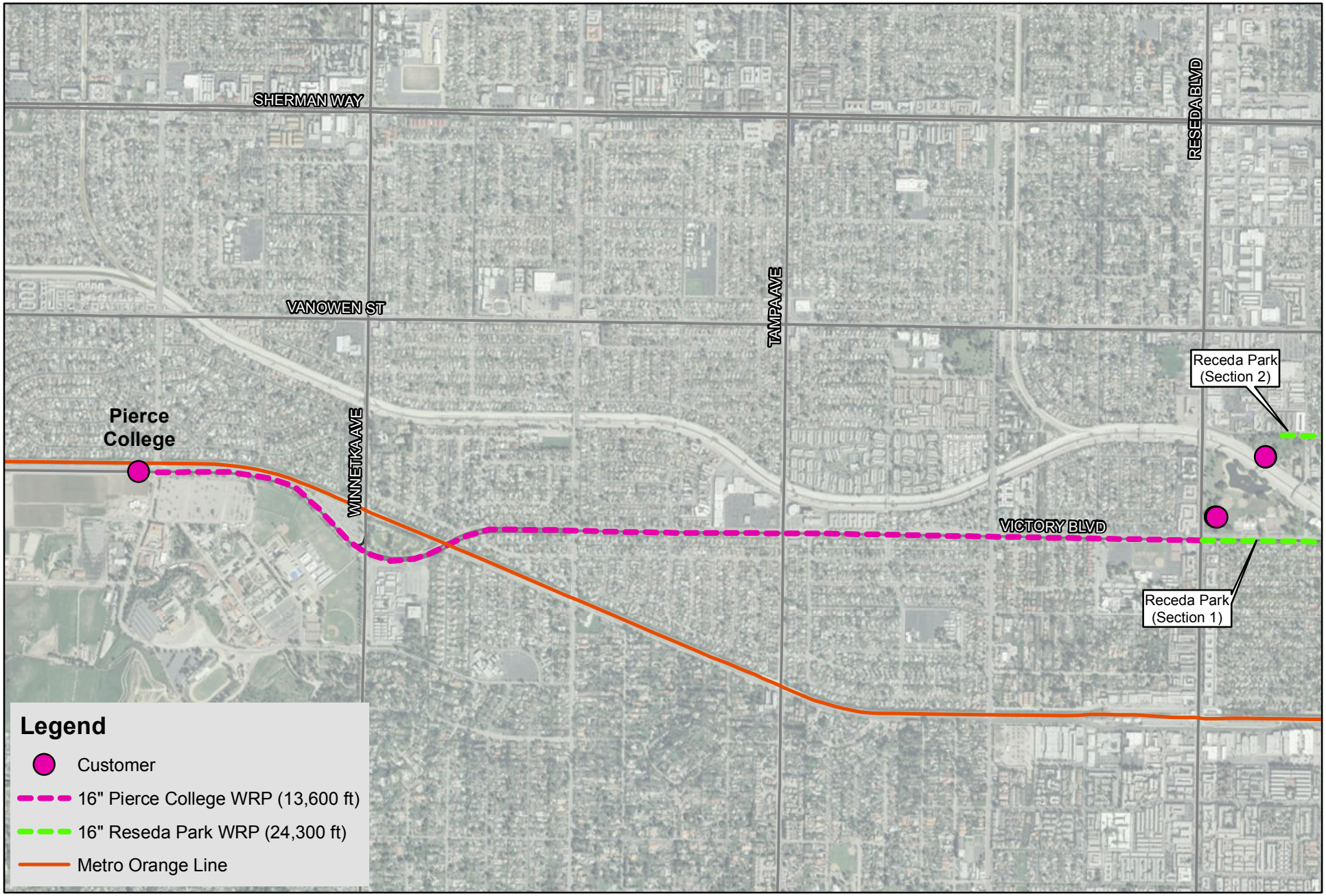


Source: ESRI 2011

N

0 0.25 0.5 0.75 1 Miles

Figure 7
VA Hospital Segment



Source: ESRI 2011

N

0 0.25 0.5 0.75 1 Miles

Figure 8
Pierce College Segment

1.4 Project Background

The City relies on four sources to meet its water needs: (1) snow-melt runoff from the Eastern Sierra conveyed by the Los Angeles Aqueduct (LAA) (an average of 35.4 percent of the total supply over the last 5 years); (2) local groundwater (11.4 percent); (3) purchases from the Metropolitan Water District of Southern California (MWD) conveyed from the Colorado River through the Colorado River Aqueduct and the State Water Project via the California Aqueduct (52.3 percent); and (4) recycled water for non-potable uses (1 percent). Population growth in the area has added to the City's water needs.

Although these water resources have served the City well for decades, several factors have converged that threaten the long-term reliability of these supplies. Climate conditions, such as consecutive years of below-normal snowfall and drought, and environmental commitments have severely impacted historical water supply sources.

- Eastern Sierra Watershed: The City's right to export water from the Eastern Sierra is based on approximately 188 water right licenses from various rivers, lakes and creeks in the Mono Basin and Owens Valley. The City's water rights are on file with the California State Water Resources Control Board. The City also owns the majority of land (approximately 315,000 acres) and associated riparian water rights in the Owens Valley. The LAA ~~Los Angeles Aqueduct~~ deliveries from the Eastern Sierra vary with snowpack conditions. In addition, over the last two decades, the City's water deliveries from the LAA ~~Los Angeles Aqueduct~~ have dropped significantly due to reallocation of water for environmental mitigation and enhancement activities. Among these environmental commitments are the State Water Resources Control Board's Mono Lake Decision, which reduced LADWP's ability to export water from the Mono Basin from 90,000 acre-feet per year (AFY) to 16,000 AFY; implementation of the Owens Lake Dust Mitigation Program, to which the LADWP is currently delivering 80,000 AFY, but is expected to increase to 95,000 AFY; implementation of the 1997 Memorandum of Understanding (MOU) between LADWP and the MOU Ad Hoc Group, which commits LADWP to supply 1,600 AFY for mitigation identified in the 1991 Water from the Owens Valley to Supply the Second Los Angeles Aqueduct Environmental Impact Report and rewatering of the Lower Owens River where losses are approximately 17,000 AFY.

- Local Groundwater: The City owns groundwater rights in three Upper Los Angeles River Area groundwater basins – the San Fernando, Sylmar, and Eagle Rock basins – as well as the Central and West Coast Basins, as determined by separate judgments by the Superior Court of the State of California. However, groundwater contamination in the San Fernando Basin, where the majority of the City's groundwater supply is produced, has severely limited the City's ability to pump groundwater.

- Purchased Water: MWD's sources of water – the Colorado River, State Water Project, local surface and groundwater storage, and stored/transferred water with Central Valley and Colorado River agencies – are subject to great uncertainty due to climate variability and environmental issues. The current environmental crisis in the Sacramento-San Joaquin Bay-Delta led to a Federal Court decision that resulted in MWD receiving up to 30 percent less of its anticipated State Water Project deliveries. Between April 2009 and April 2011, MWD implemented an allocation plan that limited

supplies to member agencies and imposed penalties for exceeding water usage targets. LADWP may request financial assistance from MWD for the proposed project under their Local Resources Program (LRP).

In response to the challenges facing the City's water supply, LADWP has embarked upon an aggressive effort to create reliable and sustainable sources of water for the future of Los Angeles. A key component is to maximize the use of recycled water.

Recycled water is municipal wastewater that has gone through various treatment processes to meet specific water quality criteria with the intent of being used in a beneficial manner. It is conveyed to customers with facilities similar to the potable water system (i.e., pump stations, pipelines, and tanks), but the non-potable facilities are designated by a purple color and/or labeled as recycled water. As a result, non-potable reuse projects are commonly referred to as "purple pipe" projects.

LADWP's 2010 Urban Water Management Plan set a goal of 59,000 AFY of potable water supplies to be replaced by recycled water by 2035 to meet non-potable demands. The City has existing non-potable reuse projects with an average annual reuse of 8,000 AFY and has "Planned" non-potable reuse projects that are under construction or in planning/design with planned construction by fiscal year 2015 with an average reuse of 11,350 AFY. The total potable water offset capacity of existing and planned purple pipe projects is 19,350 AFY. The goal of new recycled water projects is to offset the remaining 39,650 AFY of potable water. The non-potable reuse projects that make up the part of this goal are referred to as "Potential."

1.5 Project Objectives

The objectives of the proposed project are to:

- Improve the reliability of the City of Los Angeles water supply through increased recycled water use
- Comply with LADWP's 2010 Urban Water Management Plan outlining the steps to sustain a reliable water supply to meet current and future demand
- Construct the necessary infrastructure to convey recycled water to the various industrial and irrigation customers in the San Fernando Valley portion of Los Angeles
- Provide recycled water to some of the City of Los Angeles' largest water customers and, where feasible, switch their potable water connection to recycled water for supplying their non-potable uses

1.6 Description of the Proposed Project

The LADWP recycled water projects are divided into four service areas: Harbor, Metro, Valley, and Westside. Each service area, with the exception of the Harbor service area, is supplied by one water treatment facility and a corresponding pipeline distribution system that is hydraulically independent from the others. A distribution system is made up of individual Water Recycling Projects that are connected to each other. There are five water treatment facilities that serve the four service areas: Terminal Island Treatment Plant, which serves the Harbor Service Area via its Advanced Water Treatment Facility; West Basin

Municipal Water District Carson Regional Water Recycling Facility, which also serves the Harbor Service Area; Los Angeles-Glendale Water Reclamation Plant, which serves the Metro Service Area; Donald C. Tillman Water Reclamation Plant, which serves the Valley Service Area; and the West Basin Municipal Water District Edward C. Little Plant, which serves the Westside Service Area.

The proposed San Fernando Valley WRP would be located within the Valley Service Area and supplied with recycled water from the Donald C. Tillman Water Reclamation Plant. Additionally, the proposed project would include a connection to the City of Burbank recycled water system, which receives recycled water from the Burbank Water Reclamation Plant. The proposed project would consist of six segments: North Hollywood Park, Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, VA Hospital, and Pierce College. The construction of these six segments would expand the supply of recycled water to customers located throughout the San Fernando Valley. All segments would connect to existing recycled water pipeline systems in the area using a 16-inch connection~~. and 16-inch diameter distribution lines.~~ In addition, all segments except for North Hollywood Park would include only 16-inch diameter distribution lines. The North Hollywood Park segment would include 4- to 16-inch diameter distribution lines. The North Hollywood Park segment would connect to the existing City of Burbank recycled water pipeline; the Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, and VA Hospital segments would connect to the existing LADWP recycled water pipeline; and the Pierce College segment would connect to the Reseda Park segment. In total, approximately 114,080 ~~109,800~~ linear feet of new recycled water pipeline would be installed with implementation of the proposed project.

The North Hollywood Park segment would connect to the existing 16-inch City of Burbank pipeline via a 16-inch point connection on the City of Los Angeles border at Verdugo Avenue and Clybourn Avenue. The North Hollywood Park segment would include a total of approximately 18,280 linear feet of pipeline. From the pipeline connection point, this ~~segment~~ 16-inch diameter pipeline segment would extend ~~approximately 14,000 linear feet~~ west on Verdugo Avenue to Camarillo Street, then continue west on Camarillo Street to Vineland Avenue, then north on Vineland Avenue to Magnolia Boulevard, and west on Magnolia Boulevard to ~~terminating at~~ North Hollywood High School~~.~~, with two extensions. One extension would include an 8-inch diameter pipeline located north on Colfax Avenue from Magnolia Boulevard to Chandler Boulevard. This extension would then split into two legs including 6-inch diameter pipelines. One leg would travel west on Chandler Boulevard terminating at North Hollywood High School; and the other leg would travel east on Chandler Boulevard terminating at SR 170. The second extension would include a 4-inch diameter pipeline located south on Irvine Avenue from Magnolia Boulevard to Hartsook Street, east on Hartsook Street to Westpark Drive, and south on Westpark Drive terminating at North Hollywood Park. The Metro Orange Line Busway operates in the median of Chandler Boulevard in this area. Proposed pipeline segments that would cross the Metro Orange Line Busway would be pipe-jacked beneath the existing transit facility. Proposed pipelines located on Chandler Boulevard would be located beneath the vehicle traffic lanes and would not disturb the existing busway. This segment would be trenched across the San Fernando Wash on Magnolia Boulevard approximately 900 feet west of Tujunga Avenue. Along its route, the North Hollywood Park segment would serve the following known customers:

- North Hollywood Park, located on Magnolia Boulevard west of Tujunga Avenue
- North Hollywood High School, located at Magnolia Boulevard and Colfax Avenue

- Metro Orange Line Busway, located in the median of Chandler Boulevard
- Caltrans operated SR 170

The Valley Plaza Park segment would connect to the existing 54-inch LADWP pipeline via a 16-inch connection point at the intersection of Sherman Way and Woodman Avenue. This segment would extend approximately 14,700 linear feet east on Sherman Way from the connection point to SR 170, with two segments extending south; one on Ethel Avenue from Sherman Way to James Madison Middle School; and one on Whitsett Avenue from Sherman Way to Vanowen Street, and east on Vanowen Street terminating at Valley Plaza Park. This segment would cross the San Fernando Wash in two places. The first channel crossing would occur on Sherman Way approximately 1,300 feet east of Woodman Avenue, and the second channel crossing would occur on Vanowen Street approximately 1,021 feet east of Whitsett Avenue. For the channel crossing on Sherman Way, the pipe would be hung from the side of the roadway or installed through an existing utility duct. For the channel crossing on Vanowen Street, trenching would be used. Additionally, this route would cross over the SR 170 freeway overpass bridge on Sherman Way, which would require installation through an existing utility duct. The Valley Plaza Park segment would serve the following known customers:

- James Madison Middle School, located on Ethel Avenue south of Hart Street
- Caltrans ~~California Department of Transportation (Caltrans)~~ facility, located on Sherman Way east of SR 170
- Valley Plaza Park, located on Vanowen Street east of SR 170

The Van Nuys Sherman Oaks Park segment would begin on Kester Avenue just south of the Metro Orange Line Busway via an extension of the existing 16-inch LADWP pipeline. This segment would extend approximately 21,800 linear feet south on Kester Avenue from the connection point to Oxnard Street, then east on Oxnard Street to Van Nuys Boulevard, and south on Van Nuys Boulevard terminating at Sherman Oaks Hospital, with two extensions. One of these extensions would travel east on Burbank Boulevard from Van Nuys Boulevard and terminate at Los Angeles Valley College. The other extension would travel east on Magnolia Boulevard from Van Nuys Boulevard and terminate at Van Nuys Sherman Oaks Park. The Van Nuys Sherman Oaks Park segment would serve the following known customers:

- Sherman Oaks Hospital, located on Van Nuys Boulevard south of Addison Street
- Van Nuys Sherman Oaks Park, located on Magnolia Boulevard east of Van Nuys Boulevard
- Burbank Oaks Apartments, located on Burbank Boulevard west of Tyrone Avenue
- Los Angeles Valley College, located on Burbank Boulevard east of Fulton Avenue

The Reseda Park segment would connect to the existing 54-inch LADWP pipeline via a 16-inch connection point at the intersection of Victory Boulevard and Woodley Avenue. This segment would extend approximately 24,300 linear feet west on Victory Boulevard from the connection point terminating at the intersection of Victory Boulevard and Reseda Boulevard, with three extensions. One extension would travel south on Balboa Boulevard from Victory Boulevard and terminate at the Sepulveda Basin Sports Complex. Another extension would travel north on Balboa Boulevard from Victory Boulevard to Vanowen Street, then west on Vanowen Street terminating at Mulholland Middle School. A third extension would travel north on Lindley Avenue from Victory Boulevard to Kittridge Street, then west on Kittridge

Street and terminate on the north side of Reseda Park, just east of the intersection of Kittridge Street and Reseda Boulevard. There would be two channel crossings on Victory Boulevard. The first channel crossing would occur over Bull Creek approximately 1,050 feet east of Balboa Boulevard, and the other crossing would occur over the Los Angeles River approximately 600 feet west of Lindley Avenue. For both channel crossings, the pipelines would be hung from the side or underneath the bridges. The Reseda Park segment would serve the following known customers:

- Sepulveda Basin Sports Complex, located on Balboa Boulevard south of Victory Boulevard
- Birmingham High School, located on Balboa Boulevard and Haynes Street
- Valley Alternative School, located on Balboa Boulevard and Vanowen Street
- Mulholland Middle School, located on Vanowen Street east of Aldea Avenue
- High Tech High School, located on Victory Boulevard east of Aldea Avenue
- South side of Reseda Park, located on Victory Boulevard at Reseda Boulevard
- North side of Reseda Park, located on Kittridge Street east of Reseda Boulevard

The VA Hospital segment would connect to the existing 54-inch LADWP pipeline via a 16-inch connection point at the intersection of Sherman Way and Woodley Avenue. This segment would extend approximately 21,400 linear feet north on Woodley Avenue from the connection point and terminate at the intersection of Woodley Avenue and Roscoe Boulevard, with two extensions. One extension would travel west on Roscoe Boulevard from Woodley Avenue to Gothic Avenue, then north on Gothic Avenue terminating at Valley Sod Farms. Another extension would travel east on Roscoe Boulevard from Woodley Avenue to Haskell Avenue, then north on Haskell Avenue and terminate at the VA Hospital. This segment would cross the Amtrak/Metrolink tracks located on Woodley Avenue approximately 1,000 feet south of Roscoe Boulevard. Trenchless construction would be required for this rail crossing. The VA Hospital segment would serve the following customers:

- Valley Sod Farms, located on Gothic Avenue east of Hayvenhurst Avenue
- Anheuser Busch facility, located on Roscoe Boulevard west of Interstate 405 (I-405, San Diego Freeway)
- VA Hospital, located on Haskell Avenue south of Lassen Street

The Pierce College segment would connect to the westernmost termination point of the Reseda Park segment via a 16-inch pipeline extension, and then travel approximately 13,600 linear feet west on Victory Boulevard, terminating at the intersection of Victory Boulevard and Mason Avenue. This segment would cross the Metro Orange Line Busway on Victory Boulevard approximately 1,000 feet east of Winnetka Avenue. It would only serve Pierce College at this time.

Installation of the recycled water pipeline would occur within public roads and using a cut and cover trenching technique. An approximately 3-foot wide by 5-foot deep trench would be excavated within the roadway that could be covered with metal plates during periods of the day when construction is not ongoing. Once the pipeline has been installed within a segment, the trench would be backfilled with imported slurry and returned to its original condition. Recycled water pipeline installation would necessitate restrictions of on-street parking and closure of up to two lanes of the roadway depending on the location of construction. In general, approximately 90 linear feet of pipeline would be installed per day.

Construction is anticipated to occur sequentially along the alignment of each segment to minimize long-term disruption within any one area. Construction would generally occur from east to west, beginning with the North Hollywood Park segment. Subsequent segments would be constructed in the following order: Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, VA Hospital, and Pierce College. Materials and equipment staging and construction worker parking would use City facilities and public parking lots located along or near the proposed alignments.

Railroad crossings would require tunneling instead of trenching via a procedure called "pipe jacking." Launching and receiving pits would be located on either end of the tunnel. Hydraulic jacks would drive pipes through the ground. Excavated soil and other material would be removed from the pits and disposed of at an appropriate regional landfill. The launching and receiving pits would be backfilled with imported slurry and the roadway would be returned to its original condition.

1.7 Construction Schedule and Procedures

Construction of the proposed project is anticipated to begin in summer 2017 and take approximately 5 years to complete, concluding in summer 2022.

Generally, in accordance with the City of Los Angeles Noise Ordinance (the Noise Ordinance), construction activity would occur Mondays through Fridays from 7:00 a.m. to approximately 3:30 p.m. The City of Los Angeles Mayor's Directive #2 prohibits construction on major roads during rush hour periods (6:00 a.m. to 9:00 a.m. and 3:30 p.m. to 7:00 p.m.). However, due to the nature of construction activities within public roadways, construction activity could occur during rush hour periods. Therefore, LADWP would request a variance to Directive #2. Additionally, construction activity may occur at night in non-residential areas in order to complete construction of the proposed project in a timely manner. Construction would also be coordinated with the City of Los Angeles Department of Transportation (LADOT) to minimize traffic disturbances.

A spreadsheet that reflects the level of construction activities by segment installed is included as Appendix A of this document.

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):

- 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:
    1) Water shall be applied to exposed surfaces at least two times per day to prevent generation of dust plumes.
    2) The construction contractor shall utilize at least one of the following measures at each vehicle egress from the project site to a paved public road:
        a. Install a pad consisting of washed gravel maintained in clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long;
        b. Pave the surface extending at least 100 feet and at least 20 feet wide;

c. Utilize a wheel shaker/wheel spreading device consisting of raised dividers at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages; or

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

3) 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).

4) Construction activity on exposed or unpaved dirt surfaces shall be suspended when wind speed exceeds 25 miles per hour (such as instantaneous gusts).

5) Ground cover in disturbed areas shall be replaced in a timely fashion when work is completed in the area.

6) A community liaison shall be identified concerning on-site construction activity including resolution of issues related to PM_{10} generation.

7) 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).

8) Traffic speeds on all unpaved roads shall be limited to 15 mph or less.

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

- The construction contractor would develop and implement an erosion control plan and Storm Water Pollution Prevention Plan (SWPPP) 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 BMPs may include the following:
        - Temporary desilting basins;
        - Silt fences;
        - Gravel bag barriers;
        - Temporary soil stabilization with mattresses and mulching;
        - Temporary drainage inlet protection; and
        - Diversion dikes and interceptor swales.

- The proposed project would comply with the Regional Water Quality Control Board's National Pollution Discharge Elimination System Phase II Rule.
- The pipeline alignment would not be located within 15 feet of a residential or institutional building, or within 12 feet of a commercial building to minimize vibration induced building damage.
- Residences and businesses near the pipeline alignment would be notified prior to the start of construction (e.g., via flyers) of lane closures and parking restrictions in their

vicinity. The notices would include a telephone number for comments or questions related to construction activities.

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

1.8 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

- Certification by the City of Los Angeles Board of Water and Power Commissioners that the MND was prepared in accordance 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 Permit
- Grading Permit

City of Los Angeles Department of Public Works, Bureau of Sanitation, Stormwater Management Division

- Discharge permit for construction dewatering and hydrostatic test water discharge in storm drains

City of Los Angeles Department of Transportation

- Approval of Traffic Management Plan
- Approval of temporary road closures

County of Los Angeles Department of Public Works, Bureau of Sanitation, Stormwater Management Division

- Flood Permit

Los Angeles County Metropolitan Transportation Authority

- Right of Entry Permit

State of California, Los Angeles Regional Water Quality Control Board

- National Pollution Discharge Elimination System Permit for construction dewatering and hydrostatic test water discharge

State of California Department of Industrial Relations, Division of Occupational Safety and Health, Mining and Tunneling Unit

- Underground Classification Permit for tunneling and jacking locations

State of California Department of Transportation

- Encroachment Permit

U.S. Army Corps of Engineers

- Easement and Construction Permit

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SECTION 2
INITIAL STUDY CHECKLIST

The following discussion of potential environmental effects was completed in accordance with Section 15063(d)(3) of the CEQA Guidelines (2012) to determine if the proposed project may have a significant effect on the environment.

CEQA INITIAL STUDY FORM

Project Title:
San Fernando Valley Water Recycling 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:
Irene Paul
Environmental Planning and Assessment
Los Angeles Department of Water and Power
(213) 367-3509
Irene.Paul@ladwp.com

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

Project Location:
The project area is located in the San Fernando Valley area of Los Angeles.

City Council District:
Districts 2, 3, 5, 6, and 12

Neighborhood Council District:
Encino Neighborhood Council, Greater Toluca Lake Neighborhood Council, Greater Valley Glen Neighborhood Council, Lake Balboa Neighborhood Council, Midtown North Hollywood Neighborhood Council, Neighborhood Council Valley Village, North Hills West Neighborhood Council, North Hollywood North East Neighborhood Council, North Hollywood West Neighborhood Council, Reseda Neighborhood Council, Sherman Oaks Neighborhood Council, Tarzana Neighborhood Council, Van Nuys Neighborhood Council, and Woodland Hills-Warner Center Neighborhood Council

General Plan Designation:
The proposed project would be located entirely within the existing road right-of-way. The properties adjacent to the proposed alignment include the following designations: Very Low Residential, Low Residential, Low Medium 1 Residential, Low Medium II Residential, Medium Residential, Open Space, Public Facilities, Community

Commercial, Neighborhood Office Commercial, Highway Oriented Commercial, General Commercial, Commercial Manufacturing, Limited Manufacturing, and Light Manufacturing.

Zoning:
The properties along the proposed alignment are zoned C1 (Limited Commercial), C2 (Regional Commercial), C4 (Community Commercial), CM (Commercial Manufacturing), M1 (Limited Manufacturing), M2 (Light Industrial), OS (Open Space), PF (Public Facilities), RA (Suburban), R1 (One Family Residential), RE (Residential Estate), RD (Restricted Density Multiple Dwelling), and R3 (Multiple Dwelling Residential).

Description of Project:
The proposed project would be located within the Valley Service Area and supplied with recycled water from the Donald C. Tillman Water Reclamation Plant. Additionally, the proposed project would include a connection to the City of Burbank recycled water system, which receives recycled water from the Burbank Water Reclamation Plant. The proposed project would consist of six segments: North Hollywood Park, Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, VA Hospital, and Pierce College. The construction of these six segments would expand the supply of recycled water to customers located throughout the San Fernando Valley. All segments would connect to existing recycled water pipeline systems in the area using a 16-inch connection. ~~and 16-inch diameter distribution lines.~~ In addition, all segments except for North Hollywood Park would include 16-inch diameter distribution lines. The North Hollywood Park segment would include 4- to 16-inch diameter distribution lines. The North Hollywood Park segment would connect to the existing City of Burbank recycled water pipeline; the Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, and VA Hospital segments would connect to the existing LADWP recycled water pipeline; and the Pierce College segment would connect to the Reseda Park segment. In total, approximately 114,080 ~~109,800~~ linear feet of new recycled water pipeline would be installed with implementation of the proposed project.

Construction is anticipated to occur sequentially along the alignment of each segment to minimize long-term disruption within any one area. Construction would generally occur from east to west, beginning with the North Hollywood Park segment. Subsequent segments would be constructed in the following order: Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, VA Hospital, and Pierce College. Materials and equipment staging and construction worker parking would occur on City-owned property and public parking lots located along or near the proposed alignments. Installation of the recycled water pipeline would occur within public roads and using a cut and cover trenching technique. An approximately 3-foot wide by 5-foot deep trench would be excavated within the roadway that could be covered with metal plates during periods of the day when construction is not ongoing. Once the pipeline has been installed within a segment, the trench would be backfilled with imported slurry and the roadway returned to its original condition. Excess soil that cannot be reused as backfill material would be disposed of at an appropriate regional landfill. Recycled water pipeline installation would necessitate restrictions to on-street parking and closure of up to two lanes of the roadway depending on the location of construction. In general, approximately 90 linear feet of pipeline would be installed per day. Railroad crossings would require tunneling instead of trenching. Launching and receiving pits would be located on either end of the tunnel. Hydraulic jacks would drive pipes through the ground. Excess soil that cannot be reused as backfill material would be disposed of at an appropriate regional landfill.

Surrounding Land Uses and Setting:
The proposed project would be located entirely within public street rights-of-way in the San Fernando Valley. The proposed project area would generally be bound by Interstate 5 (I-5, Golden State Freeway) to the east, Ventura Freeway (State Route 134 [SR 134] and U.S. Route 101 [US 101]) to the south, Mason Avenue to the West and Lassen Street by I-405 to the north. The proposed project alignment encompasses portions of the communities of Canoga Park-Winnetka-Woodland Hills-West Hills, Reseda-West Van Nuys, Mission Hills-Panorama City-North Hills, Van Nuys-North Sherman Oaks, and North Hollywood-Valley Village. The proposed alignment abuts a variety of commercial, residential, open space, public facilities, light industrial, and limited manufacturing uses.

Responsible/Trustee Agencies:
- State of California, Los Angeles Regional Water Quality Control Board
- State of California, Department of Industrial Relations, Division of Occupational Safety and Health, Mining and Tunneling Unit
- State of California Department of Transportation
- U.S. Army Corps of Engineers
- Los Angeles Metropolitan Transportation Authority
- County of Los Angeles Department of Public Works, Flood Control District
- Metropolitan Water District of Southern California

Reviewing Agencies:
- City of Los Angeles Department of Transportation
- City of Los Angeles Department of Public Works, Bureau of Engineering
- City of Los Angeles Department of Public Works, Bureau of Sanitation, Stormwater Management Division

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the Environmental Impacts discussion in Section 3.

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

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.

Charles C. Holloway — 6/19/13

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**. 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.	Substantially degrade the existing visual character or quality of the site and its surroundings?				**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 that, 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 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.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			**X**	
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			**X**	
d.	Expose sensitive receptors to substantial pollutant concentrations?			**X**	
e.	Create objectionable odors 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 federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				**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**

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
V.	**CULTURAL RESOURCES**. Would the project:				
a.	Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?			**X**	
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?		**X**		
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		**X**		
d.	Disturb any human remains, including those interred outside of formal cemeteries?			**X**	
VI.	**GEOLOGY AND SOILS**. Would the project:				
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			**X**	
	ii) Strong seismic ground shaking?			**X**	
	iii) Seismic-related ground failure, including liquefaction?			**X**	
	iv) Landslides?				**X**
b.	Result in substantial soil erosion, loss of topsoil, or changes in topography or unstable soil conditions from excavation, grading, or fill?			**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 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**
VII.	**GREENHOUSE GAS EMISSIONS**: Would the project:				
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impacts 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
VIII.	**HAZARDS AND HAZARDOUS MATERIALS**: Would the project:				
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			**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 that 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 for people residing or working in the project area?				**X**
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				**X**
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			**X**	
h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				**X**
IX.	**HYDROLOGY AND WATER QUALITY**. Would the project:				
a.	Violate any water quality standards or waste discharge requirements?			**X**	
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			**X**	
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?			**X**	

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?			X	
e.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f.	Otherwise substantially degrade water quality?			X	
g.	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h.	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
i.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j.	Inundation by seiche, tsunami, or mudflow?			X	
X.	**LAND USE AND PLANNING**. Would the project:				
a.	Physically divide an established community?				X
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
XI.	**MINERAL RESOURCES**. Would the project:				
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				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
XII.	**NOISE**. Would the project result in:				
a.	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?		X		
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		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 expose people residing or working in the project area to excessive noise levels?				X
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
XIII.	**POPULATION AND HOUSING**. Would the project:				
a.	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
XIV.	**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
XV.	**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

	Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?		X		
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				X
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e. Result in inadequate emergency access?			X	
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?		X		
XVII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	

		Potentially Significant Impact	Less Than Significant Impact After Mitigation Incorporated	Less Than Significant Impact	No Impact
g.	Comply with federal, state, and local statutes and regulations related to solid waste?			X	
XVIII.	**MANDATORY FINDINGS OF SIGNIFICANCE**.				
a.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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 that will cause substantial adverse effects on human beings, either directly or indirectly?		X		

SECTION 3
ENVIRONMENTAL IMPACT ASSESSMENT

INTRODUCTION

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

I. AESTHETICS

Would the project:

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

No Impact. The proposed project would not have an adverse effect on a scenic vista. Scenic views or vistas are panoramic public views of various natural features, including the ocean, striking or unusual natural terrain, or unique urban or historic features. Public access to these views may be from park lands, private and publicly owned sites, and public right-of-way.[1] The project site is located entirely within public street rights-of-way in urbanized and fully developed areas within the San Fernando Valley. The Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan, Reseda-West Van Nuys Community Plan, Van Nuys-North Sherman Oaks Community Plan, the Mission Hills-Panorama City-North Hills Community Plan, and the North Hollywood-Valley Village Community Plan do not identify any official scenic vistas within or adjacent to the project area.[2,3,4,5,6] Further, the proposed project involves trenching within public streets to install a recycled water pipeline in 90-foot segments. Pipeline segments that would cross the Metro Orange Line Busway would be microtunneled beneath the transit right-of-way. Each segment would be constructed within a single day and the roadway would be returned to its original condition such that there would be no visible change to the roadways. Therefore, the views from vantage points adjacent to the project site would remain similar to existing conditions. No impact to a scenic vista would occur.

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

No Impact. Implementation of the proposed project would not damage scenic resources within a state scenic highway. No sections of CA 134, I-405, I-5, or US 101 within the project vicinity are designated as eligible California Scenic

1 City of Los Angeles Department of City Planning, *City of Los Angeles General Plan, Conservation Element*, adopted September 26, 2001.
2 City of Los Angeles Department of City Planning, *Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan*, updated August 17, 1999.
3 City of Los Angeles Department of City Planning, *Reseda-West Van Nuys Community Plan*, adopted November 17, 1999.
4 City of Los Angeles Department of City Planning, *Van Nuys-North Sherman Oaks Community Plan*, adopted September 9, 1998.
5 City of Los Angeles Department of City Planning, *Mission Hills-Panorama City-North Hills Community Plan*, updated June 9, 1999.
6 City of Los Angeles Department of City Planning, *North Hollywood-Valley Village Community Plan*, updated May 14, 1996.

Highways.[7] Further, none of these segments are Designated Scenic Highways in the Transportation Element of the City of Los Angeles General Plan. However, a portion of Lankershim Boulevard within the proposed alignment for the North Hollywood Park segment is a Designated Scenic Highway in the City of Los Angeles General Plan.[8] Because the proposed project involves trenching within public streets to install a recycled water pipeline in 90-foot segments, each segment would be constructed within a single day and the roadway would be returned to its original condition. Pipeline segments that would cross the Metro Orange Line Busway would be microtunneled beneath the transit right-of-way. Therefore, this scenic roadway would not be altered as a result of the implementation of the proposed project. No impact would occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

No Impact. The proposed project involves trenching within public roadway rights-of-way to install a recycled water pipeline. Pipeline segments that would cross the Metro Orange Line Busway would be microtunneled beneath the transit right-of-way. As discussed in Section I(a) above, each segment would be constructed within in a single day and the segment returned to its original condition such that there would be no visible change to the roadway following the completion of construction. Therefore, there would be no change to the visual character or quality of the roadways, and 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 light or glare that would adversely affect day or nighttime views. The proposed project would be constructed primarily during daylight within public roadway rights-of-way to install a recycled water pipeline via trenching. Pipeline segments that would cross the Metro Orange Line Busway would be microtunneled beneath the transit right-of-way. No permanent night lighting or reflective surfaces would be installed because operation would occur entirely below-grade. Therefore, 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. The project site is located in a fully urbanized portion of the San Fernando Valley and would be located entirely within public roadway rights-of-way. The proposed alignment is designated as Urban and Built-Up Land on the "Important Farmland in California" map prepared by the California Resources

[7] State of California Department of Transportation. *State Scenic Highway Program*. Website: http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm, accessed May 16, 2012.

[8] City of Los Angeles Department of City Planning, *City of Los Angeles General Plan, Transportation Element*, adopted September 8, 1999.

Agency pursuant to the Farmland Mapping and Monitoring Program. Thus, no part of the proposed alignment would be located on or near Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.[9] Therefore, the proposed project would not convert farmland to a non-agricultural use, and no impact to farmland would occur.

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

No Impact. As discussed in Section II(a) above, the proposed project would be located entirely within public roadway rights-of-way. Furthermore, the County of Los Angeles does not offer Williamson Act contracts.[10] Therefore, the proposed project would not conflict with existing zoning or a Williamson Act contract. No impact would occur.

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

No Impact. The proposed project would be located entirely within public roadway rights-of-way in a fully urbanized portion of the San Fernando Valley. No portion of the proposed alignment is zoned for or developed as forest land or timberland as defined in Public Resources Code Section 12220(g) and Government Code Section 4526, respectively.[11] Therefore, the proposed project would not conflict with existing zoning for or cause a rezoning of forest or timberland. No impact would occur.

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

No Impact. The proposed project would be located entirely within public roadway rights-of-way in a fully urbanized portion of the San Fernando Valley. No portion of the proposed alignment is zoned or developed for a forest land use, and the proposed alignment is not located within or adjacent to forest lands.[12] Therefore, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

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

No Impact. The proposed project involves trenching, and in some cases microtunneling, within public roadway rights-of-way to install a recycled water pipeline. The project site and adjacent properties are designated as "Urban and

[9] State of California Department of Conservation, Division of Land Resource Protection, Farmland Mapping & Monitoring Program, *Important Farmland in California, 2008* map. Website: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2008/fmmp2008_08_11.pdf, accessed May 16, 2012.

[10] State of California Department of Conservation, Division of Land Resource Protection, *Williamson Act Program – Basic Contract Provisions*. Website: http://www.conservation.ca.gov/dlrp/lca/basic_contract_provisions, accessed May 16, 2012.

[11] City of Los Angeles Zoning Information and Map Access System (ZIMAS). Website: http://zimas.lacity.org/, accessed May 16, 2012.

[12] Ibid.

Built-Up Land;" no portion of the project site or surrounding area is identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.[13] Additionally, no forest lands exist on or adjacent to the project area. Therefore, the proposed project would not change the existing environment in a way that would result in the conversion of Farmland to non-agricultural use or forest land to non-forest use. No impact would occur.

III. AIR QUALITY

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan (e.g., the SCAQMD Plan or Congestion Management Plan)?

Less Than Significant Impact. The SCAQMD and the Southern California Association of Governments (SCAG) have responsibility for preparing an Air Quality Management Plan (AQMP), which implements federal Clean Air Act and California Clean Air Act requirements, and details goals, policies, and programs for improving air quality in the South Coast Air Basin. The 2007 AQMP was adopted by the SCAQMD Governing Board on June 1, 2007, and the California Air Resources Board (CARB) on September 27, 2007. The purpose of the 2007 Air Quality Management Plan for the South Coast Air Basin is to set forth a comprehensive program that will lead the region into compliance with federal air quality standards for 8-hour ozone (O_3) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).

According to the SCAQMD, there are two key indicators of consistency with the AQMP: 1) whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and 2) whether the project will not exceed the assumptions in the AQMP based on the year of project buildout.[14] The first consistency criterion refers to violations of the California Ambient Air Quality Standards. ~~One measure to determine whether the proposed project would cause or contribute to a violation of an air quality standard would be based on the estimated carbon monoxide (CO) concentrations at intersections that would be affected by the proposed project.~~ The amount of vehicle trips during post-construction operations of the proposed project would be similar to the existing conditions as there is no operational component of the proposed project. Operational activity would not generate regional emissions that could interfere with attainment or maintenance of ambient air quality standards. In addition, the proposed project would comply with State and local strategies designed to control air pollution. ~~Also, the 2007 AQMP and the 2007 South Coast Air Basin State Implementation Plan demonstrates attainment of the federal $PM_{2.5}$ standard in the South Coast Air Basin by 2014, and attainment of the federal 8-hour O_3 standard by 2023. As a result of state and local control strategies, the South Coast Air Basin has not exceeded the federal CO standard since 2002.~~ Therefore, the proposed project would comply with Consistency Criterion No. 1.

[13] State of California Department of Conservation, Division of Land Resource Protection, Farmland Mapping & Monitoring Program. *Important Farmland in California. 2008*. Website: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2008/fmmp2008_08_11.pdf, accessed May 16, 2012.

[14] SCAQMD, *The CEQA Air Quality Handbook,* 1993.

The second consistency criterion requires that the proposed project not exceed the assumptions in the AQMP. A project is consistent with the AQMP if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. The proposed project does not include a residential component, and therefore, would not increase population or housing in the area. In addition, the proposed project would not increase employment since upon completion of construction of the recycled water pipelines and facilities, the project area would return to existing conditions. As such, the proposed project is considered to be consistent with growth assumptions included in the AQMP, and it would comply with Consistency Criterion No. 2.

Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality management plan. The impact would be less than significant.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact. The proposed project would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. The project site is located within the Los Angeles County portion of the South Coast Air Basin, which is designated a non-attainment area for O_3, particulate matter smaller than or equal to 10 microns in diameter (PM_{10}), and $PM_{2.5}$. The SCAQMD maintains an extensive air quality monitoring network to measure criteria pollutant concentrations throughout the South Coast Air Basin.

Construction of the proposed project would contribute air quality emissions through the use of heavy-duty construction equipment, truck delivery and haul trips, and vehicle trips generated by construction workers traveling to and from the project site for all six segments of the proposed project. Fugitive dust emissions would primarily result from trenching activities. Nitrogen oxide (NO_X) emissions would primarily result from the use of construction equipment. The assessment of construction air quality impacts considers each of these potential sources.

It is mandatory for all construction projects in the South Coast Air Basin to comply with SCAQMD Rule 403 for Fugitive Dust. As discussed in Section 1.7 above, Specific Rule 403 control requirements include, but are 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, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce regional $PM_{2.5}$ and PM_{10} emissions associated with construction activities by approximately 61 percent in accordance with SCAQMD guidance.

Table 1 shows the maximum daily emissions associated with construction (see Appendix B). As indicated in the table below, construction activities would not exceed the SCAQMD regional significance thresholds. Therefore, the impact related to regional construction emissions would be less than significant.

Table 1 Regional Construction Emissions

Source	Pounds Per Day					
	VOC	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$**	**PM_{10}**
Construction Equipment	5	34	25	5	2	2
Worker Vehicles	0.14	0.22	2.45	--	<1	<1
Off-site Truck Trips	0.22	3.46	1.07	--	<1	<1
Fugitive Dust	--	--	--	--	<1	<1
Maximum Localized Total	5	37	28	5	2	2
Regional Significance Threshold	*75*	*100*	*550*	*150*	*55*	*150*
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Terry A. Hayes Associates, 2013.

The proposed project would not have an operational component. As such, operational activities following the completion of construction of the proposed project would be the same as current levels. Therefore, no impact to regional operational emissions would occur.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less Than Significant. The proposed project would not result in a cumulatively considerable net increase of a criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. The proposed project and the whole of the Los Angeles metropolitan area are located within the South Coast Air Basin, which is characterized by relatively poor air quality. The South Coast Air Basin is currently classified as a federal and state non-attainment area for O_3, PM_{10}, and $PM_{2.5}$ and a federal attainment/maintenance area for CO. It is classified as a state attainment area for CO, and it currently meets the federal and state standards for nitrogen dioxide, sulfur oxide (SO_x), and lead.

Because the South Coast Air Basin is designated as a State and/or federal nonattainment air basin for O_3, PM_{10} and $PM_{2.5}$, and nitrogen dioxide (NO_2), there is an ongoing regional cumulative impact associated with these pollutants. An individual project can emit these pollutants without significantly contributing to this cumulative impact depending on the magnitude of emissions. The SCAQMD has indicated that there are instances when the project-level thresholds may be used as an indicator defining if project emissions contribute to the regional cumulative impact.[15] The use of project-specific thresholds to determine a cumulative impact is acceptable for a project that is not constructed, by necessity, with another project. The proposed project is not dependent on another project and the project-level thresholds have been deemed appropriate for assessing the cumulative impact.

As discussed in Section III(b) above, ~~construction activities associated with implementation of~~ the proposed project would not ~~result in increases in~~ generate

[15] MacMillan, Ian. Program Supervisor, CEQA Intergovernmental Review, SCAQMD. Telephone conversation with Sam Silverman, Senior Environmental Scientist, of Terry A. Hayes Associates. May 7, 2013.

air pollutant emissions that exceed the project-level thresholds~~, which, individually or cumulatively, would exceed established thresholds. The impact would be less than significant.~~ Therefore, the proposed project would not significantly contribute to cumulative regional emissions, and no impact to a cumulatively considerable net increase in emissions during operations would occur.

~~The proposed project would not have an operational component. As such, operational activities following completion of construction of the proposed project would be the same as current levels. Therefore, no impact to a cumulatively considerable net increase in emissions during operations would occur.~~

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. CARB has identified the following groups who are most likely to be affected by 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, sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

Sensitive receptors located adjacent to the proposed pipeline alignment include the following land uses:

North Hollywood Park
- Single- and multi-family residences
- North Hollywood High School
- Amelia Earhart High School
- Oakwood Secondary School
- North Hollywood Library
- Toluca Lake Elementary School
- St. Paul's First Lutheran School
- East Valley High School
- North Hollywood Park
- Valley Village Park

Valley Plaza Park
- Single- and multi-family residences
- James Madison Middle School
- Valley Plaza Park
- Valley Plaza Library
- Roy Romer Middle School

Van Nuys Sherman Oaks Park
- Single- and multi-family residences
- Sherman Oaks Hospital
- Sherman Oaks Center for Enriched Studies
- Van Nuys Sherman Oaks Park
- Los Angeles Valley College

- The Church of Jesus Christ of Latter-Day Saints
- Chandler Elementary School
- Van Nuys Middle School

Reseda Park
- Single- and multi-family residences
- Birmingham High School
- High Tech High School
- Valley Alternative School
- Mulholland Middle School
- Reseda Park
- Newcastle Elementary School

VA Hospital
- Single- and multi-family residences
- Monroe High School
- Centers of Learning
- VA Hospital
- Albert Einstein High School

Pierce College
- Single- and multi-family residences
- Pierce College
- Vanalden Elementary School

The above sensitive receptors represent the nearest residential land uses with the potential to be impacted by the proposed project. Additional sensitive receptors are located further from the project site in the surrounding community and would be less impacted by air emissions than the above sensitive receptors.

Construction activity would generate on-site pollutant emissions associated with equipment exhaust and fugitive dust. The SCAQMD has developed localized significance thresholds to determine the potential for on-site project activity to expose adjacent sensitive receptors to significant pollutant concentrations. These thresholds were designed to identify potential health-related impacts from construction activity. Table 2 shows the estimated localized emissions associated with construction. As shown, maximum daily volatile organic compounds (VOC), NO_x, CO, SO_x, $PM_{2.5}$, and PM_{10} emissions would not exceed the SCAQMD localized threshold of significance. Therefore, the impact to sensitive receptors would be less than significant.

Table 2 Localized Construction Emissions

Source	Pounds Per Day					
	VOC	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$**	**PM_{10}**
Construction Equipment	5	34	25	5	2	2
Fugitive Dust	--	--	--	--	<1	<
Maximum Localized Total	5	34	25	5	2	2
Localized Significance Threshold	*n/a*	*103*	*426*	*n/a*	*3*	*4*
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Terry A. Hayes Associates, 2013.

Installation of the recycled water pipeline would require restrictions to on-street parking and could require the closure of up to two roadway lanes depending on the location of construction. Consequently, traffic flow would be affected whenever a mixed-flow traffic lane is closed for construction activities. Reduced speeds through construction zones would result in additional localized concentrations. Traffic congestion would lessen as some automobile travelers would reroute to parallel streets when lane closures would occur. The proposed project is not anticipated to substantially increase traffic congestion, however, since road closures would be limited in duration. In addition, construction activities would be limited to 90 linear feet of the public roads per day to minimize long-term traffic disruption. Therefore, the impact related to localized traffic concentrations would be less than significant.

The greatest potential for toxic air contaminant (TAC) emissions during construction would be diesel particulate emissions associated with heavy-duty equipment operations. The SCAQMD has not published guidance for assessing the risk from construction projects. The California Air Pollution Control Officers Association has published *Health Risk Assessments for Proposed Land Use Projects*. Page 2 of the document states that, "this guidance does not include how risk assessments for construction projects should be addressed in CEQA. As this is intended to be a 'living document', the risks near construction projects are expected to be included at a later time as the toxic emissions from construction activities are better quantified. State risk assessment policy is likely to change to reflect current science, and therefore this document will need modification as this occurs."[16] Nonetheless, as regional and localized particulate matter emissions resulting from construction activities would not result in significant impacts, it is similarly anticipated that diesel particulate emissions would not result in a significant health impact. Therefore, construction of the proposed project would result in a less than significant impact to sensitive receptors related to construction TAC emissions.

The proposed project would not have an operational component. As such, operational activities would be the same as the current levels. Therefore, no air quality impact to sensitive receptors would occur during operations.

[16] California Air Pollution Control Officers Association, *Health Risk Assessments for Proposed Land Use Projects,* 2009.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Potential sources that may emit odors during construction activities include equipment exhaust. Odors from these sources would be localized and generally confined to the immediate area surrounding the segment under construction. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Therefore, the odor impact during construction would be less than significant.

The proposed project would require no post-construction operational activities. Therefore, no odor impact would occur during operations.

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~~ Wildlife or U.S. Fish and Wildlife Service?

No Impact. Sensitive plants include those listed as threatened or endangered, proposed for listing, or candidate for listing by the U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and ~~Game~~ Wildlife (CDF~~G~~W) or those listed by the California Native Plant Society (CNPS). Sensitive wildlife species are those species listed as threatened or endangered, proposed for listing, or candidate for listing by USFWS and/or CDF~~G~~W, or considered special status by CDF~~G~~W. Sensitive habitats are those that are regulated by USFWS, U.S. Army Corps of Engineers, and/or those considered sensitive by the CDF~~G~~W.

The California Natural Diversity Database (CNDDB) RareFind 3 program and the CNPS *Inventory of Rare and Endangered Plants* were reviewed for information on known occurrences of sensitive species and communities within a 10-mile radius of the project site; it included the San Fernando, Oat Mountain, Simi Valley East, San Fernando, Mint Canyon, Agua Dulce, Newhall, Canoga Park, Calabasas, Sunland, Burbank, and Van Nuys U.S. Geological Survey 7.5-minute topographic quadrangle maps.[17,18] Based on the above literature review, 16 sensitive wildlife species, 28 sensitive plant species, and 9 sensitive plant communities were identified as having the potential to occur in the vicinity (i.e., within 10 miles) of the proposed pipeline alignment. In addition to the literature review, a field reconnaissance survey was conducted on May 9, 2012.

Because the proposed project would involve trenching, and in some cases microtunneling, entirely within public road rights-of-way in a fully urbanized portion of the San Fernando Valley, there would be no direct impacts to sensitive plants,

[17] California Department of Fish and Game. 2012 (April). RareFind: California Department of Fish and Game Natural Diversity Database (Version 3.1.0). California Department of Fish and Game, Biogeographic Data Branch.

[18] California Native Plant Society. 2012. Inventory of Rare and Endangered Plants (online edition, v7-11). California Native Plant Society. Sacramento, CA. Website: http://www.cnps.org/inventory, accessed May 2012.

wildlife, or vegetation communities. No vegetation removal would be required to install the proposed recycled water pipeline. Further, all construction staging would occur within the roadway or nearby developed areas, such that no vegetation removal would be required and there would be no indirect impacts to native vegetation, sensitive plants, sensitive wildlife species, or sensitive vegetation communities.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. As discussed in Section IV(a) above, construction activities would occur entirely within public roadway rights-of-way in a fully urbanized portion of the San Fernando Valley. No vegetation removal would occur, and there would be no impact to a riparian habitat or other sensitive natural community.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. As discussed in Section IV(a) above, construction activities would occur entirely within public roadway rights-of-way in a fully urbanized portion of the San Fernando Valley. There would be no impact to federally protected wetlands.

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

No Impact. In an urban context, a wildlife migration corridor can be defined as a linear landscape feature of sufficient width and buffer to allow animal movement between two comparatively undisturbed habitat fragments, or between a habitat fragment and some vital resources, thereby encouraging population growth and diversity. A viable wildlife migration corridor consists of more than a path between fragmented habitats. A wildlife migration corridor must also include adequate vegetative cover and food sources for transient species, as well as resident populations of less mobile animals to survive. They must be extensive enough to allow for large animals to pass relatively undetected, be free of obstacles, and lack any other distraction that may hinder wildlife passage such as lights or noise.

As discussed in Section IV(a) above, construction activities would occur entirely within public roadway rights-of-way in a fully urbanized portion of the San Fernando Valley. Therefore, the proposed alignment does not constitute a wildlife corridor, nor does it abut one. No vegetation removal would occur and no water bodies would be affected. Therefore, there would be no impact to suitable nesting or migratory habitat. No impact would occur.

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

No Impact. The proposed project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Construction of the proposed project would not require removal of vegetation, including trees under the protection of the City of Los Angeles Tree Protection Ordinance.[19] No impact to protected trees 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 proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The proposed alignment is not located within any Significant Ecological Areas or designated Critical Habitat. No regional habitat conservation plans or Natural Community Conservation Plans have been adopted within the project area.[20] No impact would occur.

V. CULTURAL RESOURCES

Potential impacts to cultural resources associated with the proposed project were determined from the results presented in the Cultural Resources Assessment and Supplemental Memorandum (see Appendix C).

Would the project:

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

Less Than Significant Impact. The project area and a study area encompassing a 0.25-mile radius around the project area were examined for cultural resource investigations and previously recorded cultural resource sites. The archival research included a review of previously recorded archaeological site records and reports, historic site and property inventories, and historic maps including Sanborn Fire Insurance Maps.

The records search indicated that a total of 13 cultural resources have been previously recorded within a 0.25-mile radius of the project site; however, none of these resources occur within the proposed project alignment. Additionally, two California Historic Landmarks were identified as points of interest and are located within the project vicinity, but do not overlap with the proposed project alignment. Further, seven cultural monuments have been identified within a 0.25-mile radius of the project site, none of which overlap with the proposed project alignment (see Appendix C). No historical resources are located within the proposed project alignment. Therefore, the proposed project would not cause a substantial adverse

[19] City of Los Angeles Municipal Code, Section 17.02.
[20] County of Los Angeles, *Draft General Plan, Conservation & Open Space, Proposed Significant Ecological Areas Map*, 2007.

change in the significance of a historical resource, and impacts would be less than significant.

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

Less Than Significant Impact with Mitigation Incorporated. The location of the proposed project alignment is in the vicinity of the Mission of San Fernando. In addition, the prehistoric villages of *Tohuunga* and *Muuhonga* have long been rumored or documented as being located near portions of the project area. The project site's location relative to the Los Angeles River would have provided access to important resources during all periods of prehistory. Subsequent land use has included modern and historic development. The proposed project segments themselves lie within a roadway alignment dating back to at least the 1920s. It is possible that archaeological resources could be buried beneath the ground surface of the project alignment, especially in areas where development has included only minimal ground disturbance where the roadway may have effectively capped buried prehistoric or historic resources.

The field survey of the project area did not result in the identification of any previously unknown archaeological resources. However, the proposed project alignment would intersect with two resources which are historic in age, the Tujunga Wash Channel and the former Southern Pacific Railroad right-of-way. As the proposed project would not result in direct impacts to these resources, they were not evaluated as part of the project; however, work in the vicinity of these resources may encounter previously unknown buried resources.

The proposed Reseda Park, Valley Plaza Park, and the North Hollywood Park segments of the proposed project each cross the Tujunga Wash Channel at one location (for a total of three crossings). The channel is associated with the construction of the Hansen Dam in 1940, which was crucial in alleviating the effects of floodwaters of the Tujunga Wash in the neighboring residential areas. Prior to the construction of the Tujunga Wash Channel, its floodplain was not centralized and, therefore, encompassed a greater area. The three proposed segments would also cross the former Tujunga Wash floodplain. As such, it is possible that, during ground-disturbing construction activities, cultural resources may be encountered as they may be buried beneath alluvium or re-deposited in unknown locations as a result of deposition or erosion in the wash.

The Southern Pacific Railroad right-of-way intersects with the proposed project alignment in four ~~three~~ locations, three ~~two~~ of which are currently in portions of the right-of-way operating as ~~Metro busways~~ the Metro Orange Line Busway and have likely undergone extensive disturbance. However, the VA Hospital segment intersects with an intact portion of the right-of-way in the location of the Amtrak/Metrolink tracks located on Woodley Avenue, approximately 1,000 feet south of Roscoe Boulevard. Trenchless construction, including microtunneling, would be required for this rail crossing, as well as all busway crossings. The former Southern Pacific Railroad right-of-way has been surveyed for cultural resources, and although none have been previously recorded in this specific location, the right-of-way has a high potential for preserved historic and prehistoric archaeological sites.

Furthermore, historic development began in the project area nearly 100 years ago when the common method of rubbish disposal was burial. Historic period archaeological materials are items over 50 years in age, including but not limited to, glass bottles, ceramics, buried infrastructure, military and construction debris, metal, etc. During prehistoric times, the project area may have been occupied by the *Gabrielino/Fernandeño* Indians. As part of this investigation, a Native American contact program was conducted to inform interested parties of the proposed project and to address any concerns regarding Traditional Cultural Properties or other resources that might be affected by the proposed project. The program involved contacting Native American representatives provided by the Native American Heritage Commission to solicit comments and concerns regarding the proposed project. A letter was prepared and mailed to the Native American Heritage Commission on May 11, 2012. The letter requested that a Sacred Lands File search 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 area. The Native American Heritage Commission responded to the request in a letter dated May 15, 2012. The letter indicated that "Native American cultural resources were identified in the project area of potential affect…also, please note; the Native American Heritage Commission Sacred Lands Inventory is not exhaustive and does not preclude the discovery of cultural resources during any groundbreaking activity." The letter also included an attached list of Native American contacts. Letters were mailed on May 21, 2012, to each group or individual provided on the contact list. Maps depicting the project area and response forms were attached to each letter. Follow-up phone calls were made to each party on June 21, 2012. A total of two responses were received; these responses are included in Appendix C, Cultural Resources Assessment.

It is possible that buried or otherwise obscured archaeological resources may be present within the project area. As such, construction activities, including trenching, could affect previously undiscovered archaeological resources, including Native American cultural resources. The three segments with the potential to encounter archaeological resources during construction activities are the North Hollywood Park, Van Nuys Sherman Oaks Park, and VA Hospital segments. To address potential impacts of the proposed project on unknown archaeological resources, the implementation of mitigation measure CR-1 would be required to ensure that impacts would be less than significant.

Mitigation Measure

CR-1 An archaeological monitoring program shall be implemented within segments identified as having cultural resources sensitivity.

a. Archaeological monitoring of ground-disturbing activities shall include:

- Archaeological monitoring for the North Hollywood Park segment due to the presence of the Tujunga Wash, historic development, and evidence of prehistoric settlement 19-100281;
- Archaeological monitoring for the Van Nuys Sherman Oaks Park segment due to the proximity of the San Fernando Mission, Los Angeles River, and Santa Monica Mountains; and

- Archaeological monitoring for the VA Hospital segment pipe jacking entry and exit pits in the location of the former Southern Pacific Railroad crossing.

b. The on-site archaeological monitor shall work under the direction of a qualified archaeological Principal Investigator. 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 archaeological monitor shall have the authority to redirect construction equipment in the event potential archaeological resources are encountered.

c. In the event archaeological resources are encountered, 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 and Section 106 of the National Historic Preservation Act.

d. Ground-disturbing activities include, but are not limited to, geotechnical boring, boring, trenching, grading, excavating, and the demolition of building foundations. The archaeological monitor shall observe ground-disturbing activities in the segments requiring monitoring, to depth.

e. Once ground-disturbing activities begin, if the level of disturbance of 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 LADWP may recommend that archaeological monitoring be continued intermittently, as appropriate, or discontinued within the segment or portion thereof.

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

g. Upon completion of all ground-disturbing activities, 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 shall also document the associated cultural materials and the methods of treatment as determined appropriate by the archaeologist. This report shall be placed on file at the South Central Coastal Information Center upon its completion.

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

Less Than Significant Impact with Mitigation Incorporated. A paleontological records search was conducted for the proposed project by Dr. Samuel McLeod, Vertebrate Paleontology Division of the Natural History Museum of Los Angeles County on June 26, 2012 (see Appendix C, Cultural Resources Assessment). The records search indicated that there is no known vertebrate fossil locality that lies within the proposed project alignment; however, nearby fossil localities are known to exist from the same sedimentary deposits that occur along the proposed project alignment.

The North Hollywood Park segment surface deposits consist of younger Quaternary Alluvium, derived primarily as fluvial deposits from the Central Branch of the Tujunga Wash and probably from the Los Angeles River that flows to the south. Vertebrate fossil localities are known to occur nearby in these types of deposits (see Appendix C).

The surface deposits within the vicinity of the Valley Plaza Park segment consist entirely of younger Quaternary Alluvium, derived primarily as fluvial deposits from the Tujunga Wash that crosses the western portion, or the Central Branch of the Tujunga Wash that crosses the eastern portion of this segment. No vertebrate fossil localities are known to occur within or adjacent to this segment (see Appendix C).

Surface deposits in the vicinity of the Van Nuys Sherman Oaks Park segment consist of younger Quaternary Alluvium, derived primarily as fluvial deposits from the Los Angeles River located adjacent to the southernmost portion of this segment, or from the Tujunga Wash located adjacent to the eastern portion of the segment. Two vertebrate fossil localities are known to occur west of the western portion of this segment (see Appendix C).

The VA Hospital segment surface deposits consist entirely of younger Quaternary Alluvium, derived as a mixture of alluvial fan deposits from the Santa Susana Mountains to the northwest, as well as fluvial deposits from Bull Creek, which flows to the west, and the Pacoima Wash, which flows to the east. Four vertebrate fossil localities are known to occur north of this segment (see Appendix C).

Surface deposits within the vicinity of the Reseda Park and Pierce College segments consist of soil and younger Quaternary Alluvium, derived predominantly as fluvial deposits from the Los Angeles River that flows adjacent to and bisects these segments. These deposits found throughout the San Fernando Valley typically do not contain significant vertebrate fossils, at least in the uppermost layers, but older Quaternary deposits found at depth may contain significant fossil vertebrate remains. Two vertebrate fossil localities are known to occur south-southwest of these segments, and one locality is known to occur north of these segments (see Appendix C).

Near the western terminus of the Pierce College segment, there are some exposures of the marine late Miocene Upper Modelo Formation (also known as the Monterey Formation), which may occur at depth in this segment. Four vertebrate fossil localities from the Upper Modelo Formation are known to occur south-

southwest of the western terminus of the Pierce College segment (see Appendix C).

Excavations that extend into surficial younger Quaternary Alluvium within the proposed project segments are unlikely to produce significant fossil vertebrate remains. However, deeper excavations that extend down into the older Quaternary deposits or the marine late Miocene Upper Modelo Formation, may encounter significant vertebrate fossils. As such, the implementation of mitigation measure CR-2 would be required for excavations extending below five feet. With implementation of the mitigation measure, impacts related to paleontological resources would be less than significant.

Mitigation Measure

CR-2 Any excavations below 5 feet, should they be necessary, shall be monitored to quickly and professionally recover any discovered fossil remains. In the event that paleontological resources are encountered, a qualified paleontologist shall be retained in order to recover and record any fossil remains discovered. Any discovered fossils shall be prepared, identified, and catalogued before curation in an accredited repository such as designated in consultation with LADWP.

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

Less Than Significant Impact. No formal cemeteries or other places of human internment are known to exist within the project site. No evidence of human remains was observed on the surface during site surveys within the proposed project alignment (see Appendix C). As discussed in Section V(b) above, a Sacred Lands File search and Native American contact program were conducted for the proposed project. 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, they will require evaluation by the county coroner as to the nature of the remains. If the remains are determined to be of Native American origin, the Native American Heritage Commission shall be contacted and a Most Likely Descendent identified. Compliance with existing regulations would ensure that impacts related to the discovery of human remains would be less than significant.

VI. GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

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

Less Than Significant Impact. The proposed project would not expose people or structures to new adverse effects associated with rupture of a known earthquake fault. There are numerous known earthquake faults in the vicinity of the project site and a portion of the project site is located within a City-designated fault rupture zone.[21] Therefore, the proposed pipelines would be designed and constructed in accordance with the latest version of the City of Los Angeles Building Code and other applicable federal, state, and local codes relative to seismic criteria. Compliance with existing regulations would ensure a less than significant impact related to fault rupture.

ii) Strong seismic ground shaking?

Less Than Significant Impact. The project site is located within the seismically active southern California region, and like all locations within the area, is subject to strong seismic ground shaking. However, as discussed in Section VI(a)(i) above, the proposed pipeline would be designed and constructed in accordance with the latest version of the City of Los Angeles Building Code and other applicable federal, state, and local codes relative to seismic criteria. Additionally, the proposed project involves extension of the recycled water pipeline network within portions of the San Fernando Valley and does not include any habitable structures. Therefore, the impact from strong seismic ground shaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Portions of the project site are located within a City-designated liquefiable area.[22] However, the proposed project would be designed and constructed in compliance with the latest version of the City of Los Angeles Building Code and other applicable federal, state, and local codes relative to liquefaction criteria. Compliance with existing regulations would ensure a less than significant impact related to seismic-related ground failure, including liquefaction.

[21] City of Los Angeles Department of City Planning, Environmental and Public Facilities Maps, *Alquist-Priolo Special Study Zones & Fault Rupture Study Areas* Map, September 1996.

[22] City of Los Angeles Department of City Planning, Environmental and Public Facilities Maps, *Areas Susceptible to Liquefaction* Map, September 1996.

iv) Landslides?

No Impact. The project site is not located within a City-designated hillside area.[23] Further, construction and excavation activities within public roadway rights-of-way would not be expected to increase the risk of landslides in the hillside areas. No impact related to landslides would occur.

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

Less Than Significant Impact. Construction activities would expose soils for a limited time, allowing for possible erosion. However, all excavation would comply with all applicable provisions of Chapter IX, Division 70 of the Los Angeles Municipal Code, which addresses grading, excavation, and fill. During construction, transport of sediments from the project site by storm water runoff and winds would be prevented through the use of appropriate BMPs. As discussed in Section 1.7 above, Rule 403 dust control measures would be implemented as required by the SCAQMD. Additionally, LADWP would develop and implement an erosion control plan and a SWPPP for construction activities, in compliance with the latest National Pollutant Discharge Elimination System requirements for storm water discharges. Implementation of the required construction BMPs would ensure that soil erosion impacts would be less than significant.

No large areas of exposed soils subject to erosion would be created or affected by operation of the proposed project. Therefore, there would be no long-term impact related to erosion and loss of topsoil.

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

Less Than Significant Impact. One of the major types of liquefaction induced ground failure is lateral spreading of mildly sloping ground. Lateral spreading involves primarily side-to-side movement of earth materials due to ground shaking, and is evidenced by near-vertical cracks to predominantly horizontal movement of the soil mass involved. As discussed in Sections VI(a)(iii) and VI(a)(iv) above, the project site is located in an area identified as being at risk for liquefaction, but is not located within a designated hillside area. However, all construction work would adhere to the latest version of the City of Los Angeles Building Code, and other applicable federal, state, and local codes relative to liquefaction criteria.

Subsidence is the lowering of surface elevation due to changes occurring underground, such as the extraction of large amounts of groundwater, oil, or gas. When groundwater is extracted from aquifers at a rate that exceeds the rate of replenishment, overdraft occurs, which can lead to subsidence. However, the proposed project does not anticipate the extraction of any groundwater, oil, or gas from the project site. Therefore, subsidence would not occur.

Collapsible soils consist of loose dry materials that collapse and compact under the addition of water or excessive loading. Collapsible soils are prevalent throughout the southwestern United States, specifically in areas of young alluvial fans. Soil

[23] City of Los Angeles Department of City Planning, Environmental and Public Facilities Maps, *Landslide Inventory & Hillside Areas* Map, September 1996.

collapse occurs when the land surface is saturated at depths greater than those reached by typical rain events. However, the proposed project would be constructed in accordance with the latest version of the City of Los Angeles Building Code and other applicable federal, state, and local codes relative to seismic criteria. These building codes are designed to ensure safe construction. Compliance with existing regulations would ensure a less than significant impact.

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

Less Than Significant Impact. Expansive soils are clay-based soils that tend to expand (increase in volume) as they absorb water and shrink (lessen in volume) as water is drawn away. If soils consist of expansive clays, foundation movement and/or damage can occur if wetting and drying of the clay does not occur uniformly across the entire area. The onsite geologic materials in the project area consist of alluvium.[24] Due to the mix of earth materials underlying the project site, these soils are not expected to be high clay-bearing, and expansion potential is considered low. Additionally, the proposed project would be constructed in accordance with the latest version of the City of Los Angeles Building Code and other applicable federal, state, and local codes relative to seismic criteria. Furthermore, the proposed project does not include any habitable structures. Therefore, the proposed project would not create a substantial risk to life or property resulting from expansive soils, and the impact would be less than significant.

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

No Impact. The proposed project involves extension of the recycled water pipeline network within the San Fernando Valley. No septic tanks or alternative wastewater disposal systems are proposed. Therefore, no impact associated with the use of such systems would occur.

VII. GREENHOUSE GAS EMISSIONS

Would the project:

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

Less Than Significant Impact. Greenhouse gas (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 degrees Fahrenheit. Of all the GHGs, CO_2 is the most abundant gas that contributes to climate change through fossil fuel combustion. The other GHGs are less abundant, but have higher global warming

[24] California Department of Conservation, *Seismic Hazard Zone Report for the Los Angeles 7.5-Minute Quadrangle, Los Angeles County, California*, 1998.

potential than CO_2. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e.

GHG emissions were estimated for equipment exhaust, truck trips, and worker commute trips. Installation of the six pipeline segments is scheduled to be completed in five years (2017 to 2022). The SCAQMD has developed guidance for the determination of the significance of GHG construction emissions, and recommends emissions for construction to be amortized over 30 years. As shown in Table 3, maximum GHG emissions would be 131 tons per year (see Appendix B). Estimated GHG emissions would be less than the 10,000 metric tons of CO_2e per year quantitative significance threshold. The impact would be less than significant.

Table 3 Annual Greenhouse Gas Emissions

Source	Carbon Dioxide Equivalent (Metric Tons per Year)
Amortized Construction Emissions	131
Significance Threshold	*10,000*
Exceed Threshold?	No

Source: Terry A. Hayes Associates, 2013.

The proposed project would have no operational component. As such, operational activities would be the same as the current levels. Therefore, no impact to GHG emissions would occur during operation of the proposed project.

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

No Impact. As shown in Table 3 above, the proposed project would not generate substantial sources of construction and operational emissions. The proposed project would not conflict with any state or local climate change policy or regulation adopted for the purpose of reducing emissions of GHGs. No impact would occur.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

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

Less Than Significant Impact. Implementation 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 be temporary in nature and would involve the limited transport, storage, use, and disposal of hazardous materials. Such hazardous materials could include on-site fueling/servicing of construction equipment, and the transport of fuels, lubricating fluids, and solvents. These types of materials are not acutely hazardous, and all storage, handling, and disposal of these materials are regulated by the California Department of Toxic Substances Control, the U.S. Environmental Protection Agency, the Occupational Safety & Health Administration, the Los Angeles County Fire Department, and the Los Angeles County Health Department. The transport,

use, and disposal of construction-related hazardous materials would occur in conformance with applicable federal, state, and local regulations governing such activities. Therefore, the short-term construction impact would be less than significant.

Long-term operation of the proposed project would not involve the transport, storage, use, or disposal of hazardous materials. Additionally, the proposed project would not generate industrial wastes or toxic substances during operation. Therefore, project operation would not pose a significant hazard to the public or the environment. No operational impact related to the use or transport of hazardous materials would occur.

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?

No Impact. The proposed project construction would not 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. As discussed in Section VII(a) above, construction activities may involve limited transport, storage, use, or disposal of some hazardous materials, such as on-site fueling/servicing of construction equipment, and the transport of fuels, lubricating fluids, and solvents. These types of materials are not acutely hazardous, and compliance with existing federal, state, and local regulations would ensure that construction impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials would be less than significant. No impact would occur.

Long-term operation of the proposed project would not involve the transport, storage, use, or disposal of hazardous materials. Additionally, the proposed project would not generate industrial wastes or toxic substances during operation. Therefore, project operation would not pose a significant hazard to the public or the environment. No operational impact related to reasonably foreseeable upset or accident conditions would occur.

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 following schools are located within 0.25-mile of the proposed pipeline segments: North Hollywood High School, Amelia Earhart High School, Oakwood Secondary School, North Hollywood Library, Toluca Lake Elementary School, St. Paul's First Lutheran School, East Valley High School, James Madison Middle School, Roy Romer Middle School, Chandler Elementary School, Van Nuys Middle School, Birmingham High School, High Tech High School, Valley Alternative School, Mulholland Middle School, Newcastle Elementary School, Albert Einstein High School, and Vanalden Elementary School. As discussed in Section VIII(a) above, construction activities would involve limited transport, storage, use, and disposal of hazardous materials. However, as discussed, these materials are not acutely hazardous and the transport, use, and disposal of construction-related hazardous materials would occur in conformance with all applicable federal, state, and local regulations governing such activities.

Therefore, impacts related to hazardous materials within 0.25-mile of an existing or proposed school would be less than significant.

Long-term operation of the proposed project would not involve the transport, storage, use, or disposal of hazardous materials. Therefore, there would be no operational impact related to hazardous materials within 0.25-mile of an existing or proposed school.

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

Less Than Significant Impact. Some hazardous materials sites have been identified on or near the proposed segments. The Department of Toxic Substances Control's EnviroStor database lists sites of identified underground storage tanks on and near the proposed segments; the State Water Resources Control Board's GeoTracker site indicates open sites are located along the proposed segments, and numerous active sites are listed on the Cortese list on or near the proposed segments.[25,26,27] The project area is not listed on the U.S. Environmental Protection Agency's National Priorities List.[28] These lists are compiled pursuant to Section 65962.5 of the Government Code. As discussed in Section 1.6 above, construction activities along the proposed segments would not require deep excavations. As such, it is not anticipated that any underground storage tanks would be encountered or disturbed during construction activities. Therefore, implementation of the proposed project would not create a significant hazard to the public or the environment. The impact would be less than significant.

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

No Impact. The closest airport to the project site is the Van Nuys Airport, located less than one mile west of the VA Hospital segment.[29] However, the proposed project would extend the recycled water pipeline network within the San Fernando Valley and would be located entirely within public roadway rights-of-way. The proposed project would not result in a safety hazard related to an airport for people residing or working in the project area. No impact would occur.

[25] California Department of Toxic Substances Control, EnviroStor *Database*. Website: http://www.envirostor.dtsc.ca.gov/public/, accessed May 30, 2012.

[26] California State Water Resources Control Board, *GeoTracker Database*, Search by Map Location. Website: http://geotracker.waterboards.ca.gov/, accessed May 30, 2012.

[27] California Department of Toxic Substances Control, *DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List)*. Website: http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm, accessed May 30, 2012.

[28] United States Environmental Protection Agency, *National Priorities List*, Search by Location. Website: http://www.epa.gov/superfund/sites/query/queryhtm/nplmapsg.htm, accessed May 30, 2012.

[29] Airnav.com, Airports search. Website: http://www.airnav.com/airports/, accessed May 30, 2012.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project site is not located within the vicinity of a private airstrip.[30] However, several heliports are located on rooftops of buildings adjacent to the proposed segments. Based on the approach and departure patterns of the helicopters, and the location, height, and nature of construction activities within public roadway rights-of-way, the proposed project would not result in a safety hazard related to helicopter operations for people residing or working in the project area. No impact would occur.

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

Less Than Significant Impact. The proposed segments intersect with, are located adjacent to, or run along several disaster routes within the City, including I-405, US 101, SR 170, SR 134 and Sherman Way, Vineland Avenue, and Van Nuys Boulevard.[31] As described in Section 1.6 above, construction of the proposed project would involve temporary lane closures, which could have an effect on designated disaster routes. However, full roadway closures are not anticipated and any open trenches would be covered with steel plates during non-work hours. Additionally, a Traffic Management Plan would be prepared in coordination with LADOT for the proposed project and would detail construction traffic control and detour methods. Implementation of the Traffic Management Plan during construction would ensure that impacts related to emergency response plans would be less than significant. Following installation of the proposed pipeline segments, all roadways would be returned to their existing conditions. Therefore, no long-term impacts would result from operation of the proposed project.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The project site is not located within a City-designated Wildfire Hazard Area or Fire Buffer Zone.[32] Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. No impact would occur.

IX. HYDROLOGY AND WATER QUALITY

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. The proposed project would not violate a water quality standard or waste discharge requirement. Construction activities, such as excavation, would result in the disturbance of soil and temporarily increase the potential for soil erosion. Additionally, construction activities and equipment would

[30] Ibid.

[31] Los Angeles County Department of Public Works, Disaster Route Maps by City, *City of Los Angeles – Central Area Map*. Website: http://dpw.lacounty.gov/dsg/disasterRoutes/city.cfm, accessed May 30, 2012.

[32] City of Los Angeles Department of City Planning, Environmental and Public Facilities Maps, *Selected Wildfire Hazard Areas* Map, September 1996.

require the on-site use and storage of fuels, lubricants, and other hydrocarbon fluids. Storm events occurring during the construction phase would have the potential to carry disturbed sediments and spilled substances from construction activities off-site to nearby receiving waters.

However, prior to the start of construction, LADWP would be required to obtain a General Construction Activity Storm Water Permit, issued by the State Water Resources Control Board. One of the conditions of the General Permit is the development and the implementation of a SWPPP, which would identify structural and nonstructural Best Management Practices to be implemented during the construction phase. As discussed in Section 1.7, LADWP would also develop and implement an erosion control plan for the proposed project. BMPs developed for the SWPPP and the erosion control plan may include, but not be limited to, 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, as well as the use of temporary desilting basins, silt fences, gravel bag barriers, temporary soil stabilization, temporary drainage inlet protection, and diversion dikes and interceptor swales. With implementation of BMPs, the proposed project would not violate any water quality standards or waste discharge requirements. Therefore, impacts on water quality from construction activities would be less than significant.

Upon completion of the proposed project, storm flows would be directed to the existing storm drain system, similar to existing conditions. There would be no exposed soil remaining at completion of construction activities; therefore, there would be no potential for soil erosion or contamination. In addition, LADWP designs and constructs recycled water pipelines in accordance with California Department of Health Services regulations and guidelines to provide adequate vertical and horizontal separation from potable water pipelines and potable supply wells.[33] This would minimize the potential for possible travel of recycled water from a pipeline leak or rupture to reach or affect potable supply wells or the water distribution system. All recycled water would be treated to meet or exceed Title 22 of California Code of Regulations standards before entering the recycled water distribution system. If a break were to occur along a recycled water pipeline, impacts related to water quality standard violations at production wells are not anticipated because the separation distances between the recycled water distribution pipelines and production wells would comply with Title 22 requirements. Therefore, operation of the proposed project would not violate any water quality standards or water discharge requirements.

[33] City of Los Angeles, Department of Public Works, Bureau of Sanitation and Department of Water and Power. 2005. *Integrated Resources Plan Draft Environmental Impact Report*. Website: http://www.lacity.irp.org/drafteir.htm, accessed June 18, 2012.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant Impact. There are two groundwater wells located within the proposed pipeline alignment. These groundwater wells are maintained by the County of Los Angeles Department of Public Works. Well number 3753 B is located on Van Nuys Boulevard between Ostego Street and Hesby Street at Van Nuys Sherman Oaks Park. Well number 3752 D is located on Van Nuys Boulevard just south of Oxnard Street. Additionally, there are several wells located adjacent to or in the vicinity of the proposed pipeline alignment. Groundwater levels along the proposed pipeline alignment range from 15 to 50 feet below ground surface.[34] As discussed in Section 1.6, excavation for trenches within which the pipe would be placed would occur to a depth of approximately 5 feet below ground surface. Microtunneling beneath areas where the proposed project crosses the Metro Orange Line Busway would occur at a similar depth. Therefore, it is not anticipated that groundwater would be encountered during construction, as deep excavations would not be necessary. Additionally, the proposed project does not involve any direct extraction of groundwater. Further, following installation of the proposed pipeline, the roadways would be returned to their existing conditions and there would be no change in the amount of impermeable surfaces. Therefore, the proposed project would neither decrease the amount of storm water entering the groundwater table through an increase in the amount of impermeable surfaces, nor deplete groundwater through extraction. The impact to groundwater supply and recharge would be less than significant

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?

Less Than Significant Impact. The proposed pipeline would be located within existing roadways, which have been previously disturbed. Portions of the proposed pipeline that would cross over existing washes in the project area would also be located within existing roadways that currently cross over these washes. All drainage flows would be routed through existing storm water infrastructure along the proposed pipeline alignment. As discussed, following installation of the proposed pipelines, the roadways would be returned to their existing conditions. As such, storm water flows would generally follow the same course as existing flows. Construction activities would temporarily increase the potential for erosion due to excavation. However, compliance with the SWPPP and the erosion control plan developed for the proposed project would minimize impacts. Therefore, impacts related to erosion resulting from altered drainage patterns would be less than significant.

[34] Los Angeles County Department of Public Works, Ground Water Wells Website. Website: http://gis.dpw.lacounty.gov/wells/viewer.asp, accessed March 15, 2012.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

Less Than Significant Impact. The project site consists entirely of existing roadways. Portions of the proposed pipeline that would cross over existing washes in the project area would also be located within existing roadways that currently cross over these washes. All drainage flows would be routed through existing storm water infrastructure serving the project site and surrounding areas. Additionally, following construction of the proposed project, all roadways would be returned to their original condition. As such, after construction, storm water flows would be similar to the current condition, and the proposed project does not have the potential to substantially increase the rate of surface runoff. As discussed in Section IX(a) above, BMPs would be implemented to control runoff from the project site during construction. Therefore, no flooding is expected to occur on- or off-site as a result of the proposed project. The impact would be less than significant.

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

Less Than Significant Impact. As discussed above, implementation of the proposed project would result in a similar amount of permeable surfaces as under existing conditions. Thus, no substantial increase in the amount of runoff from the project site is anticipated. Construction would require water, as necessary, to control fugitive dust. Fugitive dust emissions at the construction site would be controlled by water trucks equipped with spray nozzles. Construction water needs would generate minimal quantities of discharge water, which would drain into existing storm drains located along the proposed pipeline alignment. BMPs would be identified in the SWPPP developed for the proposed project pursuant to the National Pollutant Discharge Elimination System permit requirements to control runoff from the project sites during construction. Thus, the proposed project would not create or contribute runoff which would exceed drainage system capacity, nor would it provide substantial additional sources of polluted runoff. The impact would be less than significant.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. Other than the sources described for construction activities (i.e., potential soil erosion and fuels for construction equipment), the proposed project does not include other potential sources of contaminants that could potentially degrade water quality. Additionally, as discussed in Section IX(a) above, a SWPPP and an erosion control plan would be developed and implemented for the proposed project construction to prevent the degradation of water quality. Further, LADWP designs and constructs recycled water pipelines in accordance with California Department of Health Services regulations and guidelines to provide adequate vertical and horizontal separation from potable water pipelines and potable water supply wells. All recycled water would be treated to meet or exceed Title 22 standards before entering the recycled water distribution system. Compliance with existing regulations would ensure a less than significant impact related to water quality.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. A 100-year flood is a flood defined as having a 1.0 percent chance of occurring in any given year. Portions of the project site are located within areas designated as Special Flood Areas and Zone X on the Federal Emergency Management Agency flood insurance rate maps. The Special Flood Areas designation indicates areas determined to have a less than 0.1 percent annual chance floodplain. The Zone X designation indicates areas determined to be outside the 0.2 percent annual chance floodplain.[35] Therefore, portions of the project site are known to experience flooding and are anticipated to flood in the future. However, the proposed project involves construction of a recycled water pipeline within public roadways. Following completion of construction, the roadways would be returned to their original condition and the proposed pipeline would be located completely below ground surface with pavement on top. Further, the proposed project does not include a residential component; therefore, it would not place housing within a 100-year flood hazard area. No impact would occur.

h) Place within a 100-year flood area structures to impede or redirect flood flows?

No Impact. As discussed above, portions of the project area are designated as Special Flood Areas, which means that portions of the project site are known to flood. Other portions of the project area are designed Zone X, which indicates areas determined to be outside the 100-year floodplain.[36] However, the proposed project involves construction of a recycled water pipeline within public roadways. Following completion of construction, the roadways would be returned to their original condition and the proposed pipeline would be located completely below ground surface with pavement on top. There would be no aboveground structures such that flood flows would be impeded or redirected. No impact to flooding would occur.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less Than Significant Impact. Portions of the project site would be located within City-designated inundation areas.[37] However, the proposed project involves construction of a recycled water pipeline within public roadways. Following completion of construction, the roadways would be returned to their original condition and the proposed pipeline would be located completely below ground surface with pavement on top. Additionally, no habitable structures are included as part of the proposed project. Therefore, implementation of the proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam. The impact would be less than significant.

[35] Federal Emergency Management Agency, Flood Insurance Rate Maps, Search by Street Address. Website: http://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1, accessed June 18, 2012.

[36] Ibid.

[37] City of Los Angeles Department of City Planning, Environmental and Public Facilities Maps, *Inundation and Tsunami Hazard Areas* Map, September 1, 1996.

j) Inundation by seiche, tsunami, or mudflow?

Less Than Significant Impact. Seiches are oscillations generated in enclosed bodies of water usually as a result of earthquake-related ground shaking. A seiche wave has the potential to overflow the sides of a containing basin to inundate adjacent or downstream areas. As discussed above, portions of the project area would be located within the designated inundation areas of multiple reservoirs located within the San Fernando Valley. However, seiches primarily cause damage to properties that are located in close proximity to the body of water. The distance between the project site and these bodies of water would result in a decreased risk of a seiche resulting in damage to the proposed project. Additionally, no above ground structures would be constructed.

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 Santa Monica Mountains separate the project site from the Pacific Ocean. The project site is not located within a designated Tsunami Hazard Area.[38]

As discussed in Section VI(a)(iv) above, no portion of the project site is located within a City-designated hillside area. The project site would not be subject to a landslide.

Therefore, construction of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow. The impact would be less than significant.

X. LAND USE AND PLANNING

Would the project:

a) Physically divide an established community?

No Impact. The proposed project would not physically divide an established community. The proposed pipeline alignment would be located entirely within existing roadways. Following installation of the proposed pipeline, the roadways would be returned to their existing condition. No streets or sidewalks would be permanently closed as a result of the proposed project, and no separation of uses or disruption of access between land use types would occur. As such, the proposed project would not physically divide an established community, and no impact would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed pipeline alignment would be located entirely within existing roadways. The proposed project would serve existing uses along the alignment and would not conflict with the zoning or land use designations of such uses. Therefore, implementation of the proposed project would not conflict with any

[38] Ibid.

applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The proposed pipeline alignment would be located entirely within an urbanized area within existing public roadways. There are no adopted habitat conservation plans that apply to the project area, nor is the proposed pipeline alignment located in or near any natural community conservation plan areas (refer to Section IV[f] above). Therefore, the proposed project would not conflict with any such plan. No impact would occur.

XI. MINERAL RESOURCES

Would the project:

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

No Impact. The proposed pipeline alignment does not pass through City-designated Mineral Resource Zone Areas, which are areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.[39] However, according to the State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, several wells are known to exist in the vicinity of the proposed pipeline alignment.[40] However, no wells are located within the alignment itself.[41] Should any future mineral resource be discovered on or near the project site, implementation of the proposed project would not preclude the mineral's extraction. Therefore, the proposed project would not 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 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 on any City plans.[42] Further, as discussed in Section XI(a) above, no active oil wells exist on the project site. 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.

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39 City of Los Angeles Department of City Planning, Environmental and Public Facilities Maps, *Areas Containing Significant Mineral Deposits* Map, September 1996.

40 State of California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, DOGGR Online Mapping System. Website: http://maps.conservation.ca.gov/doms/doms-app.html, accessed June 19, 2012.

41 Ibid.

42 City of Los Angeles Department of City Planning, Environmental and Public Facilities Maps, Oil Field & Oil Drilling Areas Map, September 1, 1996.

XII. NOISE

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of applicable standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact with Mitigation Incorporated. A significant impact would occur if the proposed project would expose persons to or generate noise levels in excess of standards established in the ~~local~~ general plan~~,~~ or noise ordinance of the local jurisdiction in which the proposed project is located ~~, or other applicable standards~~. As discussed in Section 1.3 above, the proposed project is located in the San Fernando Valley area of the City of Los Angeles. The City of Los Angeles regulates development and construction in its jurisdiction through standards established in the Los Angeles Municipal Code. The City of Los Angeles regulates noise within the City boundaries through several sections of ~~its municipal code~~ the Los Angeles Municipal Code. These include Section 41.40 of the Los Angeles Municipal Code, which establishes time prohibitions on noise due to construction activity; Section 112.04, which prohibits the use of loud machinery and/or equipment within 500 feet of residences; and Section 112.05, which establishes maximum noise levels for powered equipment and powered hand tools. According to Section 41.40, no construction activity that might create loud noises in or near residential areas or buildings shall be conducted before 7:00 a.m. or after 9:00 p.m. on weekdays, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday or City holidays.

Existing Noise Levels

The proposed project would pass through a variety of land uses sensitive to increased noise levels, which include residences, schools, and passive recreation areas. Sensitive receptors located within 500 feet of the proposed pipeline alignment include:

North Hollywood Park

- Single- and multi-family residences
- North Hollywood High School
- Amelia Earhart High School
- Oakwood Secondary School
- North Hollywood Library
- Toluca Lake Elementary School
- St. Paul's First Lutheran School
- North Hollywood Park
- Valley Village Park

Valley Plaza Park

- Single- and multi-family residences
- James Madison Middle School
- Valley Plaza Park
- Valley Plaza Library
- Bellingham Primary Center

Van Nuys Sherman Oaks Park

- Single- and multi-family residences
- Sherman Oaks Hospital
- Sherman Oaks Center for Enriched Studies
- Van Nuys Sherman Oaks Park
- Los Angeles Valley College
- The Church of Jesus Christ of Latter-Day Saints
- Chandler Elementary School

Reseda Park

- Single- and multi-family residences
- Birmingham High School
- Valley Alternative School
- Mulholland Middle School
- High Tech High School
- Reseda Park

VA Hospital

- Veteran's Administration Hospital
- Single- and multi-family residences
- Monroe High School
- Valley Presbyterian Church
- Centers of Learning
- Motel 6

Pierce College

- Single- and multi-family residences
- Pierce College

The existing noise environment is characterized by vehicular traffic on local roadways and noises typical of a dense urban area (e.g., sirens, horns, helicopters, etc). Noise monitoring locations were selected to be representative of the ambient environment in the project area. Ambient noise monitoring was performed using a SoundPro DL Sound Level Meter between 11:10 a.m. and 4:10 p.m. on June 6, 2012 and on March 7, 2013. As shown in Table 4 below, existing noise levels range from 51.5 to 78.3 A-weighted decibels (dBA) L_{eq} along the proposed alignment.

Table 4 Existing Noise Levels

Noise Monitoring Location	Noise Level (dBA, L_{eq})
Amelia Earhart High School	64.0
North Hollywood Library	64.6
Multi-Family Residences – 11515 Hartsook Street	61.4
James Madison Middle School	63.0
Valley Plaza Library	61.9
Sherman Oaks Hospital	72.0
Los Angeles Valley College	60.2
High Tech Charter High School	71.8
Sherman Oaks Center for Enriched Studies	62.3
Pierce College	51.5
Single-Family Residences – 8300 Gloria Avenue	78.3
VA Hospital	59.3

Source: Terry A. Hayes Associates, 2013.

Construction

The City of Los Angeles Mayor's Directive #2 prohibits construction on major roads during rush hour periods (6:00 a.m. to 9:00 a.m. and 3:30 p.m. to 7:00 p.m.). However, as discussed in Section 1.7, LADWP would request a variance to the Directive. Thus, the proposed project construction activities are generally anticipated to occur on weekdays from 7:00 a.m. to approximately 3:30 p.m., although work may occasionally continue beyond this time or at night in non-residential areas to complete a component of work that cannot be interrupted. Construction work may also occur on Saturday but it would not commence before 8:00 a.m., and it would cease by 6:00 p.m. No construction work would occur on Sundays or City holidays.

According to Section 112.05 of the Los Angeles Municipal Code, powered equipment and hand tools may not produce a maximum noise level exceeding 75 dBA at a distance of 50 feet. However, this noise limitation does not apply where compliance is technically infeasible, including with the use of such equipment as mufflers or other noise reduction devices during the operation of equipment. Table 5 shows the noise level ranges for the types of equipment that would be used during construction of the proposed project. ~~All equipment and tools would comply with the established noise limits.~~ Equipment noise levels would typically be greater than 75 dBA L_{eq} at 50 feet.

Table 5 Construction Equipment Noise Level Ranges

Construction Equipment	Noise Level at 50 feet (dBA, L_{eq})
Backhoe	73-95
Paver	85-88
Concrete Mixers	75-88
Crane (derrick)	86-89
Generators	71-83
Air Compressors	75-87

Source: CEQA*, L.A. CEQA Thresholds Guide Your Response for Preparing CEQA Analyses in Los Angeles*, 2006.

Installation of the proposed pipeline would occur within public roadways and would typically use a cut and cover trenching technique. The proposed project would install approximately 90 linear feet of pipeline per day to minimize long-term disruption within an area. However, noise from construction activities would still affect the areas immediately adjacent to each of the construction sites, specifically areas that are less than 500 feet from a construction site. As shown in Table 5 above, ~~the loudest~~ construction equipment ~~would~~ could generate noise levels up to 95 dBA~~, which~~ at 50 feet, or multiple loud pieces of equipment operating simultaneously could combine to generate a noise level that exceeds 100 dBA at 50 feet. However, the City of Los Angeles states in the *CEQA Thresholds Guide* that construction activity involving multiple pieces of equipment typically generate a noise level of 89 dBA at 50 feet.

Construction equipment noise levels would exceed the 75 dBA at 50 feet noise limitation listed in Section 112.05 of the Los Angeles Municipal Code. This code section, which explicitly addresses noise from construction equipment, requires that all feasible measures be implemented. Mitigation measures N-1 through N-11 are feasible measures to control noise levels, including engine mufflers and noise blanket barriers. The City of Los Angeles has stated in the *CEQA Thresholds Guide* that mufflers typically reduce aggregate equipment noise levels by 3 dBA. Equipment noise would be at least 86 dBA at 50 feet after engine muffling (mitigation measure N-1). Noise sound blankets (mitigation measure N-8) can reduce noise levels by up to 10 dBA if properly located between the noise source and receptor. The implementation of other mitigation measures, while difficult to quantify, would also reduce and/or control construction noise levels.

Additional mitigation measures were considered to reduce noise levels, but were determined to be infeasible. These mitigation measures included:

- Electric Equipment - Electric equipment would generate less noise than diesel equipment but is not widely available and the horsepower associated with electric equipment would not meet project requirements.

- Relocation - Removing the affected land uses from the construction zone would eliminate the impact. This measure would not be feasible due to the number of affected land uses and associated cost of relocation.

- Window Retrofits - Retrofitting windows at affected land uses would reduce noise exposure. This measure would not be feasible due to the number of affected land uses and associated cost of relocation.

Implementation of mitigation measures N-1 through N-11 would reduce ~~construction~~ equipment engine noise levels, and the impact would be less than significant after mitigation. However, construction noise levels would still exceed 75 dBA at 50 feet.

~~T~~Microtunneling instead of trenching would be required during the construction of the VA Hospital segment to cross beneath the railroad tracks on Woodley Avenue south of Roscoe Boulevard and the San Fernando Wash on Magnolia Boulevard located 900 feet west of Tujunga Avenue. Microtunneling would also be required during the construction of the North Hollywood Park segment to cross beneath the Metro Orange Line Busway. A trenchless technique known as "microtunneling," would be used ~~with~~ in which a launching pit is located at one end ~~of the tunnel and equipment located on~~ and a receiving pit is located at the other end ~~of the tunnel~~. Hydraulic jacks would be used to drive sections of the water pipe~~s~~ through the ground from the launching pit to the receiving pit. The railroad tracks that cross Woodley Avenue are in an industrial area and approximately 1,000 feet from the nearest residential land use. ~~T~~Microtunneling activity at this location would not disturb any sensitive land use.

However, the microtunneling locations on Magnolia Avenue and the Metro Orange Line Busway would be within 500 feet of residential land uses and would increase ambient noise levels in the project area. Based on the Federal Highway Administration Roadway Construction Noise Model, the maximum noise level for a horizontal boring hydraulic jack is 82 dBA at 50 feet. Since equipment used on construction sites often operates at less than full power, an acoustical usage factor is applied. The acoustical usage factor is a percentage of time that a particular piece of equipment is anticipated to be in full power operation during a typical construction day. The acoustical usage factor for a hydraulic jack is 25 percent and the noise level for the hydraulic jack is reduced to 80 dBA at 50 feet. The noise level generated from the hydraulic jack would exceed the 75 dBA at 50 feet noise limitation listed in Section 112.05 of the Los Angeles Municipal Code. Therefore, implementation of mitigation measures N-2 through N-11 would be required to reduce ~~tunneling~~ construction noise. ~~With implementation of mitigation~~ As described above, the proposed project with the implementation of these feasible mitigation measures would ~~tunneling activity would~~ result in a less than significant noise impact.

The proposed project could include nighttime construction activity to prevent traffic congestion. Section 41.40 (Noise Due to Construction, Excavation Work) of the Los Angeles Municipal states that construction activity that would disturb persons occupying sleeping quarters in any dwelling hotel, apartment, or other place of residence should not take place between 9:00 p.m. and 7:00 a.m. Based on language included in Section 112.04 of the Los Angeles Municipal Code, nighttime construction activity within 500 feet of sensitive land uses would not be consistent with the City Code and would result in a significant impact. Therefore, implementation of mitigation measure N-12 would be required to ensure that nighttime construction activity would not occur within 500 feet of land uses where

people sleep. With implementation of mitigation, nighttime construction activity would result in a less than significant noise impact.

Operational Noise

Following installation of the proposed pipeline, there would be no operational component of the proposed project. Therefore, the proposed project would not create new sources of noise, and no operational noise impact would occur.

Mitigation Measures

N-1 All construction equipment shall be properly maintained and equipped with mufflers and other suitable noise attenuation devices.

N-2 LADWP shall endeavor to use rubber-tired equipment rather than track equipment. Noisy equipment shall be used only when necessary and shall be switched off when not in use.

N-3 LADWP shall ensure that all stockpiling and vehicle staging areas are located away from noise-sensitive receivers.

N-4 LADWP shall establish a public liaison for project construction that shall be responsible for addressing public concerns about construction activities, including excessive noise. The liaison shall determine the cause of the concern (e.g., starting too early, bad muffler, etc.) and shall work with LADWP to implement reasonable measures to address the concern.

N-5 The construction contractor shall develop a construction schedule to ensure that the construction would be completed quickly to minimize the time a sensitive receptor will be exposed to construction noise.

N-6 Construction supervisors shall be informed of project-specific noise requirements, noise issues for sensitive land uses adjacent to the pipeline route, and/or equipment operations.

N-7 Construction equipment shall be electric- and hydraulic-powered rather than diesel and pneumatic powered, as feasible.

N-8 During all construction activities in residential neighborhoods, temporary barriers, such as noise blankets, shall be utilized, as applicable to site conditions, around noisy equipment located within 500 feet of a sensitive receptor. Staging sites shall not be located within 500 feet of a sensitive receptor. A temporary barrier shall be employed when staging sites are restricted to residential neighborhoods.

N-9 Prior to construction work, the public shall be notified of the location and dates of construction. Residents shall be kept informed of any changes to the schedule.

N-10 Haul routes shall be on major arterial roads within non-residential areas. If not feasible, haul routes shall be reviewed and approved by LADOT before the haul route can be on major arterial roads in residential areas.

N-11 LADWP shall coordinate with the site administrator for institutional land uses located adjacent to the pipeline. These include North Hollywood High School, Oakwood Secondary School, North Hollywood Regional Library, James Madison Middle School, Valley Plaza Library, Sherman Oaks Hospital, Los Angeles Valley College, Birmingham High School, Valley Alternative School, High Tech High School, Mulholland Middle School, Veteran's Administration Hospital, Monroe High School, and Pierce College. Coordination between the site administrator and LADWP shall continue on an as-needed basis while construction is occurring adjacent to these land uses to minimize potential disruption to the land uses.

N-12 Construction activities are prohibited between the hours of 9:00 p.m. and 7:00 a.m. when located within 500 feet of occupied sleeping quarters or other land uses sensitive to increased nighttime noise levels.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact with Mitigation Incorporated. A significant impact would occur if the proposed project would cause excessive vibration levels. 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. The peak particle velocity is most frequently used to describe vibration impacts to buildings and is measured in inches per second.

Heavy trucks can generate ground-borne vibrations that vary depending on vehicle type, weight, and pavement conditions. As heavy trucks typically operate on major streets, existing ground-borne vibration in the project vicinity is largely related to heavy truck traffic on the surrounding roadway network. Based on field visits, vibration levels from adjacent roadways are not perceptible along the proposed pipeline alignment.

Construction

Construction activity can result in varying degrees of vibration, depending on the equipment and methods employed. Operation of construction equipment causes vibrations that spread through the ground and diminish in strength with distance. The primary source of operational vibration includes on-site haul trucks. Directional drilling and standard construction equipment (e.g., a large bulldozer) generate vibration levels of approximately 0.089 inches per second at 25 feet. Table 6 presents typical vibration levels for such equipment at 12 to 150 feet. Other equipment used during construction activity such as jackhammers would generate less vibration than presented for drilling or a large bulldozer.

Table 6 Vibration Velocities for Construction Equipment

Distance from Equipment (feet)	Peak Particle Velocity (inches/second)
12	0.268
15	0.191
20	0.124
25	0.089
50	0.031
75	0.017
100	0.011
125	0.008
150	0.006

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

The Federal Transit Administration has indicated that engineered concrete and masonry buildings can be exposed to vibration levels up to 0.3 inches per second, non-engineered timber and masonry buildings is 0.2 inches per second (typical of residential and institutional buildings), and buildings extremely susceptible to vibration damage is 0.12 inches per second (e.g., historical buildings). In accordance with Federal Transit Administration criteria, vibration is a function of the distance of the receiver from the vibration source (i.e., construction equipment or automobiles). As shown in Table 6, vibration dissipates rapidly with distance. Although the precise pipeline alignment will be determined during the final design process, it is estimated that construction-related building damage could occur when construction equipment would be located within 21 feet of buildings extremely susceptible to vibration damage, 15 feet of residential or institutional buildings, or 12 feet of commercial buildings. As discussed in Section 1.7, to minimize vibration effects, LADWP would design the final alignment such that construction equipment would not be located within 15 feet of a residential or institutional building, or within 12 feet of a commercial building. Mitigation measure N-13 would be implemented to prevent vibration-related building damage in the event that the final alignment would not avoid locating construction equipment within 21 feet of buildings extremely susceptible to vibration damage. Therefore, with implementation of the mitigation measure, impacts related to construction vibration would be less than significant.

Operation

Following installation of the proposed pipeline, the proposed project would not have an operational component. Therefore, there would be no operational vibration impacts.

Mitigation Measure

N-13 Prior to the completion of final design, LADWP shall conduct a survey of the pipeline alignment to determine if buildings extremely susceptible to vibration damage are located less than 21 feet from the alignment. If identified, LADWP shall design the final pipeline alignment to avoid placing construction equipment within 21 feet of buildings extremely

susceptible to vibration damage. In the event that avoidance is not possible, LADWP shall hire qualified structural and geotechnical engineers to review the predicted vibration levels and determine if there are any risks to the building(s). If potential risks are identified, all necessary steps would be taken to protect the building including, but not limited to, photographing and/or videotaping the building in order to provide a record of the existing conditions prior to construction activities. If any visible building damage occurs due to construction vibration activity, LADWP shall be responsible for performing repairs, under the direction of a qualified structural or geotechnical engineer, at the completion of construction.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact. A significant impact would occur if the proposed project would cause a substantial permanent increase in noise levels above existing ambient levels. As discussed in Section XII(a) above, operation of the proposed project would create no new permanent sources of noise. Additionally, following installation of the recycled water pipeline, all roadways would be returned to their existing conditions. Operational activities would be the same as current levels. Therefore, the proposed project would not create a substantial permanent increase in noise levels above existing ambient levels. No impact would occur.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact with Mitigation Incorporated. A significant impact would occur if the proposed project would result in a substantial temporary or periodic increase in ambient noise levels. Following installation of the recycled water pipeline, all roadways would be returned to their existing conditions. Operational activities would be the same as current levels. Therefore, operation of the proposed project would not result in an increase in ambient noise levels. However, as discussed in Section XII(a) above, construction activities would result in temporary increases in noise levels at the project site. With implementation of mitigation measures N-1 through N-11, construction noise impacts would be less than significant.

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

No Impact. A significant impact would occur if the proposed project would expose people residing or working in the project area to excessive noise levels from a public airport or public use airport. As the proposed project does not include a residential component, this analysis focuses on construction worker exposure to aircraft noise. The closest airport to the project site is the Van Nuys Airport, located less than one mile west of the VA Hospital segment. The California State Airport Noise Standards Quarterly Report, *First Quarter 2011*, published on May 3, 2012, for the Van Nuys Airport included an Airport Impact Area map that shows the noise contour for Van Nuys Airport and the affected land uses. The noise contour map

indicates an annual Community Noise Equivalent Level (CNEL) ranges between 52 to 63 dBA.[43] Airport noise levels would be lower than construction noise levels generated from construction workers operating a hydraulic jack (80 dBA L_{eq}). Therefore, no impacts related to exposing people working in the project area to excessive noise levels from a public airport or public use airport would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. A significant impact would occur if the proposed project would expose people residing or working in the project area to excessive noise levels from a private airstrip. The project site is not located within 10 miles of a private airstrip, and noise levels generated at private airports are not audible at the project site. Therefore, no impacts related exposing people residing or working in the project area to excessive noise levels from a private airstrip would occur.

XIII. POPULATION AND HOUSING

Would the project:

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

No Impact. The proposed project does not include construction or operation of any residential or commercial land uses, and therefore, would not result in a direct population increase from construction of new homes or businesses. The proposed project would install recycled water pipelines to serve existing customers in portions of the San Fernando Valley. Therefore, the proposed project would not result in indirect population growth. No impact to population growth would occur.

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

No Impact. All construction activity would occur in the existing road right-of-way and the roadways would be restored to their original condition following installation of the pipeline. Therefore, the proposed project would not require the removal of existing housing. Implementation of the proposed project would not impact the number or availability of existing housing in the area, and would not necessitate the construction of replacement housing elsewhere. No impact to housing would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As discussed in Section XIII(b) above, construction would occur within existing roadways. Thus, there are currently no residential uses on the project site and no persons would be displaced as a result of implementation of the proposed project. Construction of replacement housing would not be necessary, and no impact would occur.

[43] CNEL is an average sound level during a 24-hour period. In general, CNEL is within 2-dBA of the L_{eq}.

XIV. PUBLIC SERVICES

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

i) Fire protection?

Less Than Significant Impact. Fire protection services in the City are provided by the City of Los Angeles Fire Department (LAFD). There are several LAFD Fire Stations serving the project area. As the proposed project would serve existing customers, it would not generate population growth. Furthermore, no new habitable structures would be built as part of the proposed project. Therefore, construction and operation of the proposed project would not require the construction of additional fire protection services or facilities or expansion of existing facilities.

As discussed in Section VIII(h) above, the proposed alignment is not located within any lands designated as Wildfire Hazard Areas or a Fire Buffer Zone. Therefore, construction activities would not occur within an area designated with a substantial fire risk.

Fire protection could be required at the project site in the event of a construction accident. The likelihood of an accident requiring such a response would be low as project construction would not occur in areas of high fire danger. In addition, watering activities associated with dust suppression for disturbed areas would reduce the potential for accidental fire to occur. Therefore, the service capacity of local fire stations in which accidents could happen would not be adversely affected by the proposed project.

Installation of the proposed pipeline would require temporary lane closures during the construction period, which could affect response times and emergency access. However, it is not anticipated that full roadway closures would be necessary and the operation of existing roadways would be preserved throughout construction. Vehicular access to intersecting streets would be limited during portions of the construction period. However, construction would occur in approximately 90-foot segments and no portion of the roadway would remain closed during the entire construction period. Additionally, it is anticipated that lane closures would be effective and access would be restricted during working hours only and would reopen at the end of each work day. Recessed steel plates would be used to cover any open trenches during non-work hours. Furthermore, LADWP would consult with LAFD regarding construction schedules and worksite traffic control and detour plans. Development of such plans and consultation with LAFD would ensure that impacts related to emergency response and access during construction would be less than significant.

ii) Police protection?

Less Than Significant Impact. The City of Los Angeles Police Department (LAPD) is the local law enforcement agency responsible for providing police protection services in the City. Several LAPD Community Police Stations serve the areas through which the proposed project would pass. As previously stated, the proposed project would not generate population growth. Therefore, construction and operation of the proposed project would not require the construction of additional police protection services or facilities or expansion of existing police facilities.

As discussed in Section XIV(a)(i) above, installation of the proposed pipeline would require temporary lane closures during the construction period, which could have an impact on response times and emergency access. However, full roadway closures are not anticipated and any open trenches would be covered with steel plates during non-work hours. Furthermore, LADWP would consult with LAPD regarding construction schedules and worksite traffic control and detour plans. Development of such plans and consultation with LAPD would ensure that impacts related to emergency response and access during construction would be less than significant.

iii) Schools?

No Impact. The proposed project involves an extension of the recycled water pipeline network in portions of the San Fernando Valley. As the proposed project does not include development of any residential uses, no increase in residential population would occur. Additionally, as the proposed project would serve existing customers, no housing or employment opportunities would be provided by the proposed project. Therefore, no indirect population growth would occur. No new students would be generated, and no increase in demand for local schools would result. No impact to schools would occur.

iv) Parks?

No Impact. Residential developments typically have the greatest potential to result in impacts to parks since these types of developments generate a permanent increase in residential population. As previously stated, the proposed project does not include development of any residential uses and would not generate any new permanent residents that would increase the demand for local and regional park 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 and would not increase the demand for other public facilities. The proposed project involves an extension of the recycled water pipeline network in portions of the San Fernando Valley. The proposed project would not result in indirect population growth, which could increase demand for other public facilities. No impact to other public facilities would occur.

XV. RECREATION

Would the project:

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

No Impact. The proposed project involves an extension of the recycled water pipeline network in portions of the San Fernando Valley to serve existing customers. Neither construction nor operation of the proposed project would generate new permanent residents that would increase the use of existing parks and recreational facilities. Therefore, substantial physical deterioration of these facilities would not occur or be accelerated with implementation of the proposed project. No impact would occur.

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

No Impact. The proposed project does not include development of any residential uses and, thus, would not generate new permanent residents that would increase the demand for recreational facilities. Further, the proposed project would serve existing customers and would not promote or indirectly induce new development that would require the construction or expansion of recreational facilities. Therefore, no impact would occur.

XVI. TRANSPORTATION/TRAFFIC

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less Than Significant Impact with Mitigation Incorporated. This section evaluates the existing and future (cumulative) traffic conditions surrounding each segment of the proposed project and potential impacts to the study roadway segments associated with implementation of the proposed project. A copy of the traffic study and supplemental technical memorandum is included as Appendix D of this document.

Construction

Construction of the proposed project would result in temporary, localized increases in traffic volumes associated with construction activities and temporarily reduced roadway capacities during brief periods of time in the area in which construction is occurring. The proposed project would potentially conflict with the City of Los Angeles Mayor's Directive #2, which prohibits construction on major roads during rush hour periods (6:00 a.m. to 9:00 a.m. and 3:30 p.m. to 7:00 p.m.), if construction takes place during these times. As part of the variance to the Directive

and to minimize traffic-related impacts during construction, detailed traffic control/handling plans would be prepared and subject to LADOT approval.

No complete street closures are anticipated during project construction. Existing on-street parking areas along the proposed pipeline alignment would be utilized as travel lanes to minimize traffic lane closures during construction, as necessary. Further, each roadway segment would be affected only as construction occurs on that segment, not for the duration of the construction period.

The analysis of future baseline traffic conditions included the addition of traffic growth, based on projections within the Metro 2010 Congestion Management Program. The highest Congestion Management Program traffic growth rates in the study area were multiplied by a factor of two to provide a conservative estimate of regional traffic growth plus trips expected to be generated by area projects. A list of area projects is provided in Appendix D of this document. Project construction activity would be completed by year 2022. Therefore, that year was used for future baseline conditions. Baseline conditions for the study roadway segments were generated based on the application of traffic growth rates.

To determine the impacts of peak construction activity on the roadway system, construction generated traffic was added to existing traffic (year 2012), traffic generated by other projects in the surrounding area, and ambient (background) growth in traffic volumes to determine future (year 2022) plus project conditions. Impact thresholds defined by LADOT were not used for the proposed project traffic analysis. These standards define significant impacts to long-term traffic operations. Construction of the proposed project would only temporarily constrict roadway capacity in affected segments, as the trench line would be returned to its existing condition and roadway operations fully restored following completion of construction activities. Thus, the construction impact analysis is based on roadway flow during construction and the generalized application of volume-to-capacity (V/C) calculations and levels of service (LOS). Based on LADOT guidance, significant impacts related to the roadway segments were defined based on the worsening of conditions at any segment to or within a final LOS value of E or F. These two values represent poor traffic operating conditions. LADOT level of service definitions are provided in Table 7 below.

Table 7 Level of Service Definitions

LOS	V/C	Definition
A	0.000 – 0.600	Excellent. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 – 0.700	Very Good. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	Good. Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	Fair. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	Poor. Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	Greater than 1.000	Failure. Backups from nearby intersections or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: City of Los Angeles Department of Transportation, *Traffic Study Policies & Procedures*, May 2012. Website: http://www.ladot.lacity.org/pdf/pdf223.pdf, accessed July 10, 2012.

Future baseline without the proposed project traffic volumes and associated level of service values are provided in Table 8. The future traffic condition with peak construction traffic generated by the proposed project is shown in Table ~~8~~ 9 below.

Table 8 Future Without Project Study Conditions – Peak Hour Level of Service (2022)

#	Segment	AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
	North Hollywood Segment				
1	Camarillo Street b/w Cahuenga Boulevard and Vineland Avenue/Lankershim Boulevard	1.219	F	1.267	F
2	Vineland Avenue b/w Camarillo Street and Magnolia Boulevard	0.414	A	0.451	A
3	Magnolia Boulevard b/w SR 170 and Colfax Avenue	0.816	D	0.906	E
	Valley Plaza Park Segment				
4	Sherman Way b/w Woodman Avenue and Fulton Avenue	1.084	F	1.147	F
5	Sherman Way b/w Coldwater Canyon Avenue and Whitsett Avenue	1.038	F	1.153	F
6	Whitsett Avenue b/w Sherman Way and Vanowen Street	0.625	B	0.601	B
7	Vanowen Street b/w Whitsett Avenue and SR 170	0.812	D	0.946	E
	Van Nuys Sherman Oaks Park Segment				
8	Oxnard Street b/w Kester Avenue and Van Nuys Boulevard	0.709	C	0.786	C
9	Van Nuys Boulevard b/w Clark Street and Weddington Street	1.032	F	1.123	F
10	Burbank Boulevard b/w Hazeltine Avenue and Woodman Avenue	0.980	E	0.964	E
11	Magnolia Boulevard b/w Van Nuys Boulevard and Hazeltine Avenue	0.976	E	0.899	D
	Reseda Park Segment				
12	Victory Boulevard b/w Hayvenhurst Avenue and Balboa Boulevard	1.230	F	0.801	D
13	Victory Boulevard b/w Lindley Avenue and Reseda Boulevard	0.805	D	0.770	C
14	Balboa Boulevard b/w Victory Boulevard and Vanowen Street	0.853	D	0.858	D

Table 8 Future Without Project Study Conditions – Peak Hour Level of Service (2022)

#	Segment	AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
VA Hospital Segment					
15	Woodley Avenue b/w Sherman Way and Saticoy Street	1.018	F	0.927	E
16	Roscoe Boulevard b/w Woodley Avenue and Hayvenhurst Avenue	0.846	D	0.770	C
17	Roscoe Boulevard b/w Woodley Avenue and Haskell Avenue	0.883	D	0.828	D
18	Haskell Avenue b/w Roscoe Boulevard and Parthenia Street	0.339	A	0.257	A
19	Haskell Avenue b/w Nordoff Street and Plummer Street	0.628	B	0.389	A
Pierce College Segment					
20	Victory Boulevard b/w Reseda Boulevard and Wilbur Avenue	1.099	F	1.118	F
21	Victory Boulevard b/w Winnetka Avenue and Mason Street/Stadium Way	0.734	C	0.787	C

Source: KOA Corporation, 2013.

Table 9 ~~8~~ Future With Project Study Conditions – Peak Hour Level of Service (2022)

#	Segment	AM Peak Hour			PM Peak Hour		
		V/C	LOS	Significant Impact?	V/C	LOS	Significant Impact?
North Hollywood Segment							
1	Camarillo Street b/w Cahuenga Boulevard and Vineland Avenue/Lankershim Boulevard	1.227	F	Yes	1.286	F	No
2	Vineland Avenue b/w Camarillo Street and Magnolia Boulevard	0.749	C	No	0.455	A	No
3	Magnolia Boulevard b/w SR 170 and Colfax Avenue	~~1.156~~ 1.516	F	Yes	0.913	E	No
4	Colfax Avenue b/w Magnolia Boulevard and Chandler Boulevard	0.360	A	No	0.360	A	No
5	Chandler Boulevard westbound b/w SR 170 and Colfax Avenue	0.720	C	No	0.720	C	No
6	Chandler Boulevard eastbound b/w Morella Avenue and Colfax Avenue	0.720	C	No	0.720	C	No
Valley Plaza Park Segment							
~~4~~ 7	Sherman Way b/w Woodman Avenue and Fulton Avenue	1.358	F	Yes	1.152	F	No
~~5~~ 8	Sherman Way b/w Coldwater Canyon Avenue and Whitsett Avenue	1.300	F	Yes	1.159	F	No
~~6~~ 9	Whitsett Avenue b/w Sherman Way and Vanowen Street	1.162	F	Yes	0.607	B	No
~~7~~ 10	Vanowen Street b/w Whitsett Avenue and SR 170	1.509	F	Yes	0.953	E	No
Van Nuys Sherman Oaks Park Segment							
~~8~~ 11	Oxnard Street b/w Kester Avenue and Van Nuys Boulevard	1.318	F	Yes	0.793	C	No
~~9~~ 12	Van Nuys Boulevard b/w Clark Street and Weddington Street	1.916	F	Yes	1.130	F	No
~~10~~ 13	Burbank Boulevard b/w Hazeltine Avenue and Woodman Avenue	1.821	F	Yes	0.971	E	No
~~11~~ 14	Magnolia Boulevard b/w Van Nuys Boulevard and Hazeltine Avenue	1.812	F	Yes	0.906	E	Yes

Table 9 ~~8~~ Future With Project Study Conditions – Peak Hour Level of Service (2022)

#	Segment	AM Peak Hour			PM Peak Hour		
		V/C	LOS	Significant Impact?	V/C	LOS	Significant Impact?
Reseda Park Segment							
~~12~~ 15	Victory Boulevard b/w Hayvenhurst Avenue and Balboa Boulevard	1.540	F	Yes	0.804	D	No
~~13~~ 16	Victory Boulevard b/w Lindley Avenue and Reseda Boulevard	~~1.450~~ 1.451	F	Yes	0.774	C	No
~~14~~ 17	Balboa Boulevard b/w Victory Boulevard and Vanowen Street	1.069	F	Yes	0.863	D	No
VA Hospital Segment							
~~15~~ 18	Woodley Avenue b/w Sherman Way and Saticoy Street	1.890	F	Yes	0.934	E	No
~~16~~ 19	Roscoe Boulevard b/w Woodley Avenue and Hayvenhurst Avenue	1.526	F	Yes	0.773	C	No
~~17~~ 20	Roscoe Boulevard b/w Woodley Avenue and Haskell Avenue	1.592	F	Yes	0.831	D	No
~~18~~ 21	Haskell Avenue b/w Roscoe Boulevard and Parthenia Street	0.633	~~F~~ B	No	0.263	A	No
~~19~~ 22	Haskell Avenue b/w Nordoff Street and Plummer Street	1.167	F	Yes	0.396	A	No
Pierce College Segment							
~~20~~ 23	Victory Boulevard b/w Reseda Boulevard and Wilbur Avenue	2.549	F	Yes	1.123	F	No
~~21~~ 24	Victory Boulevard b/w Winnetka Avenue and Mason Street/Stadium Way	1.324	F	Yes	0.791	C	No

As shown in Table ~~8~~ 9, ~~the construction impacts to traffic would be significant but temporary.~~ during the AM Peak Hour, 19 roadway segments would operate at LOS F due to temporarily reduced roadway capacities associated with proposed project construction. During the PM Peak Hour, the operation of one roadway segment would worsen from LOS D to LOS E. Temporary traffic lane closures during the construction of the recycled water pipelines would affect some nearby residential uses, including driveway access, use of adjacent on-street parking, and neighborhood circulation. Additionally, construction of the proposed project would temporarily constrict roadway capacity. Construction would cause a traffic nuisance on a block by block basis as the pipeline is being installed. As discussed in Section 1.6 above, approximately 90 linear feet of pipeline would be installed per day and construction is anticipated to occur sequentially along the alignment of each segment to minimize long-term disruption within any one area. Therefore, traffic delays resulting from installation of the pipeline within a roadway block would be short-term and temporary. However, for the purposes of a conservative impact analysis, as shown in Table 9, construction impacts to traffic would be considered significant but temporary. Implementation of mitigation measures TR-1 and TR-2 are required to reduce the roadway congestion impact to a less than significant level.

Mitigation Measures~~:~~

TR-1 LADWP, prior to the start of construction, shall coordinate with LADOT to prepare a Traffic Management Plan (TMP). The TMP shall be prepared by a registered traffic or civil engineer, as appropriate, based on City of Los Angeles permit guidelines. The TMP shall consist of traffic control plans showing striping changes, and a traffic signal plan for any signalized intersections indicating modifications to existing traffic signals and associated controllers to be adjusted during the construction phase. Methods to inform the public regarding project construction and roadway detours and closures shall be implemented as part of the TMP. Additional measures to be incorporated into the TMP to improve traffic flow shall include the following:

a. Directional capacity (generally southbound/westbound in the morning peak hour and northbound/eastbound in the evening peak hour) shall be considered in roadway closure planning where work area placement is flexible. The provision of the original one-way capacity of the affected roadway (in number of travel lanes) in the peak direction, while providing a reduced number of travel lanes for the opposite direction of traffic flow, shall be used to alleviate any potential poor level of service conditions.

b. Left-turn lanes and other approach lanes (as feasible) shall be maintained in close vicinity to major intersections along the proposed pipeline routes.

c. Considerations for maintained access to adjacent residential driveways, as feasible, shall be incorporated into the construction planning process.

d. Provide continued through access via detours for vehicles and to provide for adequate pedestrian and transit circulation. Signed detour routes and other potential routes that drivers would utilize during the construction period would become alternate routes for a proportion of the vehicles that would

otherwise travel along the corridor where construction would be taking place.

e. For the project detour routes, wayfinding signs and other relevant traffic control devices shall be placed on all major roadways into the larger area around each construction closure locations, and shall be repositioned for each construction segment (as the construction zones progress along the proposed project alignment). Wayfinding signs shall be placed at major detour decision points to keep vehicles on-track through the detour route, and shall also be placed at the next major intersection location in advance of the first detour decision point.

f. Consult with local transit agencies to minimize impacts to passenger loading areas and to minimize travel times on scheduled transit routes. All affected transit agencies shall be contacted to provide for any required modifications or temporary relocation of transit facilities.

TR-2 LADWP shall consult with Caltrans to obtain permits for the transport of oversized loads, and to obtain encroachment permits for any work along State facilities.

Operation

Operation of the proposed project would not cause any increase in traffic in relation to the existing traffic load and capacity of the street system. Following completion of construction, the proposed project would not generate additional traffic. Therefore, the proposed project would not result in permanent impacts to traffic.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No Impact. Project-related traffic impacts would occur during construction activities only. No traffic impacts would occur during operation of the proposed project. The County of Los Angeles Congestion Management Program level of significance thresholds are not intended to be applied to construction activities. As such, the proposed project would not exceed the significant impact thresholds defined by the County's Congestion Management Program. The proposed project would not generate any new measurable and regular vehicle trips during project operation, and no impact would occur.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The proposed project would not result in a change in air traffic patterns. Construction and operation of the proposed project would not generate air traffic. Further, the proposed project would not include any high-rise structures that could act as a hazard to aircraft navigation. No impact would occur.

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

No Impact. The proposed project would be constructed within existing roadways. No design changes to the existing roadways or use of roadways would occur. Therefore, no impact related to an increase in hazards due to a design feature or incompatible uses would occur.

e) Result in inadequate emergency access?

Less Than Significant Impact. Installation of the proposed pipeline would require temporary lane closures during the construction period, which could have an effect on emergency access. Additionally, emergency services may be needed at a location where access is temporarily blocked by the construction zone. However, it is not anticipated that full roadway closures would be necessary and the operation of existing roadways would be preserved throughout construction. Vehicular access to intersecting streets would be limited during portions of the construction period. However, construction would occur in approximately 90-foot segments per day and no portion of the roadway would remain closed during the entire construction period. Additionally, it is anticipated that lane closures would be effective and access would be restricted during working hours only and would reopen at the end of each work day. Recessed steel plates would be used to cover any open trenches during non-work hours. Furthermore, LADWP would consult with emergency service providers (e.g., LAPD, LAFD, etc.) regarding construction schedules and worksite traffic control and detour plans. Development of such plans and consultation with emergency service providers would ensure that impacts related to emergency response and access during construction would be less than significant.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Less Than Significant Impact with Mitigation Incorporated. Construction activities would require the closure of one or two travel lanes and may result in left-turn restrictions. Construction activities are also anticipated to temporarily affect public transit, bicycle, or pedestrian facilities.

Public transportation may be affected as a result of construction because project construction activities may require the use of existing bus stop curb lane areas. To the extent practicable, temporary bus stop closures would be accommodated with replacement bus stops outside the immediate work area. These temporary closures, however, would need to be located along wide portions of the roadway where the maximum number of travel lanes can be accommodated during construction.

Within the VA Hospital segment, Woodley Avenue currently contains bike lanes along the portion of the proposed pipeline alignment to the VA Hospital. Within the North Hollywood Park segment, bike lanes are currently located along Colfax Avenue and Chandler Boulevard. Additionally, the City of Los Angeles 2010 Bike Plan proposes bikeways along the following routes near the proposed pipeline alignment: Camarillo Street within the North Hollywood Park segment; Sherman Way within the Valley Plaza Park segment; Van Nuys Boulevard within the Van

Nuys Sherman Oaks Park segment; Roscoe Boulevard along the VA Hospital segment; and Balboa Boulevard and Lindley Avenue along the Reseda Park segment. If bikeways are provided prior to project construction, it is likely that the proposed project would include the closure of these lanes. As a result, construction activities would potentially create unsafe conditions for bicyclists under restricted capacity conditions. Therefore, these particular bicycle routes would be closed temporarily. To notify the public, signs would be posted at the next major intersections to the north and south of the construction area (see mitigation measure TR-1 above). Development of a TMP and detour plan would minimize impacts. With implementation of mitigation measure TR-1, impacts to bicycle facilities would be less than significant.

No impacts to public transit, bicycle, or pedestrian facilities would occur during project operation.

XVII. UTILITIES AND SERVICE SYSTEMS

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. The proposed project involves extension of the recycled water pipeline network within portions of the San Fernando Valley. As discussed above, a SWPPP and erosion control plan would be prepared for the proposed project that would specify appropriate BMPs to control runoff from the project site during construction. Additionally, any wastewater discharged by the proposed project must comply with National Pollutant Discharge Elimination System requirements. Construction activities would comply with all applicable wastewater treatment requirements of the Regional Water Quality Control Board. The construction impact would be less than significant.

During project operation, the proposed recycled water pipeline would be located entirely below ground. There would be no waste discharged. No impact to the wastewater treatment requirements of the Los Angeles Regional Water Quality Control Board would occur.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. The proposed project involves the extension of the recycled water pipeline network within portions of the San Fernando Valley. These improvements would not increase the amount of water used or wastewater generated at the project site, and the proposed project would serve existing customers in the City. Thus, no new or expanded water or wastewater treatment facilities would be required due to implementation of the proposed project. No impact would occur.

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. The proposed project involves the extension of the recycled water pipeline network within portions of the San Fernando Valley. As

discussed in Section IX(e) above, all drainage flows would be routed through existing storm water infrastructure serving the project site and surrounding area. Additionally, following construction of the proposed project, all roadways would be returned to their existing conditions. Following construction, storm water flows would be similar to the current condition. Therefore, the proposed project would not require or result in the construction or expansion of storm water drainage facilities. The impact would be less than significant.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact. High water demand is typically associated with residences, hotels, and large offices.[44] The proposed project would provide recycled water to known customers located within a portion of the San Fernando Valley in lieu of potable water supplies. Therefore, additional water supplies would not be needed and the proposed project would have the beneficial impact of offsetting a portion of the City's potable water demand. No impact would occur.

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

No Impact. As discussed in Section XVII(d) above, the recycled water pipelines would reduce the potable water demand and usage at the identified customers for irrigation and industrial uses. Therefore, no additional demand for wastewater treatment would be created. No impact to wastewater treatment capacity would occur.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Construction activities would generate construction waste, such as demolition debris. As discussed in Section 1.7, 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. These measures would minimize the amount of construction debris generated by the proposed project that would need to be disposed of in an area landfill. Any non-recyclable construction waste generated would be disposed of at a landfill approved to accept such materials. The proposed project would not have an operational component. As such, no solid waste would be generated during project operation. The impact would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. The proposed project would comply with federal, state, and local statutes and regulations related to solid waste. As discussed in Section XVII(f) above, construction debris would be recycled or disposed of according to local and regional standards. All materials would be handled and

[44] City of Los Angeles Bureau of Sanitation, *Sewer Generation Rates Table*, March 2002.

disposed of in accordance with existing local, state, and federal regulations. Compliance with existing regulations would ensure a less than significant impact.

XVIII. 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. The proposed project would be constructed entirely within existing roadways. No vegetation removal would occur, including sensitive vegetation communities or sensitive plant species. No impact to biological resources would occur.

As discussed in Section V(a) above, no historical resources are located within the proposed project alignment; therefore, no impacts related to such resources would occur. However, as discussed in Section V(b), it is possible that buried or otherwise obscured archaeological resources may be present within the North Hollywood Park, Van Nuys Sherman Oaks Park, and VA Hospital segments. As such, construction activities, including trenching, could affect previously undiscovered archaeological resources, including Native American cultural resources, within these segments. Therefore, the implementation of mitigation measure CR-1 would be required to minimize impacts to archaeological resources. With implementation of mitigation measure CR-1, impacts to archaeological resources would be less than significant.

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

Less Than Significant Impact with Mitigation Incorporated. As discussed in Section III(c) above, the proposed project is located within the Los Angeles County portion of the South Coast Air Basin, which is designated a non-attainment area for O_3, PM_{10}, and $PM_{2.5}$. In order to maintain attainment status of the South Coast Air Basin and comply with the State Implementation Plan, the SCAQMD has developed project-level thresholds of significance for criteria pollutants. The proposed project would not generate regional construction emissions in excess of the SCAQMD thresholds. Therefore, no cumulatively considerable impact would occur during construction. The proposed project does not include an operational component. Therefore, no cumulatively considerable air quality impact would occur during operations.

As discussed in Section VII(a) above, GHG emissions contribute to the global condition known as the greenhouse effect. Because this issue is by its very nature cumulative, CARB established a threshold of significance and climate reduction strategies. The proposed project would generate short-term emissions of GHGs

during construction. However, these emissions would be far less than the thresholds of significance. The cumulative impact would be less than significant.

As discussed in Sections XII(c) and XII(d) above, the proposed project would not have an operational component. Project operations would be the same as existing conditions. Therefore, there would be no permanent or temporary increase in ambient noise levels, and the proposed project would not result in a cumulatively considerable noise impact.

As discussed in Section XVI(a) above, the cumulative traffic analysis considered the addition of background traffic growth and other proposed projects combined with project construction traffic. Construction activities would result in significant impacts on project area roadways. These impacts would be reduced to a less than significant level with implementation of mitigation measures TR-1 and TR-2.

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

Less Than Significant Impact with Mitigation Incorporated. As discussed in Section XVI(f) above, construction activities would potentially result in temporary sidewalk and bicycle lane closures and the temporary relocation of bus stops. These activities could pose a hazard to human beings during construction. Therefore, implementation of mitigation measure TR-1 is required to reduce the impact to a less than significant level.

SECTION 4
CLARIFICATIONS AND MODIFICATIONS

The following clarifications and modifications are intended to update the MND in response to the comments received during the public review period and as a result of minor modifications to the description of the proposed project made by LADWP since the Draft MND was made available for public review. These changes constitute the Final MND, to be presented to the City of Los Angeles Board of Water and Power Commissioners for adoption and project approval. None of the changes to the MND would require recirculation. Revisions made to the MND have not resulted in new significant impacts or mitigation measures, nor has the severity of an impact increased. None of the CEQA criteria for recirculation have been met, and recirculation of the MND is not warranted.

The changes to the MND are listed by section, page number, and paragraph number if applicable. Text which has been removed is shown with a ~~strikethrough~~ line, while text that has been added is shown as underlined. All of the changes described in this section have also been made in the corresponding Final MND sections. Please refer to Section 5, Response to Comments, for referenced comment letters and corresponding comments.

Final MND Page	Clarification/Revision
iii	*Due to a change in an agency's name, an editorial revision regarding the agency's acronym has been made in the list of Acronyms and Abbreviations of this Final MND as follows*: ~~CDFG~~ ~~California Department of Fish and Game~~ CDFW California Department of Fish and Wildlife
iii	*An editorial addition has been made to the list of Acronyms and Abbreviations of this Final MND as follows*: UWMP Urban Water Management Plan
1-2	*An editorial revision has been made to further clarify the project area in Section 1.3, Project Location and Setting, of this Final MND as follows:* The proposed project would consist of six segments, which would be located within public street rights-of-way in urbanized and fully developed areas within the San Fernando Valley area of the City of Los Angeles.
1-3	*As a result of the minor modifications made to the proposed project, the description of the North Hollywood Park segment has been modified in Section 1.3, Project Location and Setting, of this Final MND as follows:* The North Hollywood Park segment would connect to an existing City of Burbank pipeline on the City of Los Angeles border at Verdugo Avenue and Clybourn Avenue. From the Burbank pipeline connection point, this segment

would extend approximately 600 feet west on Verdugo Avenue to Camarillo Street, approximately 5,200 feet west on Camarillo Street to Vineland Avenue, approximately 2,600 feet north on Vineland Avenue to Magnolia Boulevard, and approximately 5,800 ~~5,600~~ feet west on Magnolia Boulevard. It would terminate at approximately 620 feet west of Colfax Avenue, in front of North Hollywood High School, which is located at 5231 Colfax Avenue on the corner of Magnolia Boulevard and Colfax Avenue ~~(see Figure 3)~~. Two extensions would connect to this main segment. The first extension would travel approximately 1,400 feet north on Colfax Avenue from Magnolia Boulevard to Chandler Boulevard. The Los Angeles County Metropolitan Transportation Authority (Metro) Orange Line Busway operates in the median of Chandler Boulevard in this area. This extension would then split into two legs. One leg would travel approximately 480 feet west on Chandler Boulevard terminating at North Hollywood High School; and the other leg would travel approximately 800 feet east on Chandler Boulevard terminating at SR 170. The second extension would travel approximately 350 feet south on Irvine Avenue from Magnolia Boulevard to Hartsook Street, approximately 800 feet east on Hartsook Street to Westpark Drive, and approximately 250 feet south on Westpark Drive terminating at North Hollywood Park (see Figure 3).

1-3 *Editorial revisions regarding acronyms have been made to Section 1.3, Project Location and Setting, of this Final MND as follows:*

The Valley Plaza Park segment would connect to the existing LADWP pipeline at the intersection of Sherman Way and Woodman Avenue. This segment would extend approximately 8,800 feet east on Sherman Way from the connection point to SR 170 ~~California State Route 170 (SR 170, Hollywood Freeway)~~.

The Van Nuys Sherman Oaks Park segment would connect to the existing LADWP pipeline on Kester Avenue just south of the Metro ~~Los Angeles County Metropolitan Transportation Authority (Metro)~~ Orange Line Busway.

1-15 *An editorial revision regarding acronyms has been made to Section 1.4, Project Background, of this Final MND as follows:*

Eastern Sierra Watershed: The City's right to export water from the Eastern Sierra is based on approximately 188 water right licenses from various rivers, lakes and creeks in the Mono Basin and Owens Valley. The City's water rights are on file with the California State Water Resources Control Board. The City also owns the majority of land (approximately 315,000 acres) and associated riparian water rights in the Owens Valley. The LAA ~~Los Angeles Aqueduct~~ deliveries from the Eastern Sierra vary with snowpack conditions. In addition, over the last two decades, the City's water deliveries from the LAA ~~Los Angeles Aqueduct~~ have dropped significantly due to reallocation of water for environmental mitigation and enhancement activities.

1- 15-16 *An editorial addition regarding MWD has been made to Section 1.4, Project Background, of this Final MND as follows:*

- Purchased Water: MWD's sources of water – the Colorado River, State Water Project, local surface and groundwater storage, and stored/transferred water with Central Valley and Colorado River agencies – are subject to great uncertainty due to climate variability and environmental issues. The current environmental crisis in the Sacramento-San Joaquin Bay-Delta led to a Federal Court decision that resulted in MWD receiving up to 30 percent less of its anticipated State Water Project deliveries. Between April 2009 and April 2011, MWD implemented an allocation plan that limited supplies to member agencies and imposed penalties for exceeding water usage targets. LADWP may request financial assistance from MWD for the proposed project under their Local Resources Program (LRP).

1- 17-18 *As a result of minor modifications made to the proposed project, the description of the North Hollywood Park segment has been modified in Section 1.6, Description of the Proposed Project, of this Final MND as follows:*

All segments would connect to existing recycled water pipeline systems in the area using a 16-inch connection. ~~and 16-inch diameter distribution lines.~~ In addition, all segments except for North Hollywood Park would include only 16-inch diameter distribution lines. The North Hollywood Park segment would include 4- to 16-inch diameter distribution lines. The North Hollywood Park segment would connect to the existing City of Burbank recycled water pipeline; the Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, and VA Hospital segments would connect to the existing LADWP recycled water pipeline; and the Pierce College segment would connect to the Reseda Park segment. In total, approximately 114,080 ~~109,800~~ linear feet of new recycled water pipeline would be installed with implementation of the proposed project.

The North Hollywood Park segment would connect to the existing 16-inch City of Burbank pipeline via a 16-inch point connection on the City of Los Angeles border at Verdugo Avenue and Clybourn Avenue. The North Hollywood Park segment would include a total of approximately 18,280 linear feet of pipeline. From the pipeline connection point, this ~~segment~~ 16-inch diameter pipeline segment would extend ~~approximately 14,000 linear feet~~ west on Verdugo Avenue to Camarillo Street, then continue west on Camarillo Street to Vineland Avenue, then north on Vineland Avenue to Magnolia Boulevard, and west on Magnolia Boulevard to ~~terminating at~~ North Hollywood High School~~.~~, with two extensions. One extension would include an 8-inch diameter pipeline located north on Colfax Avenue from Magnolia Boulevard to Chandler Boulevard. This extension would then split into two legs including 6-inch diameter pipelines. One leg would travel west on Chandler Boulevard terminating at North Hollywood High School; and the other leg would travel east on Chandler Boulevard terminating at SR 170. The second extension would include a 4-inch diameter pipeline located south on Irvine Avenue from Magnolia Boulevard to Hartsook Street, east on

Hartsook Street to Westpark Drive, and south on Westpark Drive terminating at North Hollywood Park. The Metro Orange Line Busway operates in the median of Chandler Boulevard in this area. Proposed pipeline segments that would cross the Metro Orange Line Busway would be pipe-jacked beneath the existing transit facility. Proposed pipelines located on Chandler Boulevard would be located beneath the vehicle traffic lanes and would not disturb the existing busway. This segment would be trenched across the San Fernando Wash on Magnolia Boulevard approximately 900 feet west of Tujunga Avenue. Along its route, the North Hollywood Park segment would serve the following known customers:

- North Hollywood Park, located on Magnolia Boulevard west of Tujunga Avenue
- North Hollywood High School, located at Magnolia Boulevard and Colfax Avenue
- Metro Orange Line Busway, located in the median of Chandler Boulevard
- Caltrans operated SR 170

1-18 *An editorial revision regarding an acronym has been made to Section 1.6, Description of the Proposed Project, of this Final MND as follows:*

The Valley Plaza Park segment would serve the following known customers:

- James Madison Middle School, located on Ethel Avenue south of Hart Street
- Caltrans ~~California Department of Transportation (Caltrans)~~ facility, located on Sherman Way east of SR 170
- Valley Plaza Park, located on Vanowen Street east of SR 170

2-2 *As a result of minor modifications made to the proposed project, the description of the proposed project has been modified in Section 2, Initial Study Checklist, of this Final MND as follows:*

All segments would connect to existing recycled water pipeline systems in the area using a 16-inch connection. ~~and 16-inch diameter distribution lines.~~ In addition, all segments except for North Hollywood Park would include 16-inch diameter distribution lines. The North Hollywood Park segment would include 4- to 16-inch diameter distribution lines. The North Hollywood Park segment would connect to the existing City of Burbank recycled water pipeline; the Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, and VA Hospital segments would connect to the existing LADWP recycled water pipeline; and the Pierce College segment would connect to the Reseda Park segment. In total, approximately 114,080 ~~109,800~~ linear feet of new recycled water pipeline would be installed with implementation of the proposed project.

2-3 *An editorial addition regarding MWD has been made to Section 2, Initial Study Checklist, of this Final MND as follows:*

Responsible/Trustee Agencies:

- State of California, Los Angeles Regional Water Quality Control Board

- State of California, Department of Industrial Relations, Division of Occupational Safety and Health, Mining and Tunneling Unit
- State of California Department of Transportation
- U.S. Army Corps of Engineers
- Los Angeles Metropolitan Transportation Authority
- County of Los Angeles Department of Public Works, Flood Control District
- Metropolitan Water District of Southern California

3-1 *In response to Comment 3-2, the following clarification has been added to Section 3, Environmental Impact Assessment, Aesthetics I(a), of this Final MND as follows:*

Further, the proposed project involves trenching within public streets to install a recycled water pipeline in 90-foot segments. Pipeline segments that would cross the Metro Orange Line Busway would be microtunneled beneath the transit right-of-way.

3-2 *In response to Comment 3-2, the following clarification has been added to Section 3, Environmental Impact Assessment, Aesthetics I(b), of this Final MND as follows:*

Because the proposed project involves trenching within public streets to install a recycled water pipeline in 90-foot segments, each segment would be constructed within a single day and the roadway would be returned to its original condition. Pipeline segments that would cross the Metro Orange Line Busway would be microtunneled beneath the transit right-of-way.

3-2 *In response to Comment 3-2, the following clarification has been added to Section 3, Environmental Impact Assessment, Aesthetics I(c), of this Final MND as follows:*

The proposed project involves trenching within public roadway rights-of-way to install a recycled water pipeline. Pipeline segments that would cross the Metro Orange Line Busway would be microtunneled beneath the transit right-of-way.

3-2 *In response to Comment 3-2, the following clarification has been added to Section 3, Environmental Impact Assessment, Aesthetics I(d), of this Final MND as follows:*

The proposed project would be constructed primarily during daylight within public roadway rights-of-way to install a recycled water pipeline via trenching. Pipeline segments that would cross the Metro Orange Line Busway would be microtunneled beneath the transit right-of-way.

3-3 *In response to Comment 3-2, the following clarification has been added to Section 3, Environmental Impact Assessment, Agriculture and Forestry Resources II(e), of this Final MND as follows:*

The proposed project involves trenching, and in some cases microtunneling, within public roadway rights-of-way to install a recycled water pipeline.

3-4 *Minor clarifications have been made to the air quality analysis in Section 3, Environmental Impact Assessment, Air Quality III(a), of this Final MND as follows:*

According to the SCAQMD, there are two key indicators of consistency with the AQMP: 1) whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and 2) whether the project will not exceed the assumptions in the AQMP based on the year of project buildout. The first consistency criterion refers to violations of the California Ambient Air Quality Standards. ~~One measure to determine whether the proposed project would cause or contribute to a violation of an air quality standard would be based on the estimated carbon monoxide (CO) concentrations at intersections that would be affected by the proposed project.~~ The amount of vehicle trips during post-construction operations of the proposed project would be similar to the existing conditions as there is no operational component of the proposed project. Operational activity would not generate regional emissions that could interfere with attainment or maintenance of ambient air quality standards. In addition, the proposed project would comply with State and local strategies designed to control air pollution. ~~Also, the 2007 AQMP and the 2007 South Coast Air Basin State Implementation Plan demonstrates attainment of the federal $PM_{2.5}$ standard in the South Coast Air Basin by 2014, and attainment of the federal 8-hour O_3 standard by 2023. As a result of state and local control strategies, the South Coast Air Basin has not exceeded the federal CO standard since 2002.~~ Therefore, the proposed project would comply with Consistency Criterion No. 1.

3- 6-7 *Minor clarifications have been made to the air quality analysis in Section 3, Environmental Impact Assessment, Air Quality III(c), of this Final MND as follows:*

Because the South Coast Air Basin is designated as a State and/or federal nonattainment air basin for O_3, PM_{10} and $PM_{2.5}$, and nitrogen dioxide (NO_2), there is an ongoing regional cumulative impact associated with these pollutants. An individual project can emit these pollutants without significantly contributing to this cumulative impact depending on the magnitude of emissions. The SCAQMD has indicated that there are instances when the project-level thresholds may be used as an indicator defining if project emissions contribute to the regional cumulative impact.[45] The use of project-

[45] MacMillan, Ian. Program Supervisor, CEQA Intergovernmental Review, SCAQMD. Telephone conversation with Sam Silverman, Senior Environmental Scientist, of Terry A. Hayes Associates. May 7, 2013.

specific thresholds to determine a cumulative impact is acceptable for a project that is not constructed, by necessity, with another project. The proposed project is not dependent on another project and the project-level thresholds have been deemed appropriate for assessing the cumulative impact.

As discussed in Section III(b) above, ~~construction activities associated with implementation of~~ the proposed project would not ~~result in increases in~~ generate air pollutant emissions that exceed the project-level thresholds~~, which, individually or cumulatively, would exceed established thresholds. The impact would be less than significant.~~ Therefore, the proposed project would not significantly contribute to cumulative regional emissions and no impact to a cumulatively considerable net increase in emissions during operations would occur.

~~The proposed project would not have an operational component. As such, operational activities following completion of construction of the proposed project would be the same as current levels. Therefore, no impact to a cumulatively considerable net increase in emissions during operations would occur.~~

3-7 *As a result of minor modifications made to the proposed project, additions have been made to the description of air quality sensitive receptors in Section 3, Environmental Impact Assessment, Air Quality III(d), of this Final MND as follows:*

Sensitive receptors located adjacent to the proposed pipeline alignment include the following land uses:

North Hollywood Park

- Single- and multi-family residences
- North Hollywood High School
- Amelia Earhart High School
- Oakwood Secondary School
- North Hollywood Library
- Toluca Lake Elementary School
- St. Paul's First Lutheran School
- East Valley High School
- North Hollywood Park
- Valley Village Park

3-8 *Minor clarifications have been made to the analysis of air quality sensitive receptors in Section 3, Environmental Impact Assessment, Air Quality III(d), of this Final MND as follows:*

Construction activity would generate on-site pollutant emissions associated with equipment exhaust and fugitive dust. The SCAQMD has developed localized significance thresholds to determine the potential for on-site project activity to expose adjacent sensitive receptors to significant pollutant concentrations. These thresholds were designed to identify potential health-related impacts from construction activity. Table 2 shows the estimated

localized emissions associated with construction. As shown, maximum daily volatile organic compounds (VOC), NO_x, CO, SO_x, $PM_{2.5}$, and PM_{10} emissions would not exceed the SCAQMD localized threshold of significance. Therefore, the impact to sensitive receptors would be less than significant.

3-9 *An editorial clarification has been made in Section 3, Environmental Impact Assessment, Air Quality III(d), of this Final MND as follows:*

The proposed project is not anticipated to substantially increase traffic congestion, however, since road closures would be limited in duration. In addition, construction activities would be limited to 90 linear feet of the public roads per day to minimize long-term traffic disruption. Therefore, the impact related to localized traffic concentrations would be less than significant.

3-10 *Due to a change in an agency's name, the following editorial revisions have been made in Section 3, Environmental Impact Assessment, Biological Resources IV(a), of this Final MND as follows:*

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~~ Wildlife or U.S. Fish and Wildlife Service?

No Impact. Sensitive plants include those listed as threatened or endangered, proposed for listing, or candidate for listing by the U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and ~~Game~~ Wildlife (CDF~~G~~W) or those listed by the California Native Plant Society (CNPS). Sensitive wildlife species are those species listed as threatened or endangered, proposed for listing, or candidate for listing by USFWS and/or CDF~~G~~W, or considered special status by CDF~~G~~W. Sensitive habitats are those that are regulated by USFWS, U.S. Army Corps of Engineers, and/or those considered sensitive by the CDF~~G~~W.

3-10 *In response to Comment 3-2, the following clarification has been added to Section 3, Environmental Impact Assessment, Biological Resources IV(a), of this Final MND as follows:*

Because the proposed project would involve trenching, and in some cases microtunneling, entirely within public road rights-of-way in a fully urbanized portion of the San Fernando Valley, there would be no direct impacts to sensitive plants, wildlife, or vegetation communities.

3-13 *In response to Comment 3-2 and as a result of minor modifications made to the proposed project, the following modifications have been made to Section 3, Environmental Impact Assessment, Cultural Resources V(b), of this Final MND as follows:*

The Southern Pacific Railroad right-of-way intersects with the proposed project alignment in four ~~three~~ locations, three ~~two~~ of which are currently in portions of the right-of-way operating as ~~Metro busways~~ the Metro Orange Line Busway and have likely undergone extensive disturbance. However, the

VA Hospital segment intersects with an intact portion of the right-of-way in the location of the Amtrak/Metrolink tracks located on Woodley Avenue, approximately 1,000 feet south of Roscoe Boulevard. Trenchless construction, including microtunneling, would be required for this rail crossing, as well as all busway crossings. The former Southern Pacific Railroad right-of-way has been surveyed for cultural resources, and although none have been previously recorded in this specific location, the right-of-way has a high potential for preserved historic and prehistoric archaeological sites.

3-22 *As a result of minor modifications made to the proposed project, an addition has been made to the list of schools located within 0.25-mile of the proposed pipeline segments in Section 3, Environmental Impact Assessment, Hazards and Hazardous Materials VIII(c), of this Final MND as follows:*

Less Than Significant Impact. The following schools are located within 0.25-mile of the proposed pipeline segments: North Hollywood High School, Amelia Earhart High School, Oakwood Secondary School, North Hollywood Library, Toluca Lake Elementary School, St. Paul's First Lutheran School, East Valley High School, James Madison Middle School, Roy Romer Middle School, Chandler Elementary School, Van Nuys Middle School, Birmingham High School, High Tech High School, Valley Alternative School, Mulholland Middle School, Newcastle Elementary School, Albert Einstein High School, and Vanalden Elementary School.

3-26 *In response to Comment 3-2, the following clarification has been added to Section 3, Environmental Impact Assessment, Hydrology and Water Quality IX(b), of this Final MND as follows:*

Microtunneling beneath areas where the proposed project crosses the Metro Orange Line Busway would occur at a similar depth. Therefore, it is not anticipated that groundwater would be encountered during construction, as deep excavations would not be necessary.

3-26 *The following clarification has been made to Section 3, Environmental Impact Assessment, Hydrology and Water Quality IX(c), of this Final MND as follows:*

Less Than Significant Impact. The proposed pipeline would be located within existing roadways, which have been previously disturbed. Portions of the proposed pipeline that would cross over existing washes in the project area would also be located within existing roadways that currently cross over these washes.

3-27 *The following clarification has been made to Section 3, Environmental Impact Assessment, Hydrology and Water Quality IX(d), of this Final MND as follows:*

Less Than Significant Impact. The project site consists entirely of existing roadways. Portions of the proposed pipeline that would cross over existing washes in the project area would also be located within existing roadways that currently cross over these washes.

3-31 *The following clarification has been made to Section 3, Environmental Impact Assessment, Noise XII(a), of this Final MND as follows:*

Less Than Significant Impact with Mitigation Incorporated. A significant impact would occur if the proposed project would expose persons to or generate noise levels in excess of standards established in the ~~local~~ general plan~~,~~ or noise ordinance of the local jurisdiction in which the proposed project is located ~~, or other applicable standards~~. As discussed in Section 1.3 above, the proposed project is located in the San Fernando Valley area of the City of Los Angeles. The City of Los Angeles regulates development and construction in its jurisdiction through standards established in the Los Angeles Municipal Code. The City of Los Angeles regulates noise within City boundaries through several sections of ~~its municipal code~~ the Los Angeles Municipal Code. These include Section 41.40 of the Los Angeles Municipal Code, which establishes time prohibitions on noise due to construction activity; Section 112.04, which prohibits the use of loud machinery and/or equipment within 500 feet of residences; and Section 112.05, which establishes maximum noise levels for powered equipment and powered hand tools. According to Section 41.40, no construction activity that might create loud noises in or near residential areas or buildings shall be conducted before 7:00 a.m. or after 9:00 p.m. on weekdays, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday or City holidays.

3-31 *As a result of minor modifications made to the proposed project, additions have been made to the description of noise sensitive receptors in Section 3, Environmental Impact Assessment, Noise XII(a), of this Final MND as follows:*

Sensitive receptors located within 500 feet of the proposed pipeline alignment include:

North Hollywood Park

- Single- and multi-family residences
- North Hollywood High School
- Amelia Earhart High School
- Oakwood Secondary School
- North Hollywood Library
- Toluca Lake Elementary School
- St. Paul's First Lutheran School
- North Hollywood Park
- Valley Village Park

3- 32-33 *As a result of minor modifications made to the proposed project, additions have been made to the description of noise monitoring dates and to Table 4 Existing Noise Levels, in Section 3, Environmental Impact Assessment, Noise XII(a), of this Final MND as follows:*

Ambient noise monitoring was performed using a SoundPro DL Sound Level Meter between 11:10 a.m. and 4:10 p.m. on June 6, 2012 and on March 7,

2013. As shown in Table 4 below, existing noise levels range from 51.5 to 78.3 A-weighted decibels (dBA) L_{eq} along the proposed alignment.

Table 4 Existing Noise Levels

Noise Monitoring Location	Noise Level (dBA, L_{eq})
Amelia Earhart High School	64.0
North Hollywood Library	64.6
Multi-Family Residences – 11515 Hartsook Street	61.4
James Madison Middle School	63.0
Valley Plaza Library	61.9
Sherman Oaks Hospital	72.0
Los Angeles Valley College	60.2
High Tech Charter High School	71.8
Sherman Oaks Center for Enriched Studies	62.3
Pierce College	51.5
Single-Family Residences – 8300 Gloria Avenue	78.3
VA Hospital	59.3

Source: Terry A. Hayes Associates, 2013.

3-33 *The following clarification has been made to Section 3, Environmental Impact Assessment, Noise XII(a), of this Final MND as follows:*

~~All equipment and tools would comply with the established noise limits.~~ Equipment noise levels would typically be greater than 75 dBA L_{eq} at 50 feet.

3- 34-35 *The following clarifications have been made to the noise analysis within Section 3, Environmental Impact Assessment, Noise XII(a), of this Final MND as follows:*

Installation of the proposed pipeline would occur within public roadways and would typically use a cut and cover trenching technique. The proposed project would install approximately 90 linear feet of pipeline per day to minimize long-term disruption within an area. However, noise from construction activities would still affect the areas immediately adjacent to each of the construction sites, specifically areas that are less than 500 feet from a construction site. As shown in Table 5 above, ~~the loudest~~ construction equipment ~~would~~ could generate noise levels up to 95 dBA~~, which~~ at 50 feet, or multiple loud pieces of equipment operating simultaneously could combine to generate a noise level that exceeds 100 dBA at 50 feet. However, the City of Los Angeles states in the *CEQA Thresholds Guide* that construction activity involving multiple pieces of equipment typically generate a noise level of 89 dBA at 50 feet.

Construction equipment noise levels would exceed the 75 dBA at 50 feet noise limitation listed in Section 112.05 of the Los Angeles Municipal Code. This code section, which explicitly addresses noise from construction equipment, requires that all feasible measures be implemented. Mitigation measures N-1 through N-11 are feasible measures to control noise levels,

including engine mufflers and noise blanket barriers. The City of Los Angeles has stated in the *CEQA Thresholds Guide* that mufflers typically reduce aggregate equipment noise levels by 3 dBA. Equipment noise would be at least 86 dBA at 50 feet after engine muffling (mitigation measure N-1). Noise sound blankets (mitigation measure N-8) can reduce noise levels by up to 10 dBA if properly located between the noise source and receptor. The implementation of other mitigation measures, while difficult to quantify, would also reduce and/or control construction noise levels.

Additional mitigation measures were considered to reduce noise levels, but were determined to be infeasible. These mitigation measures included:

- Electric Equipment - Electric equipment would generate less noise than diesel equipment but is not widely available and the horsepower associated with electric equipment would not meet project requirements.

- Relocation - Removing the affected land uses from the construction zone would eliminate the impact. This measure would not be feasible due to the number of affected land uses and associated cost of relocation.

- Window Retrofits - Retrofitting windows at affected land uses would reduce noise exposure. This measure would not be feasible due to the number of affected land uses and associated cost of relocation.

Implementation of mitigation measures N-1 through N-11 would reduce ~~construction~~ equipment engine noise levels, and the impact would be less than significant after mitigation. However, construction noise levels would still exceed 75 dBA at 50 feet.

3-35 *In response to Comment 3-2 and as a result of minor modifications made to the proposed project, the following modifications have been made to Section 3, Environmental Impact Assessment, Noise XII(a), of this Final MND as follows:*

~~T~~Microtunneling instead of trenching would be required during the construction of the VA Hospital segment to cross beneath the railroad tracks on Woodley Avenue south of Roscoe Boulevard and the San Fernando Wash on Magnolia Boulevard located 900 feet west of Tujunga Avenue. Microtunneling would also be required during the construction of the North Hollywood Park segment to cross beneath the Metro Orange Line Busway. A trenchless technique known as "microtunneling" would be used ~~with~~ in which a launching pit is located at one end ~~of the tunnel and equipment~~ and a receiving pit is located on the other end ~~of the tunnel~~. Hydraulic jacks would drive the water pipes through the ground from the launching pit to the receiving pit. The railroad tracks that cross Woodley Avenue are in an industrial area and approximately 1,000 feet from the nearest residential land use. ~~T~~Microtunneling activity at this location would not disturb any sensitive land use.

However, the microtunneling locations on Magnolia Avenue and the Metro Orange Line Busway would be within 500 feet of residential land uses and would increase ambient noise levels in the project area.

3-35 *The following clarifications have been made to the noise analysis conclusion within Section 3, Environmental Impact Assessment, Noise XII(a), of this Final MND as follows:*

The acoustical usage factor is a percentage of time that a particular piece of equipment is anticipated to be in full power operation during a typical construction day. The acoustical usage factor for a hydraulic jack is 25 percent and the noise level for the hydraulic jack is reduced to 80 dBA at 50 feet. The noise level generated from the hydraulic jack would exceed the 75 dBA at 50 feet noise limitation listed in Section 112.05 of the Los Angeles Municipal Code. Therefore, implementation of mitigation measures N-2 through N-11 would be required to reduce tunneling noise. ~~With implementation of mitigation~~ As described above, the proposed project with the implementation of these feasible mitigation measures would ~~tunneling activity would~~ result in a less than significant noise impact.

3-44 *Minor clarifications have been added explaining the future baseline traffic conditions in Section 3, Environmental Impact Assessment, Transportation/Traffic XVI(a), of this Final MND as follows:*

The analysis of future baseline traffic conditions included the addition of traffic growth, based on projections within the Metro 2010 Congestion Management Program. The highest Congestion Management Program traffic growth rates in the study area were multiplied by a factor of two to provide a conservative estimate of regional traffic growth plus trips expected to be generated by area projects. A list of area projects is provided in Appendix D of this document. Project construction activity would be completed by year 2022. Therefore, that year was used for future baseline conditions. Baseline conditions for the study roadway segments were generated based on the application of traffic growth rates.

To determine the impacts of peak construction activity on the roadway system, construction generated traffic was added to existing traffic (year 2012), traffic generated by other projects in the surrounding area, and ambient (background) growth in traffic volumes to determine future (year 2022) plus project conditions. Impact thresholds defined by LADOT were not used for the proposed project traffic analysis. These standards define significant impacts to long-term traffic operations. Construction of the proposed project would only temporarily constrict roadway capacity in affected segments, as the trench line would be returned to its existing condition and roadway operations fully restored following completion of construction activities. Thus, the construction impact analysis is based on roadway flow during construction and the generalized application of volume-to-capacity (V/C) calculations and levels of service (LOS). Based on LADOT guidance, significant impacts related to the roadway segments were defined based on the worsening of conditions at any segment to or within a final LOS

value of E or F. These two values represent poor traffic operating conditions. LADOT level of service definitions are provided in Table 7 below.

3- 45-49 *Minor clarifications have been added explaining the future baseline traffic conditions, revised table numbering, as well as the newly added Table 8 Future Without Project Study Conditions – Peak Hour Level of Service (2022) in Section 3, Environmental Impact Assessment, Transportation/Traffic XVI(a), of this Final MND. In addition, as a result of minor modifications made to the proposed project, modifications have been made to Table 9 (formerly Table 8) Future With Project Study Conditions – Peak Hour Level of Service (2022) and the traffic analysis, in Section 3, Environmental Impact Assessment, Transportation/Traffic XVI(a), of this Final MND. The clarifications and modifications to the traffic discussion of this Final MND are as follows:*

Future baseline without the proposed project traffic volumes and associated level of service values are provided in Table 8. The future traffic condition with peak construction traffic generated by the proposed project is shown in Table ~~8~~ 9 below.

Table 8 Future Without Project Study Conditions – Peak Hour Level of Service (2022)

#	Segment	AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
North Hollywood Segment					
1	Camarillo Street b/w Cahuenga Boulevard and Vineland Avenue/Lankershim Boulevard	1.219	F	1.267	F
2	Vineland Avenue b/w Camarillo Street and Magnolia Boulevard	0.414	A	0.451	A
3	Magnolia Boulevard b/w SR 170 and Colfax Avenue	0.816	D	0.906	E
Valley Plaza Park Segment					
4	Sherman Way b/w Woodman Avenue and Fulton Avenue	1.084	F	1.147	F
5	Sherman Way b/w Coldwater Canyon Avenue and Whitsett Avenue	1.038	F	1.153	F
6	Whitsett Avenue b/w Sherman Way and Vanowen Street	0.625	B	0.601	B
7	Vanowen Street b/w Whitsett Avenue and SR 170	0.812	D	0.946	E
Van Nuys Sherman Oaks Park Segment					
8	Oxnard Street b/w Kester Avenue and Van Nuys Boulevard	0.709	C	0.786	C
9	Van Nuys Boulevard b/w Clark Street and Weddington Street	1.032	F	1.123	F
10	Burbank Boulevard b/w Hazeltine Avenue and Woodman Avenue	0.980	E	0.964	E
11	Magnolia Boulevard b/w Van Nuys Boulevard and Hazeltine Avenue	0.976	E	0.899	D
Reseda Park Segment					
12	Victory Boulevard b/w Hayvenhurst Avenue and Balboa Boulevard	1.230	F	0.801	D
13	Victory Boulevard b/w Lindley Avenue and Reseda Boulevard	0.805	D	0.770	C
14	Balboa Boulevard b/w Victory Boulevard and Vanowen Street	0.853	D	0.858	D

Table 8 Future Without Project Study Conditions – Peak Hour Level of Service (2022)

#	Segment	AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
VA Hospital Segment					
15	Woodley Avenue b/w Sherman Way and Saticoy Street	1.018	F	0.927	E
16	Roscoe Boulevard b/w Woodley Avenue and Hayvenhurst Avenue	0.846	D	0.770	C
17	Roscoe Boulevard b/w Woodley Avenue and Haskell Avenue	0.883	D	0.828	D
18	Haskell Avenue b/w Roscoe Boulevard and Parthenia Street	0.339	A	0.257	A
19	Haskell Avenue b/w Nordoff Street and Plummer Street	0.628	B	0.389	A
Pierce College Segment					
20	Victory Boulevard b/w Reseda Boulevard and Wilbur Avenue	1.099	F	1.118	F
21	Victory Boulevard b/w Winnetka Avenue and Mason Street/Stadium Way	0.734	C	0.787	C

Source: KOA Corporation, 2013.

Table 9 ~~8~~ Future With Project Study Conditions – Peak Hour Level of Service (2022)

#	Segment	AM Peak Hour			PM Peak Hour		
		V/C	LOS	Significant Impact?	V/C	LOS	Significant Impact?
North Hollywood Segment							
1	Camarillo Street b/w Cahuenga Boulevard and Vineland Avenue/Lankershim Boulevard	1.227	F	Yes	1.286	F	No
2	Vineland Avenue b/w Camarillo Street and Magnolia Boulevard	0.749	C	No	0.455	A	No
3	Magnolia Boulevard b/w SR 170 and Colfax Avenue	~~1.156~~ 1.516	F	Yes	0.913	E	No
4	Colfax Avenue b/w Magnolia Boulevard and Chandler Boulevard	0.360	A	No	0.360	A	No
5	Chandler Boulevard westbound b/w SR 170 and Colfax Avenue	0.720	C	No	0.720	C	No
6	Chandler Boulevard eastbound b/w Morella Avenue and Colfax Avenue	0.720	C	No	0.720	C	No
Valley Plaza Park Segment							
~~4~~ 7	Sherman Way b/w Woodman Avenue and Fulton Avenue	1.358	F	Yes	1.152	F	No
~~5~~ 8	Sherman Way b/w Coldwater Canyon Avenue and Whitsett Avenue	1.300	F	Yes	1.159	F	No
~~6~~ 9	Whitsett Avenue b/w Sherman Way and Vanowen Street	1.162	F	Yes	0.607	B	No
~~7~~ 10	Vanowen Street b/w Whitsett Avenue and SR 170	1.509	F	Yes	0.953	E	No
Van Nuys Sherman Oaks Park Segment							
~~8~~ 11	Oxnard Street b/w Kester Avenue and Van Nuys Boulevard	1.318	F	Yes	0.793	C	No
~~9~~ 12	Van Nuys Boulevard b/w Clark Street and Weddington Street	1.916	F	Yes	1.130	F	No
~~10~~ 13	Burbank Boulevard b/w Hazeltine Avenue and Woodman Avenue	1.821	F	Yes	0.971	E	No
~~11~~ 14	Magnolia Boulevard b/w Van Nuys Boulevard and Hazeltine Avenue	1.812	F	Yes	0.906	E	Yes

Table 9 ~~8~~ Future With Project Study Conditions – Peak Hour Level of Service (2022)

#	Segment	AM Peak Hour			PM Peak Hour		
		V/C	LOS	Significant Impact?	V/C	LOS	Significant Impact?
Reseda Park Segment							
~~12~~ 15	Victory Boulevard b/w Hayvenhurst Avenue and Balboa Boulevard	1.540	F	Yes	0.804	D	No
~~13~~ 16	Victory Boulevard b/w Lindley Avenue and Reseda Boulevard	~~1.450~~ 1.451	F	Yes	0.774	C	No
~~14~~ 17	Balboa Boulevard b/w Victory Boulevard and Vanowen Street	1.069	F	Yes	0.863	D	No
VA Hospital Segment							
~~15~~ 18	Woodley Avenue b/w Sherman Way and Saticoy Street	1.890	F	Yes	0.934	E	No
~~16~~ 19	Roscoe Boulevard b/w Woodley Avenue and Hayvenhurst Avenue	1.526	F	Yes	0.773	C	No
~~17~~ 20	Roscoe Boulevard b/w Woodley Avenue and Haskell Avenue	1.592	F	Yes	0.831	D	No
~~18~~ 21	Haskell Avenue b/w Roscoe Boulevard and Parthenia Street	0.633	~~F~~ B	No	0.263	A	No
~~19~~ 22	Haskell Avenue b/w Nordoff Street and Plummer Street	1.167	F	Yes	0.396	A	No
Pierce College Segment							
~~20~~ 23	Victory Boulevard b/w Reseda Boulevard and Wilbur Avenue	2.549	F	Yes	1.123	F	No
~~21~~ 24	Victory Boulevard b/w Winnetka Avenue and Mason Street/Stadium Way	1.324	F	Yes	0.791	C	No

Source: KOA Corporation, 2013.

3-50 *The following clarifications have been made to Section 3, Environmental Impact Assessment, Transportation/Traffic XVI(a), of this Final MND as follows:*

As shown in Table ~~8~~ 9, ~~the project construction impacts to traffic would be significant but temporary.~~ during the AM Peak Hour, 19 roadway segments would operate at LOS F due to temporarily reduced roadway capacities associated with proposed project construction. During the PM Peak Hour, the operation of one roadway segment would worsen from LOS D to LOS E. Temporary traffic lane closures during the construction of the recycled water pipelines would affect some nearby residential uses, including driveway access, use of adjacent on-street parking, and neighborhood circulation. Additionally, construction of the proposed project would temporarily constrict roadway capacity. Construction would cause a traffic nuisance on a block by block basis as the pipeline is being installed. As discussed in Section 1.6 above, approximately 90 linear feet of pipeline would be installed per day and construction is anticipated to occur sequentially along the alignment of each segment to minimize long-term disruption within any one area. Therefore, traffic delays resulting from installation of the pipeline within a roadway block would be short-term and temporary. However, for the purposes of a conservative impact analysis, as shown in Table 9, construction impacts to traffic would be significant but temporary. Implementation of mitigation measure~~s~~ TR-1 and TR-2 are required to reduce the impacts to a less than significant level.

3-52 *As a result of minor modifications made to the proposed project, the following modifications have been made to Section 3, Environmental Impact Assessment, Transportation/Traffic XVI(f), of this Final MND as follows:*

Within the VA Hospital segment, Woodley Avenue currently contains bike lanes along the portion of the proposed pipeline alignment to the VA Hospital. Within the North Hollywood Park segment, bike lanes are currently located along Colfax Avenue and Chandler Boulevard.

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SECTION 5
RESPONSE TO COMMENTS ON THE MITIGATED NEGATIVE DECLARATION

5.1 Introduction

The San Fernando Valley Water Recycling Project MND was distributed on November 16, 2012, for a 30-day public review period pursuant CEQA and its implementing guidelines. The public review period concluded on December 17, 2012. The MND was distributed to interested or involved public agencies and organizations for review. The MND was made available for general public review at the LADWP, Environmental Affairs Division (111 North Hope Avenue, Room 1044), Panorama City Branch Public Library (14345 Roscoe Boulevard), Canoga Park Branch Public Library (20939 Sherman Way), Valley Plaza Branch Public Library (12311 Vanowen Street), Mid-Valley Regional Branch Public Library (16244 Nordhoff Street), Van Nuys Branch Public Library (6250 Sylmar Avenue), North Hollywood Regional Branch Public Library (5211 Tujunga Avenue), and West Valley Regional Branch Public Library (19036 Vanowen Street). In addition, the MND was available online at: http://www.ladwp.com/envnotices.

During this public review period, a total of five comment letters were received. Each letter has been assigned a number code, and individual comments in each letter have also been coded to facilitate responses. For example, the letter from the Native American Heritage Commission is identified as Comment Letter 2, with comments noted as 2-1, 2-2, etc. Copies of each comment letter are provided prior to the response to each letter. Comments that raise issues not directly related to the substance of the environmental analysis in the MND are noted but, in accordance with CEQA, did not receive a detailed response.

5.2 Responses to Written Comments That Address Environmental Issues in the MND

The written comment letters received on the MND are listed in Table 10 below. The comments and associated responses are arranged by the date of receipt of the comment letter. The individual comments in the letters have been numbered and are referred to in the responses that directly follow the comment letter.

Table 10 List of Written Comment Letters Received in Response to MND

Letter No.	Agency/Organization/Individual	Date	Page No. of Response
1	California Department of Transportation (Caltrans) *Signed: Dianna Watson*	November 30, 2012	5-5
2	State of California, Native American Heritage Commission *Signed: Dave Singleton*	November 26, 2012	5-10
3	Los Angeles County Metropolitan Transportation Authority (Metro) *Signed: Scott Hartwell*	December 14, 2012	5-14
4	State Water Resources Control Board *Signed: Ahmad Kashkoli*	December 14, 2012	5-36

Table 10 List of Written Comment Letters Received in Response to MND

Letter No.	Agency/Organization/Individual	Date	Page No. of Response
5	State of California, Governor's Office of Planning and Research, State Clearinghouse *Signed: Scott Morgan*	December 19, 2012	5-40

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, REGIONAL PLANNING
IGR/CEQA BRANCH
100 MAIN STREET, MS # 16
LOS ANGELES, CA 90012-3606
PHONE: (213) 897-9140
FAX: (213) 897-1337

Flex your power!
Be energy efficient!

November 30, 2012

Ms. Irene Paul
Department of Water and Power
City of Los Angeles
111 North Hope Street, Room 1044
Los Angeles, CA 90012

IGR/CEQA No. 121128AL-MND
San Fernando Valley Water Recycling Project
Vic. LA-05, LA-170, LA-405
SCH #: 2012111053

Dear Ms. Paul:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project is to maximize the use of recycled water to replace potable water sources for irrigation and industrial uses by extending the recycled water pipeline network to the San Fernando Valley Area of the City of Los Angeles.

Please be reminded that any work performed within the State Right-of-way will require an Encroachment Permit from the Caltrans. Any modifications to State facilities must meet all mandatory design standard and specifications. For more information on the Permit process please see the contact information below: 1-1

Caltrans District 07
Encroachment Permit Offices
100 South Main Street, Suite 100
Los Angeles, CA 90012
(213) 897-3631
(213-897-0420 FAX

Storm water run-off is a sensitive issue for Los Angeles and Ventura counties. Please be mindful that projects should be designed to discharge clean run-off water. Additionally, discharge of storm water run-off is not permitted onto State highway facilities without a storm water management plan. 1-2

Transportation of heavy construction equipment and/or materials, which requires the use of oversized-transport vehicles on State highways, will require a transportation permit from Caltrans. It is recommended that large size truck trips be limited to off-peak commute periods. In addition, a truck/traffic construction management plan is needed for this project. 1-3

If you have any questions, please feel free to contact Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 121114AL.

Sincerely,

DIANNA WATSON
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

Comment Letter 1: Caltrans

Response 1-1

A listing of the permits and approvals required to implement the proposed project is provided in Section 1.8 on pages 1-22 through 1-23 of this Final MND. If the proposed project is approved by the City of Los Angeles Board of Water and Power Commissioners, LADWP would secure an Encroachment Permit from Caltrans as required to implement the proposed project. LADWP would also coordinate with Caltrans staff as needed during the permitting process. Mitigation measure TR-2 on page 3-51 of this Final MND requires that LADWP consult with Caltrans to obtain permits for the transport of oversized loads, and to obtain encroachment permits for any work within the State right-of-way.

Response 1-2

The proposed pipeline alignment would be located entirely within existing roadways. As discussed on page 3-27 of this Final MND, the construction of the proposed project would require water, as necessary, to control fugitive dust. Fugitive dust emissions at the construction site would be controlled by water trucks equipped with spray nozzles. Construction water needs would generate minimal quantities of discharge water, which would drain into existing storm drains located along the proposed pipeline alignment. BMPs would be identified in the SWPPP developed for the proposed project pursuant to the National Pollutant Discharge Elimination System permit requirements to control runoff from the project sites during construction.

Following construction of the proposed project, all roadways would be returned to their original condition and storm water flows would be directed to the existing storm drain system, similar to existing conditions. Storm water flows would not be discharged onto State highway facilities as a result of the proposed project. The implementation of the proposed project would result in a similar amount of permeable surfaces as under existing conditions. Thus, no substantial increase in the amount of runoff from the project site is anticipated. The proposed project would not provide substantial additional sources of polluted runoff.

Response 1-3

As discussed in Response 1-1 above, mitigation measure TR-2 on page 3-51 of this Final MND requires that LADWP consult with Caltrans to obtain permits for the transport of oversized loads, and to obtain encroachment permits for any work within the State right-of-way.

Mitigation measure TR-1 on pages 3-50 through 3-51 of this Final MND ensures that a TMP would be prepared prior to the start of construction of the proposed project. The TMP shall consist of traffic control plans, including minimizing truck trips during peak traffic periods.

STATE OF CALIFORNIA

Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

November 26, 2012

Ms. Irene Paul, Environmental Planner
Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Re: SCH#2012111053; CEQA Notice of Completion; proposed Mitigated Negative Declaration for the **"San Fernando Valley Water Recycling Project;"** located in the San Fernando Valley among several cities and communities; Los Angeles County, California

Dear Ms. Paul:

The NAHC is the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3rd 604).

This letter includes state and federal statutes relating to Native American historic properties or resources of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9. 2-1

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendment s effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC advises the Lead Agency to request a Sacred Lands File search of the NAHC if one has not been done for the 'area of potential effect' or APE previously. 2-2

The NAHC "Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural

significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code § 5097.95, the NAHC requests cooperation from other public agencies in order that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties, including archaeological studies. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and California Public Resources Code Section 21083.2 (Archaeological Resources) that requires documentation, data recovery of cultural resources, construction to avoid sites and the possible use of covenant easements to protect sites.

Furthermore, the NAHC if the proposed project is under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.' 2-2 Cont.

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for inadvertent discovery of human remains mandate the processes to be followed in the event of a discovery of human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects. 2-3

Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a).

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

Native American Contacts
Los Angeles County
November 26, 2012

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks, CA 91362
folkes@msn.com
805 492-7255
(805) 558-1154 - cell

Chumash
Tataviam
Ferrnandeño

Fernandeno Tataviam Band of Mission Indians
Ronnie Salas, Cultural Preservation Department
1019 - 2nd Street, Suite #1
San Fernando CA 91340
rsalas@tataviam-nsn.gov
(818) 837-0794 Office

(818) 837-0796 Fax

Fernandeno
Tataviam

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th St, Rm. 403
Los Angeles , CA 90020
randrade@css.lacounty.gov
(213) 351-5324
(213) 386-3995 FAX

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.
Private Address
,
tattnlaw@gmail.com
310-570-6567

Gabrielino Tongva

S an Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838
Newhall , CA 91322
tsen2u@hotmail.com
(661) 753-9833 Office
(760) 885-0955 Cell
(760) 949-1604 Fax

Fernandeño
Tataviam
Serrano
Vanyume
Kitanemuk

Randy Guzman - Folkes
6471 Cornell Circle
Moorpark , CA 93021
ndnRandy@yahoo.com
(805) 905-1675 - cell

Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

2-4

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012111053; CEQA Notice of Completion; proposed Mitigated Negative Declaration for the San Fernando Valley Recycling Project; located among several cities and communities in the San Fernando Valley; Los Angeles County, California.

Comment Letter 2: Native American Heritage Commission

Response 2-1

This comment includes introductory remarks and does not state a specific concern or question regarding the adequacy of the environmental impact analysis in the MND. No further response to this comment is required.

Response 2-2

An MND was prepared for the San Fernando Valley Water Recycling Project. As discussed in Section V starting on page 3-12 of the Final MND, the cultural resources analysis was based on the Cultural Resources Assessment prepared for the proposed project, which is included as Appendix C of the Final MND. The project area, or area of potential effects (APE), is identified in the Cultural Resources Assessment completed for the proposed project. The analysis in the MND determined that no historical resources are located within the proposed project alignment and no mitigation measures are required.

As stated on page 3-14 of the Final MND, "a Native American contact program was conducted to inform interested parties of the proposed project and to address any concerns regarding Traditional Cultural Properties or other resources that might be affected by the proposed project. The program involved contacting Native American representatives provided by the Native American Heritage Commission to solicit comments and concerns regarding the proposed project." Additionally, "A letter was prepared and mailed to the Native American Heritage Commission on May 11, 2012. The letter requested that a Sacred Lands File search be conducted for the proposed project…" A response was received in a letter from the Native American Heritage Commission dated May 15, 2012. The letter indicated that "Native American cultural resources were identified in the project area of potential affect…also, please note; the Native American Heritage Commission Sacred Lands Inventory is not exhaustive and does not preclude the discovery of cultural resources during any groundbreaking activity." The letter also included an attached list of Native American contacts. Letters were mailed on May 21, 2012, to each group or individual provided on the contact list. Maps depicting the project area and response forms were attached to each letter. Follow-up phone calls were made to each party on June 21, 2012. A total of two responses were received; these responses are included in Appendix C, Cultural Resources Assessment.

Section V(b) of the Final MND concluded that construction activities associated with the proposed project would have the potential to affect previously undiscovered archaeological resources, including Native American cultural resources. The North Hollywood Park, Van Nuys Sherman Oaks Park, and VA Hospital segments were identified as having the potential to encounter archaeological resources during construction activities. Therefore, as described on pages 3-14 through 3-15 of the Final MND, implementation of mitigation measure CR-1 would be required to ensure that impacts related to the discovery of archaeological resources would be less than significant. Mitigation measure CR-1 requires that archaeological monitoring of ground disturbing activities in the three identified segments occur. It also requires that requires that a qualified archaeological monitor, under the direction of a qualified archaeological Principal Investigator, be present on-site during ground-disturbing activities. The mitigation also requires that interested Native American parties be consulted if prehistoric archaeological sites are encountered within the project area. Furthermore, in accordance with CEQA Guidelines Section 15064.5 and Section 106

of the National Historic Preservation Act, in the event that archaeological resources are encountered at the project site, the construction contractor would be required to halt activity in the affected area until appropriate treatment of the resource(s) is determined by the qualified archaeological Principal Investigator (see page 3-15 of the Final MND).

Response 2-3

As discussed in Section V(d) on page 3-17 of this Final MND, no formal cemeteries are known to occur within the project area. "As discussed in Section V(b) [of the Final MND] above, a Sacred Lands File search and Native American contact program were conducted for the proposed project." As discussed in Response 2-2 above, the Sacred Lands File search identified Native American cultural resources within the project area. Letters were mailed on May 21, 2012, to each group or individual provided on the Native American contact list. Follow-up phone calls were made to each party on June 21, 2012. A total of two responses were received; these responses are included in Appendix C, Cultural Resources Assessment. As discussed on page 3-17 of this Final MND, 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 discovered remains are determined to be of Native American origin, the Native American Heritage Commission would be contacted and a Most Likely Descendent identified.

Response 2-4

The commenter includes a list of Native American Contacts dated November 26, 2012 for the proposed project. This list includes all of the same contacts as the contact list received from the Native American Heritage Commission in their letter dated May 15, 2012. There is one Native American contact that is not listed under the Native American Contacts as part of the comment letter dated November 26, 2012, but is listed on the contact list received from the Native American Heritage Commission in their letter dated May 15, 2012. All individuals from both lists are currently included in the project mailing list and will be notified of availability of the Final MND.

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

Metro

December 14, 2012

Ms. Irene Paul
Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012

RE: Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration (MND) for the San Fernando Valley Water Recycling Project

Dear Ms. Paul:

The Los Angeles County Metropolitan Transportation Authority (LACMTA) is in receipt of the Notice of Intent (NOI) to Adopt a Mitigated Negative Declaration (MND) for the San Fernando Valley Water Recycling Project. This letter conveys recommendations concerning issues that are germane to MTA's responsibilities in relation to the proposed project.

MTA, in coordination with the City of Los Angeles, is conducting an alternatives analysis on the East San Fernando Valley Transit Corridor project included in the Measure R Expenditure Plan approved by the voters of Los Angeles County in November, 2008. Among the transit alternatives being evaluated is bus rapid transit (BRT), light rail transit (LRT), or a street car that would operate along Van Nuys Boulevard. Should an alignment along Van Nuys Boulevard be selected, construction of the East San Fernando Valley Transit Corridor project may coincide with the proposed pipeline installation along Van Nuys Blvd at this location. Coordination between the project sponsor, MTA, and the City of Los Angeles will be needed to eliminate potential construction conflicts. For more information on the East San Fernando Valley Transit Corridor alternatives analysis please contact MTA Project Manager Walter Davis at 213-922-3079. 3-1

It is noted on Page 1-16 of the MND that the pipeline would "cross the Metro Orange Line Busway on Victory Boulevard approximately 1,000 feet east of Winnetka Avenue." Busway crossings would require trenchless construction, such as tunneling, so as not to affect bus operations." To ensure that any potential impacts to the Metro Orange Line at this and/or other locations are avoided, be advised of the following:

1. The developer or its contractor must obtain a license agreement from MTA's Real Estate Department prior to placement of lines under Metro Right-of-Way (ROW);
2. Design of proposed pipelines (under or within 10 feet of Metro ROW and active lines) shall be submitted to MTA for approval to ensure uninterrupted service of the Metro Orange Line and the ability to promptly close safety valves stopping water flow in the event of a pipe leak such as might occur during an earthquake; 3-2
3. Encasement or sleeving of the proposed pipelines shall be required if traversing under Metro's active ROW;
4. MTA staff shall be permitted to monitor construction activity to ascertain any impact to Metro Orange Line ROW;
5. The applicant should be advised that MTA may request reimbursement for costs incurred as a result of project construction/operation issues that cause delay or harm to Metro service delivery or infrastructure.

Several transit corridors with Metro bus service could be impacted by the proposed pipeline installation. Metro Bus Operations Control Special Events Coordinator should be contacted at 213-922-4632 regarding construction activities that may impact Metro bus lines. Other Municipal Bus Service Operators including LADOT may also be impacted and therefore should be included in construction outreach efforts.

3-3

If you have any questions regarding this response, contact me at 213-922-2836 or by email at hartwells@metro.net.

Sincerely,

Scott Hartwell
CEQA Review Coordinator, Long Range Planning

Comment Letter 3: Metro

Response 3-1

Coordination between LADWP and Metro has been ongoing during the design and environmental review process for the proposed project. As discussed on page 2-3 of this Final MND, Metro is listed as a Responsible/Trustee Agency for the implementation of the proposed project. If the proposed project is approved, LADWP would coordinate with Metro regarding any potential construction conflicts to public transportation service. Mitigation measure TR-1 on pages 3-50 through 3-51 of the Final MND requires LADWP to prepare a TMP prior to the start of construction, which also requires coordination with local transit agencies (e.g., Metro, Caltrans and LADOT) in order to minimize impacts to passenger loading areas and to minimize travel times on scheduled transit routes. All affected transit agencies shall be contacted to provide for any required modifications or temporary relocation of transit facilities. Any potential construction conflicts between the proposed project and Metro's East San Fernando Valley Transit Corridor Project would be reviewed and discussed as part of the coordination required in the implementation of mitigation measure TR-1.

Response 3-2

The Final MND includes clarifications as needed regarding the method of trenchless construction required in order to install the proposed recycled water pipelines beneath the existing Metro Orange Line Busway without impacting the transit right-of-way (see Section 4, Clarifications and Modifications).

As discussed above, coordination between LADWP and Metro has been ongoing during the design and environmental review process for the proposed project. A listing of the permits and approvals required to implement the proposed project is provided in Section 1.8 on pages 1-22 through 1-23 of this Final MND. As listed in this section, LADWP would be required to obtain a Right of Entry Permit from Metro in order to access and tunnel beneath the transit right-of-way. Mitigation measure TR-1 requires LADWP to prepare a TMP prior to the start of construction, which shall require coordination with local transit agencies (e.g., Metro). The list of recommendations and points of advice included in Metro Comment 3-2 would be reviewed and discussed during the required coordination between LADWP and Metro, prior to construction of the proposed project.

Response 3-3

See Responses 3-1 and 3-2 above.

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

DEC 14 2012

Irene Paul
City of Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Dear Ms. Irene Paul:

CLEAN WATER STATE REVOLVING FUND (CWSRF) PROGRAM INFORMATION FOR THE CITY OF LOS ANGELES DEPARTMENT OF WATER AND POWER (CITY); SAN FERNANDO VALLEY WATER RECYCLING PROJECT (PROJECT); LOS ANGELES COUNTY; STATE CLEARINGHOUSE NO. 2012111053

We have received a copy of the City's draft Initial Study and Mitigated Negative Declaration (IS/MND) from the State Clearinghouse for the Project. Since the Project may be eligible for CWSRF financing, the State Water Resources Control Board (State Water Board) is providing information on the environmental review requirements of the CWSRF Program, should the City decide to pursue CWSRF financing in the future.

The CWSRF Program provides low-cost financial assistance for a wide variety of water quality improvement and enhancement projects that protect water quality and public health. It has grant funds under certain conditions with limited availability. The application period is continuous. For additional information, please refer to the State Water Board's CWSRF Program website at: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/index.shtml. 4-1

If the City decides to pursue CWSRF financing, please note that in addition to California Environmental Quality Act (CEQA) requirements, there are federal environmental laws and regulations applicable to the CWSRF Program. Any environmental issues raised must be resolved before the State Water Board can approve CWSRF financing for your Project. Four enclosures are included that further explain the CWSRF Program environmental review process and the additional federal requirements. The City must meet those listed federal requirements if it decides to seek CWSRF financing.

Following are specific comments on the City's IS/MND:

1. Mitigation measures were identified in the IS/MND to reduce environmental impacts to a less than significant level. In accordance with CEQA Guidelines, Section 15074, please prepare and adopt a Mitigation Monitoring and Reporting Program (MMRP) to report and/or monitor on those identified mitigation measures, and include the MMRP in the final IS/MND. 4-2

Thank you for your consideration of the CWSRF Program. State Water Board staff is more than happy to discuss the CWSRF Program requirements in more detail if you decide to apply for CWSRF financing. If you have any questions or concerns, please feel free to contact me at (916) 341-5855, or by email at AKashkoli@waterboards.ca.gov, or contact Jessica Collado at (916) 341-7388, or by email at JCollado@thewaterboards.ca.gov 4-3

Sincerely,

Ahmad Kashkoli

Ahmad Kashkoli
Senior Environmental Scientist

Enclosures (4)

1. SRF & CEQA-Plus
2. Quick Reference Guide to CEQA Requirements for State Revolving Fund Loans
3. Instructions and Guidance for "Environmental Compliance Information"
4. Basic Criteria for Cultural Resources Reports

cc: State Clearinghouse
(Re: SCH# 2012111053)
P.O. Box 3044
Sacramento, CA 95812-3044

Introduction:

The State Water Resources Control Board (State Water Board) uses the California Environmental Quality Act (CEQA) review process and compliance with federal environmental laws and regulations to satisfy the environmental requirements of the Clean Water State Revolving Fund (CWSRF) Program Operating Agreement between the United States Environmental Protection Agency (USEPA) and the State Water Board. The CWSRF Program is partially funded by a capitalization grant from the USEPA. The issuance of funds from the CWSRF Program is equivalent to a federal action, and thus, compliance with federal environmental laws and regulations is required for projects being funded under the CWSRF Program.

All CWSRF Program applicants must submit adequate and complete environmental documentation to the State Water Board. Following submittal of an applicant's environmental documents, the State Water Board will review the documents to determine if the information is sufficient to document compliance with the CWSRF Program environmental requirements, including making a determination if consultation with federal authorities is required, and may request additional environmental information, when needed. The State Water Board encourages all applicants to initiate early consultation, so that the State Water Board can better streamline the environmental review process.

CEQA Information:

All projects coming to the State Water Board for funding are considered "projects" under CEQA because of the State Water Board's discretionary decision to approve funding. 4-4

Detailed information, including CEQA statutes and guidelines can be found online at the California Natural Resources Agency website at http://ceres.ca.gov/ceqa. A CEQA Process Flowchart that shows interaction points between lead and responsible agencies can be found at http://ceres.ca.gov/topic/env_law/ceqa/flowchart/index.html. In addition, State Water Board environmental staff is available to answer questions about the CEQA process, as well as the CWSRF Program environmental requirements. Please contact your assigned Project Manager at the State Water Board, regarding contact information for the appropriate environmental staff.

CEQA requires full disclosure of all aspects of the project, including impacts and mitigation measures that are not only regulated by state agencies, but also by federal agencies. Early consultation with state and federal agencies in the CEQA process will assist in minimizing changes to the project when funding is being requested from the State Water Board.

The types of CEQA documents that may apply to an applicant's project include one or a combination of the following: 1) Notice of Exemption (NOE); 2) Initial Study and Negative Declaration (ND); 3) Initial Study and Mitigated Negative Declaration (MND) with a Mitigation Monitoring and Reporting Program (MMRP); 4) Environmental Impact Report (EIR) with an MMRP; and/or 5) Addendum, Supplemental and Subsequent ND, MND or EIR. The applicant must determine the appropriate document for its project and submit the supporting information listed under the applicable section of the Environmental Package Checklist for Applicant (Attachment 1), along with a completed copy of the Evaluation Form for Environmental Review and Federal Coordination (Attachment 2). Please submit two copies of all CEQA documents.

The applicant must ensure the CEQA document is specific to the project for which funding is being requested. Program or Master Plan EIRs may not be suitable for satisfying the State Water Board environmental requirements if these documents are not project-specific. When an applicant uses an Addendum, Supplemental or Subsequent CEQA document for a project, the associated Program or Master Plan EIR must also be submitted, especially if the Addendum, Supplemental or Subsequent CEQA document includes references to pertinent environmental and mitigation information contained in the Program or Master Plan EIR.

If the applicant is using a CEQA document that is older than five years, the applicant must re-evaluate environmental and project conditions, and develop and submit an updated environmental document (such as an Addendum, Supplemental or Subsequent CEQA document) based on the results of that re-evaluation. The updated environmental document must be circulated through the State Clearinghouse for public review. The applicant must adopt the final updated environmental document, including any new identified measures, make CEQA findings, and file a Notice of Determination (NOD) with the local county clerk(s) and the Governor's Office of Planning and Research, State Clearinghouse (State Clearinghouse).

Each applicant, if it is a public agency, is responsible for approving the CEQA documents it uses regardless of whether or not it is a lead agency under CEQA. Non-profit organizations shall only be responsible for approving and ensuring implementation of the applicable project mitigation measures identified in the MMRP. All public agencies applying for CWSRF Program funding shall file either an NOE or an NOD with the State Clearinghouse and the local county clerk(s). Date stamped copies of those notices must be submitted with all the applicable environmental documents.

4-4 Cont.

If the CEQA document was jointly prepared by a federal public governmental agency to satisfy the National Environmental Policy Act (NEPA) requirements, then the applicant must submit the corresponding NEPA documents, including a Finding of No Significant Impact, or a Record of Decision completed by the federal NEPA lead agency.

Federal Information:

In addition to CEQA compliance, the State Water Board is required to document environmental compliance with federal environmental laws and regulations, including:

1. Federal Endangered Species Act (ESA), Section 7:

The United States Department of the Interior, Fish and Wildlife Service (USFWS) and the United States Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) must be consulted for any project that will have the potential to adversely impact a federal special-status species. The USEPA delegated the State Water Board to act as the non-federal lead for initiating informal Section 7 ESA consultation with the USFWS. The State Water Board will coordinate with the USEPA for projects requiring formal Section 7 ESA consultation with the USFWS and projects that will impact federal special-status fish species under the NMFS jurisdiction. The USFWS and NMFS must provide written concurrence prior to a CWSRF financing agreement. USFWS and NMFS comments may include conservation measures, for which the applicant's CWSRF financing agreement will be conditioned to ensure compliance.

For further information on the federal ESA law, regulation, policy, and notices, go to http://www.fws.gov/endangered/laws-policies/index.html and http://www.nmfs.noaa.gov/pr/laws/esa/. Note that compliance with both the state and federal ESAs is required of projects having the potential to impact state and federal special-status species. Although overlap exists between the state and federal ESAs, there might be additional or more restrictive state requirements. For further information on the state ESA, refer to the California Department of Fish and Game website at http://www.dfg.ca.gov/habcon/cesa/.

2. Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat (EFH):

The Magnuson-Stevens Fishery Conservation and Management Act, as amended, is designed to manage and conserve national fishery resources. EFH consultations are only required for actions that may adversely effect EFH. The applicant needs to determine whether the proposed project may adversely affect EFH. NMFS is responsible for publishing maps and other information on the locations of designated EFH, and can provide information on ways to promote conservation of EFHs to facilitate this assessment. If a project may adversely affect a designated EFH, the applicant must complete an EFH consultation.

The State Water Board will coordinate with the USEPA to request an EFH consultation from the NMFS. NMFS is required to respond informally or in writing. NMFS comments may include conservation measures, for which the applicant's CWSRF financing agreement will be conditioned to ensure compliance. For more information, see the brochure at http://www.nmfs.noaa.gov/sfa/reg_svcs/Council%20stuff/council%20orientation/2007/2007TrainingCD/TabT-EFH/EFH_CH_Handout_Final_3107.pdf.

3. National Historic Preservation Act (NHPA), Section 106:

The NHPA focuses on federal compliance. Section 106 requires Federal agencies to take into account the effects of their undertakings on historic properties. The Section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. The Section 106 compliance efforts and reports must be prepared by a qualified researcher that meets the Secretary of the Interior's Professional Qualifications Standards (www.cr.nps.gov/local-law/arch_stnds_9.htm). 4-4 Cont.

In addition, CEQA requires that impacts to cultural and historic resources be analyzed. The "CEQA and Archeological Resources" section from the Governor's Office of Planning and Research CEQA Technical Advice Series states that the lead agency obtains a current records search from the appropriate California Historical Resources Information System Center. Also, to contact the Native American tribes that are culturally affiliated with a project area from the list obtained from the Native American Heritage Commission (NAHC).

The NAHC can be contacted at:

915 Capitol Mall, Room 364
Sacramento, CA 95814
Tele: (916) 653-4082

4. Clean Air Act:

For CWSRF financed projects, we recommend including a general conformity section in the CEQA documents so that another public review process will not be needed, should a conformity determination be required. The applicant should check with its local air quality management district and review the Air Resources Board California air emissions map for information on the State Implementation Plan. For information on the analysis steps involved in evaluating air quality conformity, please contact the State Water Board environmental staff through the assigned Project Manager.

5. Coastal Zone Management Act:

Projects proposing construction in the Coastal Zone will require consultation with either the California Coastal Commission (or the designated local agency with a Local Coastal Program), or the San Francisco Bay Conservation and Development Commission (for projects located in the San Francisco Bay area). The applicant must submit a copy of the approved Coastal Development permit to the State Water Board to satisfy this requirement.

For more information on Coastal Zone Management Act requirements refer to the following agencies websites:

- United States Coastal Zone Boundaries through the NMFS website at http://coastalmanagement.noaa.gov/mystate/docs/StateCZBoundaries.pdf;
- California Coastal Commission website at http://www.coastal.ca.gov/ccatc.html; and/or
- San Francisco Bay Conservation and Development Commission website at http://www.bcdc.ca.gov/.

6. Coastal Barriers Resources Act:

The Coastal Barriers Resources Act is intended to discourage development in the Coastal Barrier Resources System and adjacent wetlands, marshes, estuaries, inlets, and near-shore waters. Since there is no designated Coastal Barrier Resources System in California, no impacts from California projects are expected. However, should the applicant believe there may be impacts to the Coastal Barrier Resources System due to special circumstances, please use the following information as a guide. 4-4 Cont.

During the planning process, the applicant should consult with the appropriate Coastal Zone management agency (e.g., City or County with an approved Local Coastal Program, the California Coastal Commission, or the San Francisco Bay Conservation and Development Commission) to determine if the project will have an effect on the Coastal Barrier Resources System. If the project will have an effect on the Coastal Barrier Resources System, the State Water Board must consult with the appropriate Coastal Zone management agency and the USFWS. Any recommendations from the Coastal Zone management agency and USFWS will be incorporated into the project's design prior to approval of CWSRF financing.

For more information and to ensure that no modifications to Coastal Barrier Resources System have occurred, please visit: http://www.fws.gov/CBRA/.

7. Farmland Protection Policy Act:

Projects involving impacts to farmland designated as prime and unique, local and statewide importance, or under a Williamson Act Contract, will require consultation with the United States Department of Agriculture, Natural Resources Conservation Service and/or California Department of Conservation. For more information on the Farmland Protection Policy Act go to http://www.nrcs.usda.gov/programs/fppa, and regarding the Williamson Act Contact go to http://www.consrv.ca.gov/dlrp/lca.

8. Floodplain Management – Executive Order 11988:

Each agency shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities. Before taking an action, each agency shall determine whether the proposed action will occur in a designated floodplain. The generally established standard for risk is the flooding level that is expected to occur every 100 years. If an agency determines or proposes to, conduct, support, or allow an action to be located in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains.

For further information regarding Floodplain Management requirements, please consult the United States Department of Homeland Security, Federal Emergency Management Agency website at http://www.fema.gov, as well as the USEPA floodplain management Executive Order 11988 at http://www.epa.gov/owow/wetlands/regs/eo11988.html.

9. Migratory Bird Treaty Act (MBTA):

The MBTA restricts the killing, taking, collecting and selling or purchasing of native bird species or their parts, nests, or eggs. The MBTA, along with subsequent amendments to this act, provides legal protection for almost all breeding bird species occurring in the United States and must be addressed under CEQA. In the CEQA document, each agency must make a finding that a project will comply with the MBTA. For further information, please consult the Migratory Bird Program through the USFWS website at http://www.fws.gov/laws/lawsdigest/migtrea.html.

4-4 Cont.

10. Protection of Wetlands – Executive Order 11990:

Projects, regardless of funding, must get approval for any temporary or permanent disturbance to federal and state waters, wetlands, and vernal pools. The permitting process through the United States Army Corps of Engineers (USACE) can be lengthy, and may ultimately require project alterations to avoid wetlands and waters of the United States. Applicants must consult with the USACE early in the planning process if any portion of the project site contains wetlands, or other federal waters. The USACE Wetland Delineation Manual is available at http://www.wetlands.com/regs/tlpge02e.htm. Also note that the California State Water Boards are involved in providing approvals through the Clean Water Act Section 401 Water Quality Certification Program and/or Waste Discharge Requirements. For more information, please go to http://www.waterboards.ca.gov/water_issues/programs/cwa401/index.shtml.

11. Wild and Scenic Rivers Act:

There are construction restrictions or prohibitions for projects near or in a designated "wild and scenic river." A listing of designated "wild and scenic rivers" can be obtained at http://www.rivers.gov/rivers/california.php. Watershed information can be obtained through the "Watershed Browser" at http://cwp.resources.ca.gov/map_tools.php.

12. Safe Drinking Water Act, Source Water Protection:

Projects must comply with the Safe Drinking Water Act and document whether or not a project has the potential to contaminate a sole source aquifer. For projects impacting a listed sole source aquifer, the applicant must identify an alternative project location, or develop adequate mitigating measures in consultation with the USEPA. For more information, please go to the Sole Source Aquifer Program website at http://epa.gov/region09/water/groundwater/ssa.html.

13. Environmental Justice – Executive Order No. 12898:

Identify and address any disproportionately high and adverse human health or environmental effects of the project's activities on minority and low-income populations. USEPA has defined environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."

Fair Treatment means that no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative consequences of industrial, governmental, and commercial operations or programs and policies.

Meaningful Involvement means that: 1) potentially affected community members have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; 2) the public's contribution can influence the agency's decision; 3) the concerns of all participants involved will be considered in the decision-making process; and 4) the decision-makers seek out and facilitate the involvement of those potentially affected.

4-4 Cont.

The term "environmental justice concern" is used to indicate the actual or potential lack of fair treatment or meaningful involvement of minority, low-income, or indigenous populations, or tribes in the development, implementation, and enforcement of environmental laws, regulations, and policies.

Your project may involve an "environmental justice concern" if the project could:

a) Create new disproportionate impacts on minority, low-income, or indigenous populations;
b) Exacerbate existing disproportionate impacts on minority, low-income, or indigenous populations; or
c) Present opportunities to address existing disproportionate impacts on minority, low-income, or indigenous populations that are addressable through the project.

Attachment 1

ENVIRONMENTAL[1] PACKAGE CHECKLIST FOR APPLICANT

(What to Submit to Project Manager)

Required for all CWSRF Projects:

- ❑ **Evaluation Form for Environmental Review and Federal Coordination with the substantiating information** (i.e. USFWS species list/biological assessment, cultural resources documentation, air quality data, flood map etc.)
- ❑ **Project Report, Scope of Work and Map(s)**

Based on the type of CEQA documents prepared for the project, provide additional information as identified in the following boxes.

If project is covered under a **CEQA Categorical or Statutory Exemption**, submit a copy of the following:

- ❑ **Notice of Exemption** (filed and date stamped by the county clerk and the Governor's Office of Planning and Research)

If project is covered under a **Negative Declaration**, submit a copy of the following:

- ❑ **Draft and Final Initial Study/Negative Declaration (IS/ND)**
  - ❑ Comments and Responses to the Draft IS/ND
- ❑ **Resolution approving the CEQA documents**
  - ❑ Adopting the Negative Declaration
  - ❑ Making CEQA Findings
- ❑ **Notice of Determination** (filed and date stamped by the county clerk and the Governor's Office of Planning and Research)

4-4 Cont.

If project is covered under a **Mitigated Negative Declaration**, submit a copy of the following:

- ❑ **Draft and Final Initial Study/Mitigated Negative Declaration (IS/MND)**
  - ❑ Comments and Responses to the Draft IS/MND
  - ❑ Mitigation Monitoring and Reporting Plan/Program (MMRP)
- ❑ **Resolution approving the CEQA documents**
  - ❑ Adopting the Mitigated Negative Declaration and the MMRP
  - ❑ Making CEQA Findings
- ❑ **Notice of Determination** (filed and date stamped by the county clerk and the Governor's Office of Planning and Research)

If project is covered under an **Environmental Impact Report (EIR)**, submit a copy of the following:

- ❑ **Draft and Final EIR**
  - ❑ Comments and Responses to the Draft EIR
  - ❑ Mitigation Monitoring and Reporting Plan/Program (MMRP)
- ❑ **Resolution approving the CEQA documents**
  - ❑ Certifying the EIR and adopting the MMRP
  - ❑ Making CEQA Findings
  - ❑ Adopting a Statement of Overriding Considerations for any adverse environmental impact(s), if applicable
- ❑ **Notice of Determination** (filed and date stamped by the county clerk and the Governor's Office of Planning and Research)

If EIR is a joint CEQA/National Environmental Policy Act document (EIR/Environmental Impact Statement or EIR/Environmental Assessment), submit the applicable Record of Decision and/or the Finding of No Significant Impact.

[1] If the CEQA document is more than five years old applicant shall provide an updated CEQA document (eg. subsequent, supplemental, or addendum CEQA documents) or a letter that describes the current status of the environmental condition for the project's location.

State Water Resources Control Board (State Water Board)
Clean Water State Revolving Fund Program

Evaluation Form for Environmental Review and Federal Coordination

CWSRF No.: _____
Applicant Name: _____
Date: _____
Project Title: _____

1. **Federal Endangered Species Act (ESA), Section 7:**
Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may affect federally listed threatened or endangered species or their critical habitat that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

   a. **Required documents: Attach project-level biological surveys, evaluations analyzing the project's direct and indirect effects on special-status species, and an up-to-date species list (from the United States Fish and Wildlife Service and the California Natural Diversity Database) for the project area.**

☐ No. Discuss why the project will not impact any federally listed special status species: 4-4 Cont.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

☐ Yes. Provide information on federally listed species that could potentially be affected by this project and any proposed avoidance and compensation measures so that the State Water Board can initiate informal/formal consultation with the applicable federally designated agency. Document any previous ESA consultations that may have occurred for the project. Include any comments below:

_____
_____
_____
_____
_____
_____
_____
_____
_____

2. ~~Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat:~~
Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may adversely affect essential fish habitat?

☐ No. Discuss why the project will not impact essential fish habitat:

☐ Yes. Provide information on essential fish habitat that could potentially be affected by this project and any proposed avoidance and compensation measures. Document any consultations with the National Marine Fisheries Service that may have occurred for the project. Include any comments below:

4-4 Cont.

3. National Historic Preservation Act, Section 106:
Identify the area of potential effects (APE), including construction, staging areas, and depth of any excavation. (Note: the APE is three dimensional and includes all areas that may be affected by the project, including the surface area and extending below ground to the depth of any project excavations).

- **Required documents: Cultural Resources Assessment** prepared by a prepared by a qualified researcher that meets the Secretary of the Interior's Professional Qualifications Standards (www.cr.nps.gov/local-law/arch_stnds_9.htm). **Current records search** with maps showing all sites and surveys drawn in relation to the project area, and records of **Native American consultation.** Include any comments below:

4. **Federal Clean Air Act:**

Identify Air Basin Name _____

Name of the Local Air District for Project Area: _____

Is the project subject to a State Implementation Plan (SIP) conformity determination?

☐ No. The project is in an attainment or unclassified area for all federal criteria pollutants.

☐ Yes. The project is in a nonattainment area or attainment area subject to maintenance plans for a federal criteria pollutant. Include information to indicate the nonattainment designation (e.g. moderate, serious, severe, or extreme), if applicable. If estimated emissions (below) are above the federal de minimis levels, but the project is sized to meet only the needs of current population projections that are used in the approved SIP for air quality, then quantitatively indicate how the proposed capacity increase was calculated using population projections.

- **If you checked "Yes" above, provide the estimated project construction and operational air emissions (in tons per year) in the chart below, and attach supporting calculations.**
- **Also, attach any air quality studies that may have been done for the project.**

Pollutant	Federal Status (Attainment, Nonattainment, Maintenance, or Unclassified)	Nonattainment Rates (i.e., moderate, serious, severe, or extreme)	Threshold of Significance for Project Air Basin (if applicable)	Construction Emissions (Tons/Year)	Operation Emissions (Tons/Year)
Ozone (O_3)					
Carbon Monoxide (CO)					
Oxides of Nitrogen (NO_x)					
Reactive Organic Gases (ROG)					
Volatile Organic Compounds (VOC)					
Lead (Pb)					
Particulate Matter less than 2.5 microns in diameter ($PM_{2.5}$)					
Particulate Matter less than 10 microns in diameter (PM_{10})					
Sulfur Dioxide (SO_2)					

4-4 Cont.

5. **Coastal Zone Management Act:**

Is any portion of the project site located within the coastal zone?

☐ No. The project is not within the coastal zone.

☐ Yes. Describe the project location with respect to coastal areas and the status of the coastal zone permit, and provide a copy of the coastal zone permit or coastal exemption:

_____

_____

_____

_____

_____

_____

6. **Coastal Barriers Resources Act:**
Will the project impact or be located within or near the Coastal Barrier Resources System or its adjacent wetlands, marshes, estuaries, inlets, and near-shore waters? Note that since there is currently no Coastal Barrier Resources System in California, projects located in California are not expected to impact the Coastal Barrier Resources System in other states. If there is a special circumstance in which the project may impact a Coastal Barrier Resource System, indicate your reasoning below.

☐ No. The project will not impact or be located within or near the Coastal Barrier Resources System or its adjacent wetlands, marshes, estuaries, inlets, and near-shore waters.

☐ Yes. Describe the project location with respect to the Coastal Barrier Resources System, and the status of any consultation with the appropriate Coastal Zone management agency and the United States Fish and Wildlife Service:

7. **Farmland Protection Policy Act:**
Is any portion of the project located on important farmland?

☐ No. The project will not impact farmland.

☐ Yes. Include information on the acreage that would be converted from important farmland to other uses. Indicate if any portion of the project boundaries is under a Williamson Act Contract and specify the amount of acreage affected:

4-4 Cont.

8. **Flood Plain Management:**
Is any portion of the project located within a 100-year floodplain as depicted on a floodplain map or otherwise designated by the Federal Emergency Management Agency?

- **Required documents: Attach a floodplain map.**

☐ No. Provide a description of the project location with respect to streams and potential floodplains:

☐ Yes. Describe the floodplain, and include a floodplains/wetlands assessment. Describe any measures and/or project design modifications that would be implemented to minimize or avoid project impacts:

9. **Migratory Bird Treaty Act:**
Will the project affect protected migratory birds that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

☐ No. Provide an explanation below.

_____

_____

_____

_____

☐ Yes. Discuss the impacts (such as noise and vibration impacts, modification of habitat) to migratory birds that may be directly or indirectly affected by the project and mitigation measures to reduce or eliminate these impacts. Include a list of all migratory birds that could occur where the project is located:

_____

_____

_____

_____

10. **Protection of Wetlands:**
Does any portion of the project boundaries contain areas that should be evaluated for wetland delineation or require a permit from the United States Army Corps of Engineers?

4-4 Cont.

☐ No. Provide the basis for such a determination:

_____

_____

_____

_____

☐ Yes. Describe the impacts to wetlands, potential wetland areas, and other surface waters, and the avoidance, minimization, and mitigation measures to reduce such impacts. Provide the status of the permit and information on permit requirements:

_____

_____

_____

_____

11. **Wild and Scenic Rivers Act:**
Identify watershed where the project is located: _____

Is any portion of the project located within a wild and scenic river?

☐ No. The project is not located near a wild and scenic river.

☐ Yes. Identify the wild and scenic river watershed and project location relative to the affected wild and scenic river:

_____

_____

_____

_____

12. **Safe Drinking Water Act, Sole Source Aquifer Protection:**
Is the project located in an area designated by the United States Environmental Protection Agency, Region 9, as a Sole Source Aquifer?

☐ No. The project is not within the boundaries of a sole source aquifer.

☐ Yes. Contact USEPA, Region 9 staff to consult, and identify the sole source aquifer (e.g., Santa Margarita Aquifer, Scott's Valley, the Fresno County Aquifer, the Campo/Cottonwood Creek Aquifer or the Ocotillo-Coyote Wells Aquifer) that will be impacted:

_____

_____

13. **Environmental Justice:**
Does the project involve an activity that is likely to be of particular interest to or have particular impact upon minority, low-income, or indigenous populations, or tribes?

☐ No. Selecting "No" means that this action is not likely to be of any particular interest to or have an impact on these populations or tribes. Explain.

_____

_____

_____

_____

_____

4-4 Cont.

☐ Yes. If you answer yes, please check at least one of the boxes and provide a brief explanation below:

☐ The project is likely to impact the health of these populations.

☐ The project is likely to impact the environmental conditions of these populations.

☐ The project is likely to present an opportunity to address an existing disproportionate impact of these populations.

☐ The project is likely to result in the collection of information or data that could be used to assess potential impacts on the health or environmental conditions of these populations.

☐ The project is likely to affect the availability of information to these populations.

☐ Other reasons, describe: _____

_____

_____

_____

_____

_____

_____

BASIC CRITERIA FOR CULTURAL RESOURCES REPORTS

FOR SECTION 106 CONSULTATION WITH THE STATE HISTORIC PRESERVATION OFFICER (SHPO) UNDER THE NATIONAL HISTORIC PRESERVATION ACT (NHPA)

CULTURAL RESOURCES REPORTS

The Section 106 compliance efforts and reports must be prepared by a qualified researcher that meets the Secretary of the Interior's Professional Qualifications Standards (www.cr.nps.gov/local-law/arch_stnds_9.htm).

REPORT TERMINOLOGY

- A cultural resources report used for Section 106 consultation should use terminology consistent with the NHPA.
- This doesn't mean that the report needs to "filled" with passages and interpretations of the regulations, the SHPO reviewer already knows the law.
- If "findings" are made they must be one of the four "findings" listed in Section 106. These include:

  "No historic properties affected" (no properties are within the APE, including the below ground APE).

  "No effect to historic properties" (properties may be near the APE but the project will not impact them).

  "No adverse effect to historic properties" (the project may affect historic properties but the impacts will not be adverse)

  "Adverse effect to historic properties". *Note: the SHPO must be consulted at this point. If your consultant proceeds on his own, his efforts may be wasted.*

4-4 Cont.

CURRENT RECORDS SEARCH INFORMATION

- A current (less than a year old) records search from the appropriate Information Center is necessary. The records search should include maps that show all recorded sites and surveys in relation to the area of potential effects (APE) for the project.
- The APE is three-dimensional and includes all areas that may be affected by the project. It includes the surface area and extends below ground to the depth of any project excavations.
- The records search request should be made for an area larger than the APE. The appropriate area varies for different projects but should be drawn large enough to provide information on what types of sites may exist in the vicinity.

NATIVE AMERICAN AND INTERESTED PARTY CONSULTATION

- Native American and interested party consultation should be initiated at the beginning of any cultural resource investigations. The purpose is to gather information from people with local knowledge that may be used to guide research.

- A project description and map should be sent to the Native American Heritage Commission (NAHC) requesting a check of their Sacred Lands Files. The Sacred Lands Files include religious and cultural places that are not recorded at the information centers.

- The NAHC will include a list of Native American groups and individuals with their response. A project description and maps should be sent to everyone on the list asking for information on the project area.

- Similar letters should be sent to local historical organizations.

- Follow-up contact should be made by phone if possible and a phone log should be included in the report.

WARNING PHRASES IN ALREADY PREPARED CEQA REPORTS

- A finding of **"no known resources"**, this doesn't mean anything. The consultant's job is to find out if there are resources within the APE or to explain why they are not present.

- **"The area is sensitive for buried archaeological resources"**, followed by a statement that **"monitoring is recommended as mitigation"**. Monitoring is not an acceptable mitigation. A reasonable effort should be made to find out if buried resources are present in the APE.

- **"The area is already disturbed by previous construction"**, this may be true, but documentation is still needed to show that the new project will not affect cultural resources. As an example, an existing road can be protecting a buried archaeological site. Or, previous construction may have impacted an archaeological site that was never documented.

- No mention of **"Section 106"**, a report that gives adequate information for CEQA may not be sufficient to comply with Section 106.

4-4
Cont.

S:\Funding Programs\Environmental Review Unit\Outreach\BASIC CRITERIA FOR SECTION 106 revised June 13 2012 by md.doc

If project emissions are **below the "de minimis" levels** and less than 10% of the emissions inventory for the non-attainment or maintenance area, then:

- **Further general conformity analysis is not required.**

If project emissions are **above the "de minimis" levels**:

- **A conformity determination for the area must be made.**

A conformity determination can be made if facilities are sized to meet the needs of current population projections used in an **approved** State Implementation Plan (SIP) for air quality. Using population projections, applicants must **quantify** their description of how the proposed capacity increase was calculated.

NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the NHPA requires federal agencies to take into account effects on historic properties caused by federal actions (such as funding SRF projects) and to provide the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings through consultation with the State Historic Preservation Officer (SHPO) and with interested Indian Tribes and individuals.

***USEPA has delegated to the State Water Board the responsibility for carrying out the requirements of Section 106 of the NHPA.**

Historic properties include:

- Archaeological sites.
- Historic era buildings.
- Traditional cultural properties.

Starting point for the 106 process:
Applicant's record search and cultural resource documents prepared for CEQA.

State Water Board's Cultural Resource Officer (CRO) requires:

- Copies of all original maps and studies for consultation with SHPO.

If your project has the potential to affect historic properties the consultation process can be quite lengthy. **Please contact the CRO early in your planning process to discuss what additional information may be needed for your specific project.**

Environmental Review Process Guidelines for State Revolving Fund Loan Applicants document provides additional information on the review process and can be found on the State Water Board's web site located at:

http://www.waterboards.ca.gov/funding/srf.html

Water Boards

4-4 Cont.

SRF & CEQA-PLUS

Environmental Review for State Revolving Fund (SRF) Loan Applicants

- WHAT - WHY - HOW -

State Water Resources Control Board
Division of Financial Assistance
November 2005

WHAT IS CEQA-PLUS?

The SRF Loan Program is partially funded by the U.S. Environmental Protection Agency (USEPA) and subject to federal environmental regulations, including the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA), and the General Conformity Rule for the Clean Air Act (CAA), among others. Federal agencies have their own policies on how they comply with federal environmental laws. Instead of the National Environmental Policy Act (NEPA), USEPA has chosen to use the California Environmental Quality Act (CEQA) as the compliance base for California's SRF Loan Program, in addition to compliance with ESA, NHPA and CAA. Collectively, the State Water Board calls these requirements **CEQA-Plus.** Additional federal regulations also may apply.

Lead Agency: The Applicant

Duties:

- Prepare, circulate and consider the environmental documents prior to approving the project.
- Provide the State Water Board with eight (8) copies of the applicant's CEQA documents.

Responsible Agency: State Water Board, Division of Financial Assistance

Duties:

- Acting on behalf of USEPA, review and consider the CEQA documents before approving the project's funding.
- Make findings as to the adequacy of the documents and require additional studies or documentation, as needed.
- Distribute the applicant's CEQA documents to selected federal agencies for review and comment before making a determination on adequacy. (This distribution is in addition to the standard State Clearinghouse distribution under CEQA.)

***The applicant must address all comments by federal agencies before funding is approved.**

ENDANGERED SPECIES ACT

Non-federal Representative (for all wastewater and water reclamation projects in California that involve an SRF loan): **State Water Board**

State Water Board - Environmental Services Staff (ES) reviews SRF projects to determine potential effects on federally listed species.

Applicant Duties:

- At the earliest possible date, provide ES with:
  - **Species lists.**
  - **Biological assessments.**
  - **Other documents related to project effects on sensitive species.**
- Notify ES **early** during the planning process of any issues regarding sensitive species.

ES Duties:

- Confer informally with the U.S. Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Service (NMFS), as necessary.
- Evaluate and inform USFWS/NMFS of project impacts to federally listed species.
- Ask USEPA to request formal consultation if ES, in conjunction with USFWS/NMFS, determines that a project will adversely affect a federally listed species.

***USEPA will act as the lead agency in the formal consultation process. In response to a formal request from USEPA, USFWS/NMFS may have up to 90 days to prepare a biological opinion. The process can last 135 days or longer.**

CLEAN AIR ACT

CAA general conformity analysis applies only to projects in areas:

- Not meeting National Ambient Air Quality Standards (NAAQS).
- Subject to a maintenance plan.

An analysis is necessary for each **criteria pollutant below** for which an area is considered as being in nonattainment or maintenance:

- **ozone**
- **carbon monoxide**
- **nitrogen dioxide**
- **sulfur dioxide**
- **lead**
- **inhalable particulate matter**

Cultural Resources

Compliance with Federal Section 106 of the National Historic Preservation Act

Information Needed from the Applicant:

- Current records search with maps showing all sites and surveys drawn in relation to the project area.
- Native American consultation.
- Instructions as to how to get started are found in the CEQA Guidelines, since these two items are basic to any cultural resources review.

Migratory Bird Treaty Act

Information Needed From the Applicant:

- Identification of whether or not the project is within jurisdiction of the Migratory Bird Treaty Act.

Wild and Scenic Rivers Act

Information Needed from the Applicant:

- Identification of whether or not the project will impact any Wild and Scenic Rivers.

Other Requirements

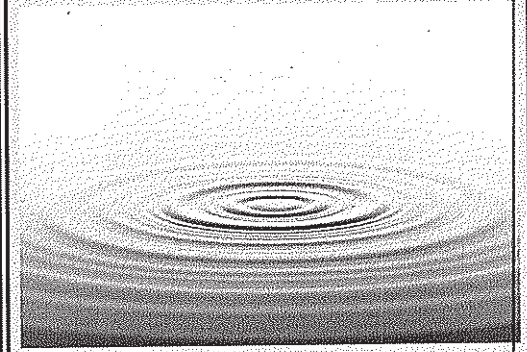
Information Needed from the Applicant:

- Eight (8) copies of the final CEQA document.
- A date-stamped copy of the Notice of Determination or the Notice of Exemption filed with the Governor's Office of Planning and Research and a receipt of the filling fees paid to the California Department of Fish and Game for Negative Declarations (ND) or Environmental Impact Reports (EIR).
- A copy of the Resolution from the lead agency, approving or certifying the CEQA document and their project. *Note: The CEQA Guidelines uses "approve" or "adopt" for ND and "certify" for EIR.*

4-4 Cont.

Quick Reference Guide to the California Environmental Quality Act (CEQA)-Plus Requirements for State Revolving Fund Loans

Guide to Federal Requirements



State Water Resources Control Board
Division of Financial Assistance
January 2008

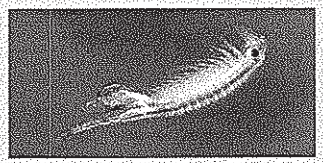
4-4 Cont.

Endangered Species

Compliance with Section 7 of the Endangered Species Act

Information Needed from the Applicant:

- List of special status species (both animal and plant) likely or possibly to occur at project site. *Note: If none will possibly occur, provide supporting information.*
- Any biological assessments or special biological studies that may have been done for the project.
- Other documents that disclose information about the project's effect on sensitive species.



Protection of Wetlands

Information Needed from the Applicant:

- Identification of whether or not the project or construction activities will impact streams, flood control channels, or wetlands.

Air Quality

Compliance with the Federal Air Quality Act

Information Needed from the Applicant:

- Air quality studies that may have been done for the project.
- For those projects in non-attainment areas or attainment areas subject to maintenance plans:
  - → Emission data for each criteria pollutant for which the area has been designated non-attainment or maintenance; and
  - → Summary of the emissions that are expected from both the construction and operation of the project for each criteria pollutant in a non-attainment or maintenance area.
- If emissions are above the federal de minimis levels, but the project is sized to meet only the needs of current population projections that are used in the approved State Implementation Plan for air quality:
  - → Quantitatively indicate how the proposed capacity increase was calculated using population projections.

Floodplain Management

Information Needed from the Applicant:

- Identification of whether or not the project is in a Flood Management Zone and a copy of the Federal Emergency Management Agency flood zone maps for the project area.

Farmland Protection Policy Act

Information Needed from the Applicant:

- Identification of whether or not the proposed project will impact any important farmland or land under Williamson Act control.

Coastal Zone Management Act

Information Needed from the Applicant:

- Identification of whether or not the proposed project is in the Coastal Zone.

Comment Letter 4: California State Water Resources Control Board

Response 4-1

This comment includes introductory remarks and does not state a specific concern or question regarding the adequacy of the environmental impact analysis in the MND. In addition, the comment states that the proposed project may be eligible for pursuing Clean Water State Revolving Fund Program financing, describes the financing program, and introduces some of the requirements of the Clean Water State Revolving Fund Program environmental review process. LADWP is not pursuing funds from this program for the implementation of the proposed project. Therefore, the proposed project would not be subject to the federal and other requirements pursuant to such funding.

Response 4-2

A Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the proposed project in accordance with CEQA Guidelines Section 15074. The MMRP is included as Appendix E of this Final MND. As such, the MMRP will be considered by the Board of Water and Power Commissioners for adoption as part of the Final MND.

Response 4-3

This comment includes closing remarks and does not state a specific concern or question regarding the adequacy of the environmental impact analysis in the MND. No further response to this comment is required.

Response 4-4

This comment includes instructions, guidance, and information regarding the environmental documentation required to be prepared for projects that are seeking Clean Water State Revolving Fund Program financing. LADWP is not pursuing funds from this program for the implementation of the proposed project. Therefore, the proposed project would not be subject to the environmental documentation requirements pursuant to such funding.

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

December 19, 2012

Irene Paul
Los Angeles Department of Water and Power
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Subject: San Fernando Valley Water Recycling Project
SCH#: 2012111053

Dear Irene Paul:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on December 17, 2012, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

5-1

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Document Details Report
State Clearinghouse Data Base

SCH#	2012111053
Project Title	San Fernando Valley Water Recycling Project
Lead Agency	Los Angeles Department of Water and Power

Type	**MND** Mitigated Negative Declaration
Description	The proposed project would be located entirely within public street rights-of-way in the San Fernando Valley. The project area would generally be bound by Interstate 5 (I-5, Golden State Freeway) to the east, Ventura Freeway (State Route 134 [SR 134] and U.S. Route 101 [US 101] to the south, Mason Avenue to the west, and Lassen Street by Interstate 405 (I-405, San Diego Freeway) to the north. The proposed project alignment encompasses portions of the communities of Canoga Park-Winnetka-Woodland Hills-West Hills, Reseda-West Van Nuys, Mission Hills-Panorama City-North Hills, Van Nuys-North Sherman Oaks, and North Hollywood-Valley Village. The proposed alignment abuts a variety of commercial, residential, open space, public facilities, and limited manufacturing uses. The proposed project would be located entirely within public street rights-of-way in the San Fernando Valley. The project area would generally be bound by Interstate 5 (I-5, Golden State Freeway) to the east, Ventura Freeway (State Route 134 [SR 134] and U.S. Route 101 [US 101] to the south, Mason Avenue to the west, and Lassen Street by Interstate 405 (I-405, San Diego Freeway) to the north. The proposed project alignment encompasses portions of the communities of Canoga Park-Winnetka-Woodland Hills-West Hills, Reseda-West Van Nuys, Mission Hills-Panorama City-North Hills, Van Nuys-North Sherman Oaks, and North Hollywood-Valley Village. The proposed alignment abuts a variety of commercial, residential, open space, public facilities, and limited manufacturing uses.

Lead Agency Contact

Name	Irene Paul		
Agency	Los Angeles Department of Water and Power		
Phone	213 367 3509	*Fax*	
email			
Address	111 North Hope Street, Room 1044		
City	Los Angeles	*State* CA	*Zip* 90012

5-1
Cont

Project Location

County	Los Angeles			
City	Los Angeles, City of, San Fernando			
Region				
Lat / Long				
Cross Streets	Various			
Parcel No.				
Township	*Range*	*Section*	*Base*	

Proximity to:

Highways	Hwy 118, 170, 134, 27
Airports	Van Nuys, Whiteman
Railways	Metrolink
Waterways	Bull Creek, LA River, Tujunga Wash, Pacoima Wash
Schools	Various
Land Use	The project site consists entirely of existing roadways. As such, there are no current land use or zoning designations.

Project Issues	Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse

Reviewing Agencies	Resources Agency; Department of Fish and Game, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Caltrans, District 7; CA Department of Public Health; State Water Resources Control Board, Divison of Financial Assistance State Water Resources Control Board, Division of Water Rights; Regional Water Quality Control Board, Region 4; Department of Toxic Substances Control; Native American Heritage Commission; Public Utilities Commission; State Lands Commission

5-1 Cont

Date Received	11/16/2012	*Start of Review*	11/16/2012	*End of Review*	12/17/2012

Comment Letter 5: State Clearinghouse

Response 5-1

This comment acknowledges that LADWP has complied with the State Clearinghouse review requirements for the MND. Three comment letters were submitted by a State agency including Caltrans (see Comment Letter 1), Native American Heritage Commission (see Comment Letter 2), and State Water Resources Control Board (see Comment Letter 4). No response to the State Clearinghouse letter is necessary because no issues related to the adequacy of the environmental impact analysis in the MND were raised.

SECTION 6
LIST OF PREPARERS

LEAD AGENCY

Los Angeles Department of Water & Power
111 N. Hope Street, Room 1044
Los Angeles, CA 90012

PREPARED BY

Los Angeles Department of Water & Power
Environmental Affairs
111 North Hope Street, Room 1044
Los Angeles, CA 90012

Charles C. Holloway, Manager of Environmental Planning and Assessment
Irene Paul, Environmental Project Manager

TECHNICAL ASSISTANCE PROVIDED BY

Melissa Hatcher, Project Director (AECOM)
Shannon Ledet, Project Manager (AECOM)
Cristina Lowery, Deputy Project Manager/Environmental Analyst (AECOM)
Sara Dietler, Archaeologist (AECOM)
Heather Gibson, Historic Archaeologist (AECOM)
Trina Meiser, Architectural Historian (AECOM)
Linda Kry, Archaeologist (AECOM)
James Wallace, Archaeologist (AECOM)
Adela Amaral, Archaeologist (AECOM)
Donna Germann, Biologist (AECOM)
Tim Harris, Geographic Information System/Graphic Specialist (AECOM)
Sam Silverman, Senior Environmental Scientist (Terry A. Hayes Associates)
Annie Ho, Environmental Scientist (Terry A. Hayes Associates)
Brian Marchetti, Senior Transportation Planner (KOA Corporation)
Bruce Chow, Senior Transportation Planner (KOA Corporation)

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APPENDICES

APPENDIX A
CONSTRUCTION SPREADSHEET

PROJECT: SAN FERNANDO WATER RECYCLING PROJECT

Work Schedule

Total footage of pipe (LF)	Pipe lay rate (LF/day)	Total days required to install pipe	Working days per year	Number of years required to install total pipe
109,800	90	1220	251	4.9

Excavation of Soils

Total soil excavated incl. 20% expansion (ft^3)[1]	Soil hauled per day (ft^3/day)	Soil hauled per day (yd^3/day)	Maximum volume allowed in a 10-yd. Dump Truck (yd^3)	Number of loads (loads per day)	Number of 10 yd^3 Dump Trucks used	Round trips per truck
1,647,000	1,350	50.0	8.5	6	3	2

Dump Site Locations

NU-WAY 1270 Arrow HighWay Irwindale Ca. I -10 E 19.0 miles

Vulcan 11520 Sheldon St. Sun Valley Ca. I - 5 N (4.7 miles - 22.3 miles)

Construction Crew		Crew Equipment	
1-Supervisor	2-Operator	2-Pick-up Trk	1-Truck Mounted Crane
1-Sr.W.U.W.	3- H.D.T.O.	1-Gang Trk	1-Back Hoe W/ Carrier
2-W.U.W.	1-Field Engineer	1-5 yd^3 Dump Trk	1-Pipe Trk
2-M.C.H		3-10 yd^3 Dump Trk	

CNG
DIESEL
GAS

Trips per vehicle

Pick-up truck - varies

5 yd^3 dump truck - varies

Gang Trk - 1 trip to and from job

Pipe Truck - 1 trip to & from job

Backhow w/carrier - 1 trip to and from job

Truck mounted crane - 1 trip to and from job

10 $yard^3$ dump trucks - see round trips above

Best Management Practices

Geotextile Fabrics / sandbag on all storm drain catch basins opening

All spoils being transported covered with tarp

Comply with City approved traffic control plans

[1] *assumed a 2.5' wide x 5' deep trench*

APPENDIX B
AIR QUALITY REPORT

SAN FERNANDO VALLEY WATER RECYCLING PROJECT AIR QUALITY IMPACT REPORT

Prepared for

AECOM

Prepared by

TERRY A. HAYES ASSOCIATES INC.

March 7, 2013

taha 2012-017

SAN FERNANDO VALLEY
WATER RECYCLING PROJECT
AIR QUALITY IMPACT REPORT

Prepared for

AECOM
515 South Flower Street, 9th Floor
Los Angeles, CA 90071

Prepared by

TERRY A. HAYES ASSOCIATES INC.
8522 National Boulevard, Suite 102
Culver City, CA 90232

March 7, 2013

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Figure 3-8 Air Quality Sensitive Receptor Locations – Pierce College....38

1.0 SUMMARY OF FINDINGS

Terry A. Hayes Associates Inc. has completed an air quality analysis for the proposed San Fernando Valley Water Recycling Project (proposed project). Key findings are listed below.

- Regional construction emissions would result in a less-than-significant impact and no mitigation measures are required.

- Localized construction emissions would result in a less-than-significant impact and no mitigation measures are required.

- Toxic air contaminant construction emissions would result in a less-than-significant impact and no mitigation measures are required.

- Construction odors would result in a less-than-significant impact and no mitigation measures are required.

- The proposed project would not consist of any additional or new long-term operational activities. Therefore, the proposed project would not result in significant impact and no mitigation measures are required.

- The proposed project would result in a less-than significant impact related to greenhouse gas emissions and no mitigation measures are required.

2.0 INTRODUCTION

2.1 PURPOSE

The purpose of this report is to evaluate the potential for air quality impacts of the proposed San Fernando Valley Water Recycling Project (proposed project). Potential air quality emissions are analyzed for construction of the proposed project.

2.2 PROJECT DESCRIPTION

With imported water supplies becoming increasingly restricted and unreliable, the Los Angeles Department of Water and Power (LADWP) 2010 Urban Water Management Plan calls for 59,000 acre feet per year (AFY) of potable supplies to be replaced by recycled water by 2035.[1] The San Fernando Valley Water Recycling Project is part of the effort to maximize the use of recycled water for non-potable uses. The proposed project would provide recycled water to some of the City of Los Angeles' largest water customers, and where feasible, switch their potable water use into recycled water use. The proposed pipeline route would be divided into six segments within the San Fernando Valley (see **Figures 2-1** through **2-6**).

- The North Hollywood Park segment is approximately 18,300 feet in length. This segment would connect to an existing City of Burbank pipeline on the City of Los Angeles border at Verdugo and Clybourn Avenues. From the Burbank pipeline connection point, this segment would extend approximately 600 feet west on Verdugo Avenue to Camarillo Street, approximately 5,200 feet west on Camarillo Street to Vineland Avenue, approximately 2,600 feet north on Vineland Avenue to Magnolia Boulevard, and approximately 5,800 feet west on Magnolia Boulevard. It would terminate at North Hollywood High School located at 5231 Colfax Avenue on the corner of Magnolia Boulevard and Colfax Avenue. Two extensions would connect to this main segment. The first extension would travel approximately 1,400 feet north on Colfax Avenue from Magnolia Boulevard to Chandler Boulevard. The Los Angeles County Metropolitan Transportation Authority (Metro) Orange Line Busway operates in the median of Chandler Boulevard in this area. Then this extension would then split into two legs. One leg would travel approximately 480 feet west on Chandler Boulevard terminating at North Hollywood High School and the other leg would travel approximately 800 feet east on Chandler Boulevard terminating at California State Route 170 (SR 170, Hollywood Freeway). The second extension would travel approximately 350 feet south on Irvine Avenue from Magnolia Boulevard to Hartsook Street, approximately 800 feet east on Hartsook Street to Westpark Drive, and approximately 250 feet south on Westpark Drive terminating at North Hollywood Park. The proposed segment would provide recycled water for customers at North Hollywood Park, North Hollywood High School, Metro Orange Line Busway, and California Department of Transportation (CalTrans).
- The Valley Plaza Park segment is approximately 14,700 feet in length. This segment would connect to the existing LADWP pipeline at the intersection of Sherman Way and Woodman Avenue. This segment would extend approximately 8,800 feet east on Sherman Way from the connection point to State Route 170. Two extensions would connect to this main segment. One extension would travel approximately 2,200 feet south on Ethel Avenue from Sherman Way and would terminate at James Madison Middle School located at 13000 Hart Street. The second extension would travel approximately 2,600 feet south on Whitsett Avenue from Sherman Way to Vanowen Street and approximately 1,100 feet east on Vanowen Street. It would terminate at Valley Plaza Park located at 12240 Archwood Street. This proposed segment would provide recycled water for customers at James Madison Middle School, Valley Plaza Park, and California Department of Transportation.

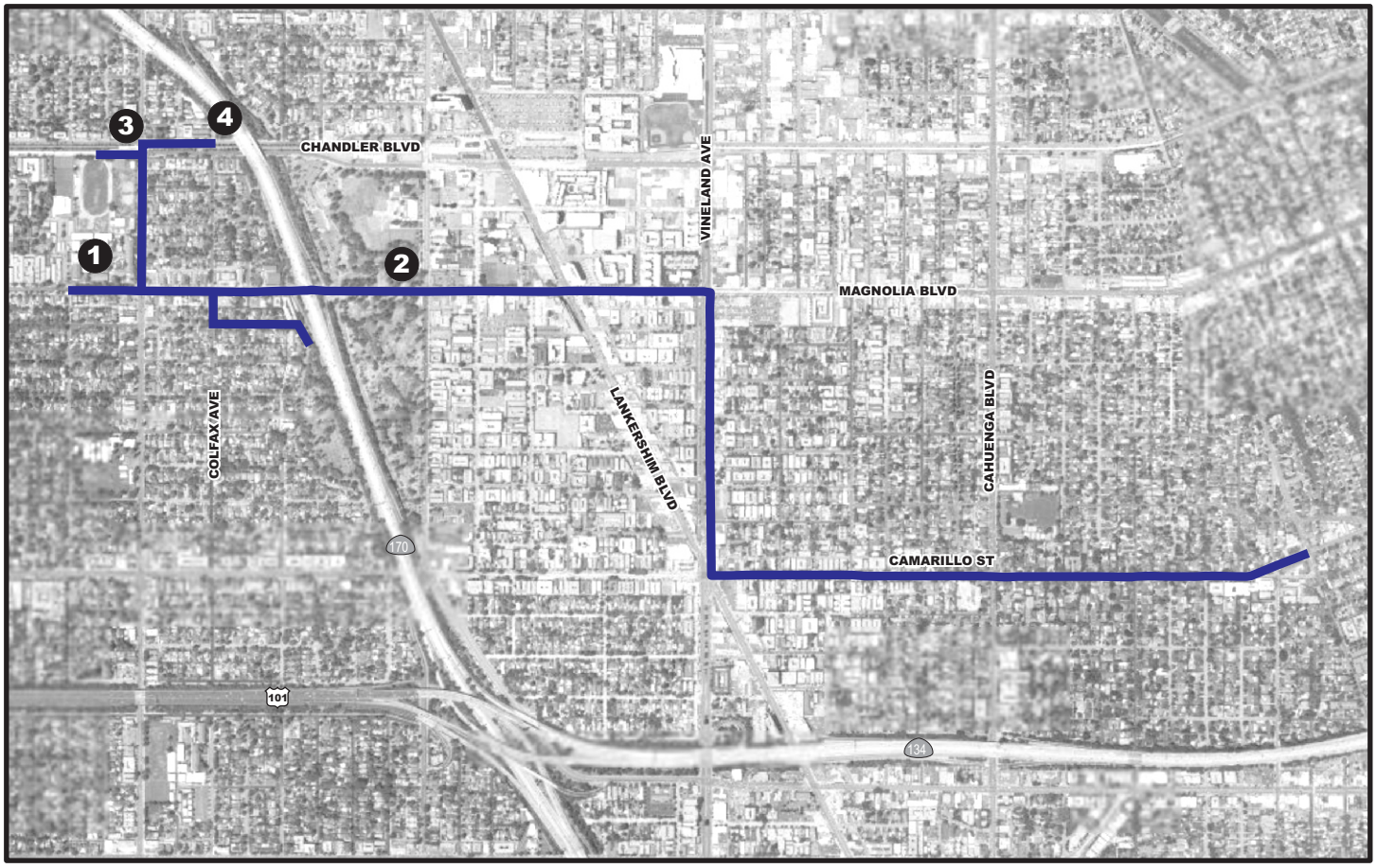
[1] Recycled water is municipal wastewater that has gone through various treatment processes to meet specific water quality criteria.

- The Van Nuys Sherman Oaks Park segment is approximately 21,800 feet in length. This segment would connect to the existing LADWP pipeline on Kester Avenue just south of the Los Angeles County Metropolitan Transportation Authority Orange Line Busway. It would extend approximately 360 feet south on Kester Avenue from the connection point to Oxnard Street, approximately 2,600 feet east on Oxnard Street to Van Nuys Boulevard, and approximately 6,940 feet south on Van Nuys Boulevard. It would terminate at Sherman Oaks Hospital located at 4929 Van Nuys Boulevard. This segment would also include two east extensions. One of these extensions would travel approximately 10,000 feet east on Burbank Boulevard from Van Nuys Boulevard and would terminate at Los Angeles Valley College located at 5800 Fulton Avenue. The other extension would travel approximately 1,900 feet east on Magnolia Boulevard from Van Nuys Boulevard and would terminate at Van Nuys Sherman Oaks Park located at 14201 Huston Street. The proposed segment would provide recycled water for customers at Bubank Oaks Apartments, Los Angeles Valley College, Van Nuys Sherman Oaks Park, and Sherman Oaks Hospital.

- The Reseda Park segment is approximately 24,300 feet in length. The segment would connect to the existing LADWP pipeline at the intersection of Victory Boulevard and Woodley Avenue. This segment would extend approximately 15,800 feet west on Victory Boulevard from the connection point terminating at the intersection of Victory Boulevard and Reseda Boulevard. Three extensions would connect to this main segment. One extension would travel approximately 1,000 feet south on Balboa Boulevard from Victory Boulevard and terminate at the Sepulveda Basin Sports Complex, located 6200 North Louise Avenue. Another extension would travel approximately 2,650 feet north on Balboa Boulevard from Victory Boulevard to Vanowen Street, and approximately 1,350 feet west on Vanowen Street terminating at Mulholland Middle School, located at 17120 Vanowen Street. A third extension would travel approximately 1,400 feet north on Lindley Avenue from Victory Boulevard to Kittridge Street, and approximately 2,100 feet west on Kittridge Street and terminate on the north side of Reseda Park just east of the intersection of Kittridge Street and Reseda Boulevard. The proposed segment would provide recycled water for customers at Birmingham High School, Valley Alternatve School, Sepulveda Basin Sports Complex, High Tech High School, Mulholland Middle School, and Reseda Park.

- The Veteran's Administration (VA) Hospital segment is approximately 21,400 feet in length. The segment would connect to the existing LADWP pipeline at the intersection of Sherman Way and Woodley Avenue. This segment would extend approximately 7,300 feet north on Woodley Avenue from the connection point and terminate at the intersection of Woodley Avenue and Roscoe Boulevard. Two extensions would branch off of this main segment. One extension would travel approximately 1,800 feet west on Roscoe Boulevard from Woodley Avenue to Gothic Avenue, and approximately 600 feet north on Gothic Avenue terminating at Valley Sod Farms located at 16405 Chase Street. Another extension would travel approximately 2,200 feet east on Roscoe Boulevard from Woodley Avenue to Haskell Avenue, then approximately 9,500 feet north on Haskell Avenue and terminate at the VA Hospital located at 16111 Plummer Street. The proposed segment would provide recycled water to customers at Valley Sod Farms, VA Hospital, and Anheuser Busch.

- The Pierce College segment is approximately 13,600 feet in length. The segment would connect to the westernmost termination point of the Reseda Park segment at the intersection of Reseda Boulevard and Victory Boulevard and travel approximately 13,600 feet west on Victory Boulevard, terminating at the intersection of Victory Boulevard and Mason Avenue. Pierce College is located at 6201 Winnetka Avenue. The proposed segment would provide recycled water to customers at Pierce College.



LEGEND:

Proposed Alignment - North Hollywood Park Segment

Customers

1. North Hollywood High School
2. North Hollywood Park
3. Metro Orange Line Busway
4. California Department of Transportation (CalTrans)

SOURCE: Google Earth and TAHA, 2013.

Approx. Scale

N

0 847 1,694 FEET

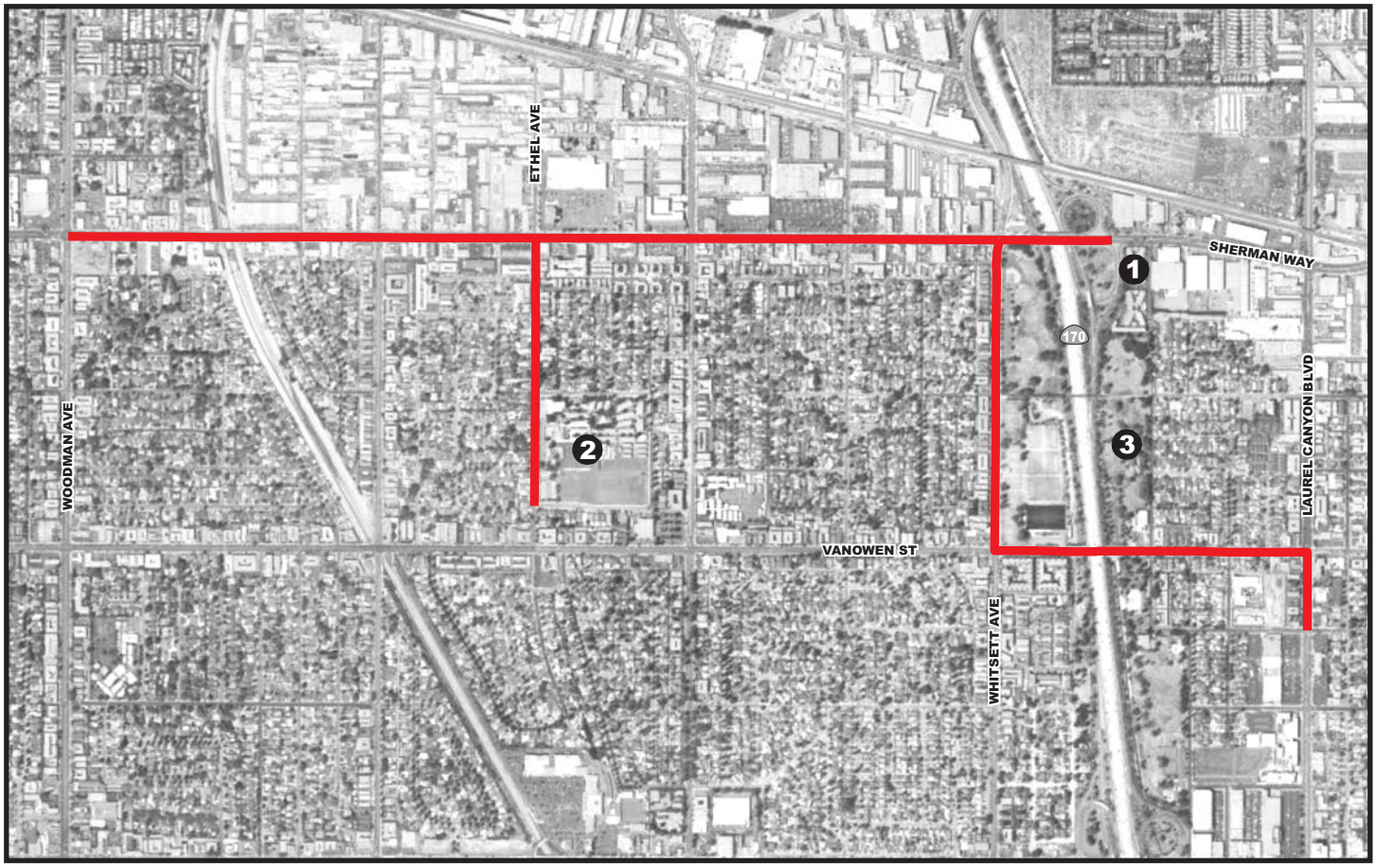
taha 2012-017

San Fernando Valley Water Recycling Project
Air Quality Impact Report

AECOM

FIGURE 2-1

PROJECT ALIGNMENT - NORTH HOLLYWOOD PARK



LEGEND:

Proposed Alignment - Valley Plaza Park Segment

(#) Customers

1. Caltrans Facility
2. James Madison Middle School
3. Valley Plaza Park

SOURCE: Google Earth and TAHA, 2012.

APPROX. SCALE

N

0 770 1,540 FEET

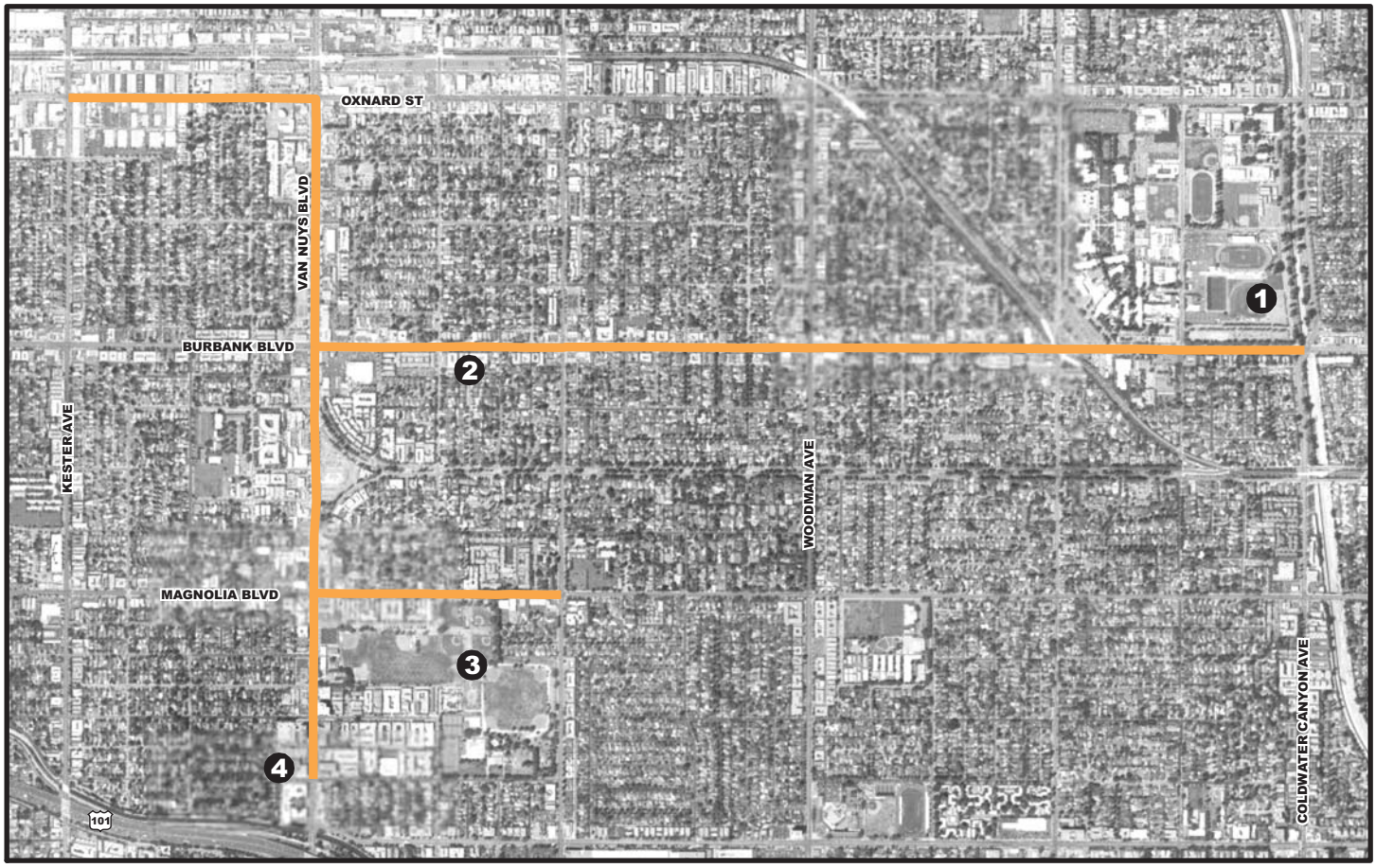
taha 2012-017

San Fernando Valley Water Recycling Project
Air Quality Impact Report

AECOM

FIGURE 2-2

PROJECT ALIGNMENT - VALLEY PLAZA PARK



LEGEND:

Proposed Alignment - Van Nuys Sherman Oaks Park Segment

(#) Customers

1. Los Angeles Valley College
2. Burbank Oaks Apartments
3. Van Nuys-Sherman Oaks Park
4. Sherman Oaks Hospital

SOURCE: Google Earth and TAHA, 2012.

Approx. Scale

N

0 970 1,940 FEET

taha 2012-017

San Fernando Valley Water Recycling Project
Air Quality Impact Report

AECOM

FIGURE 2-3

PROJECT ALIGNMENT -
VAN NUYS SHERMAN OAKS PARK

LEGEND:

Proposed Alignment - Reseda Park Segment

(#) Customers

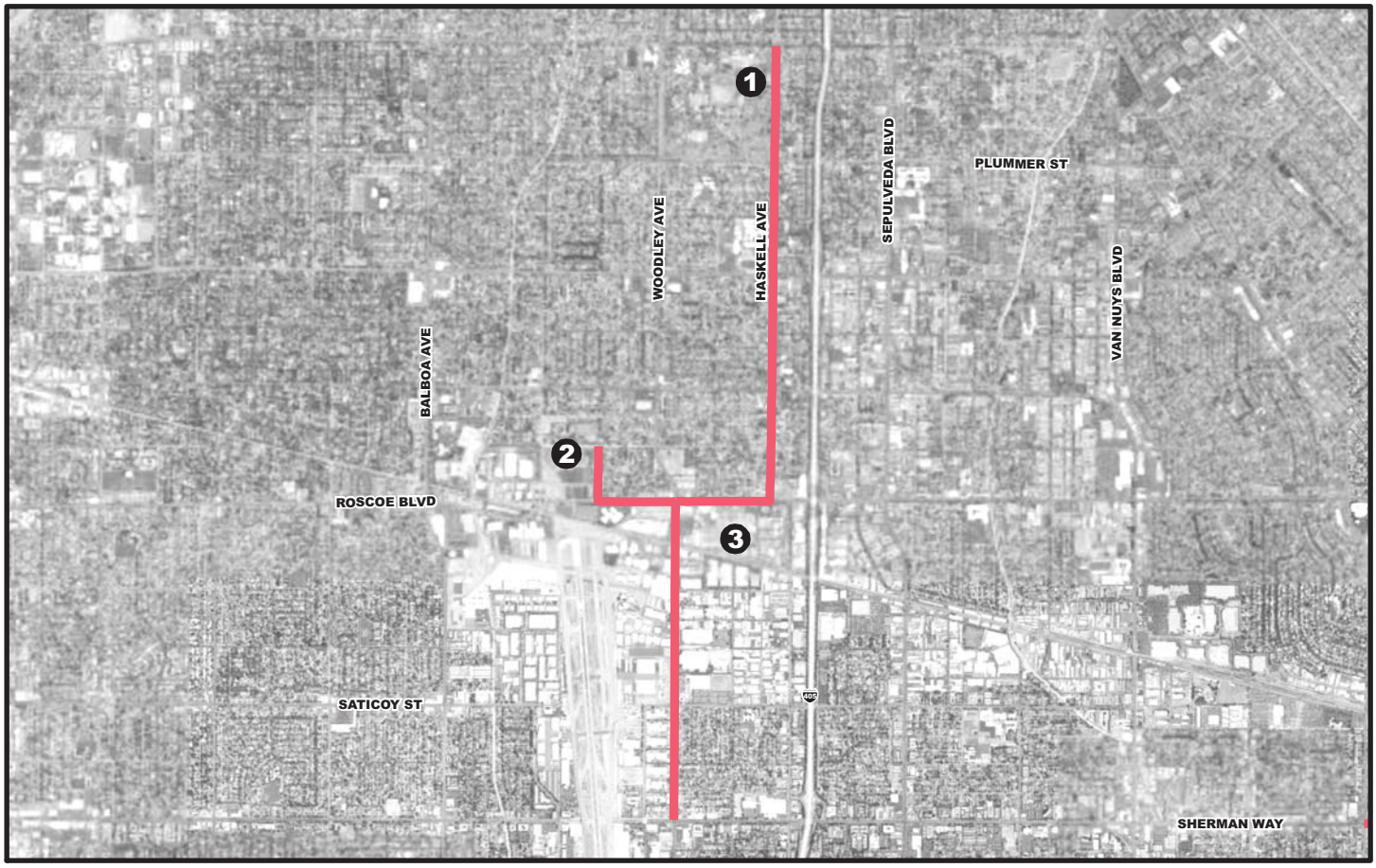
1. Mulholland Middle School
2. Valley Alternative School
3. Birmingham High School
4. High Tech High School
5. Sepulveda Basin Sports Complex
6. Reseda Park, Section 1
7. Reseda Park, Section 2

APPROX. SCALE

N

0 1,150 2,300 FEET

SOURCE: Google Earth and TAHA, 2012.



LEGEND:

Proposed Alignment - Veterans Administration Hospital Segment

(#) Customers

1. Veterans Administration Hospital
2. Valley Sod Farms
3. Anheuser Busch

SOURCE: TAHA, 2012 and Google Earth, 2012.

APPROX. SCALE

N

0 2,075 4,150 FEET

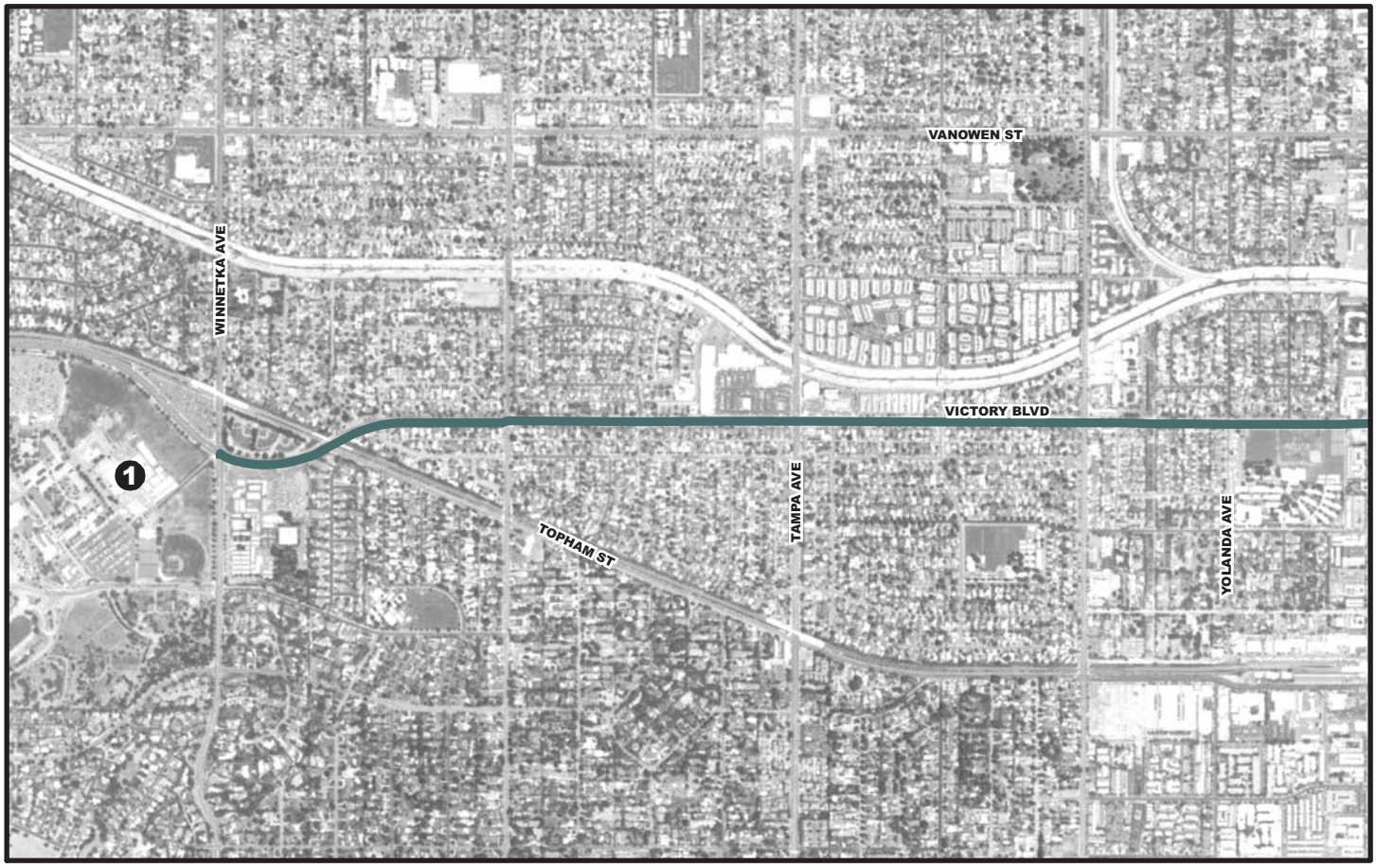
taha 2012-017

San Fernando Valley Water Recycling Project
Air Quality Impact Report

AECOM

FIGURE 2-5

PROJECT ALIGNMENT -
VETERANS ADMINISTRATION HOSPITAL



LEGEND:

Proposed Alignment - Pierce College Segment

Customers

1. Pierce College

SOURCE: Google Earth and TAHA, 2012.

APPROX. SCALE

N

0 775 1,550 FEET

taha 2012-017

San Fernando Valley Water Recycling Project
Air Quality Impact Report

AECOM

FIGURE 2-6

PROJECT ALIGNMENT - PIERCE COLLEGE

Installation of the recycled water pipeline would occur within public roads and using a cut and cover trenching technique. An approximately 2.5-foot wide by 5-foot deep trench would be excavated within the roadway that could be covered with metal plates during periods of the day when construction is not ongoing. Once the pipeline has been installed within a segment, the trench would be backfilled with slurry material and repaved. Excess soil that cannot be reused as backfill material would be disposed of at an appropriate regional landfill. Recycled water pipeline installation would necessitate restrictions of on-street parking and closure of up to two lanes of the roadway depending on the location of construction. In general, approximately 90 linear feet of pipeline would be installed per day.

Construction would occur sequentially along the alignment of each segment to minimize long-term disruption within any one area. Construction would generally occur from east to west, beginning with the North Hollywood Park and continuing in the following order: Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, VA Hospital, and Pierce College. Materials and equipment staging and construction worker parking would use City facilities and public parking lots located along or near the proposed alignments.

Railroad crossings would require tunneling instead of trenching. Launching and receiving pits would be located on either end of the tunnel. Hydraulic jacks would drive pipes through the ground. Excess soil that cannot be reused as backfill material would be disposed of at an appropriate regional landfill.

Construction of the proposed project is anticipated to begin in summer 2017 and take approximately five years to complete, concluding in summer 2021. Generally, in accordance with the Noise Ordinance, construction activity would occur Mondays through Fridays from 7:00 a.m. to approximately 3:30 p.m. However, due to the nature of construction activities within public roadways, construction activity could be limited to off-peak periods and at night in non-residential areas to minimize disruptions to traffic on public streets. Construction would also be coordinated with the City of Los Angeles Department of Transportation to minimize traffic disturbances.

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:

- 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:

    1) Water shall be applied to exposed surfaces at least two times per day to prevent generation of dust plumes;

    2) The construction contractor shall utilize at least one of the following measures at each vehicle egress from the project site to a paved public road:
        a. Install a pad consisting of washed gravel maintained in clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long;
        b. Pave the surface extending at least 100 feet and at least 20 feet wide;
        c. Utilize a wheel shaker/wheel spreading device consisting of raised dividers at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages; or
        d. Install a wheel washing system to remove bulk material from tires and vehicle undercarriages;

3) 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);

4) Construction activity on exposed or unpaved dirt surfaces shall be suspended when wind speed exceeds 25 miles per hour (mph) (such as instantaneous gusts);

5) Ground cover in disturbed areas shall be replaced in a timely fashion when work is completed in the area;

6) Identify a community liaison concerning on-site construction activity including resolution of issues related to PM_{10} generation;

7) Apply non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more);

8) Traffic speeds on all unpaved roads to be limited to 15 mph or less; and

9) 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.

3.0 AIR QUALITY

This analysis examines the degree to which the proposed project may cause significant adverse changes to air quality. Both short-term construction emissions occurring from activities, such as excavating and haul truck trips are discussed in this section. The analysis focuses on air pollution from two perspectives: daily emissions and pollutant concentrations. "Emissions" refer to the quantity of pollutants released into the air, measured in pounds per day (ppd). "Concentrations" refer to the amount of pollutant material per volumetric unit of air, measured in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$).

3.1 POLLUTANTS & EFFECTS

The federal and State governments have established ambient air quality standards for outdoor concentrations of criteria air pollutants to protect public health. The federal and State standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Criteria air pollutants include carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), particulate matter ten microns or less in diameter (PM_{10}), and lead (Pb). These pollutants are discussed below.

Carbon Monoxide. CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft and trains. In urban areas such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations generally follow the spacial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February.[2] The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Ozone. O_3 is a colorless gas that is formed in the atmosphere when reactive organic gases (ROG), which includes volatile organic compounds (VOC) and nitrogen oxides (NO_X) react in the presence of ultraviolet sunlight. O_3 is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of ROG and NO_X, components of O_3, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O_3 formation. Ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures and cloudless skies. The greatest source of smog-producing gases is the automobile. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue and some immunological changes.

[2] Inversion is an atmospheric condition in which a layer of warm air traps cooler air near the surface of the earth, preventing the normal rising of surface air.

Nitrogen Dioxide. NO_2, like O_3, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10}. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase of bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 ppm.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries. Generally, the highest levels of SO_2 are found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter or $PM_{2.5}$, is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., motor vehicles, power generation and industrial facilities), residential fireplaces and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X and VOC. Inhalable particulate matter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates and nitrates can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body. These substances can transport absorbed gases, such as chlorides or ammonium, into the lungs and cause injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Lead. Pb in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturers of batteries, paint, ink, ceramics, ammunition and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities have become lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease,

and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time and growth.

Toxic Air Contaminants. Toxic air contaminants (TACs) 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. TACs 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. Other factors, such as the amount of the chemical; its toxicity, and how it is released into the air, the weather, and the terrain, all influence whether the emission could be hazardous to human health. TACs are emitted by a variety of industrial processes such as petroleum refining, electric utility and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust and may exist as PM_{10} and $PM_{2.5}$ or as vapors (gases). TACs include metals, other particles, gases absorbed by particles, and certain vapors from fuels and other sources.

The emission of toxic substances into the air can be damaging to human health and to the environment. Human exposure to these pollutants at sufficient concentrations and durations can result in cancer, poisoning, and rapid onset of sickness, such as nausea or difficulty in breathing. Other less measurable effects include immunological, neurological, reproductive, developmental, and respiratory problems. Pollutants deposited onto soil or into lakes and streams affect ecological systems and eventually human health through consumption of contaminated food. The carcinogenic potential of TACs is a particular public health concern because many scientists currently believe that there is no "safe" level of exposure to carcinogens. Any exposure to a carcinogen poses some risk of contracting cancer.

The public's exposure to TACs is a significant public health issue in California. The Air Toxics "Hotspots" Information and Assessment Act is a state law requiring facilities to report emissions of TACs to air districts. The program is designated to quantify the amounts of potentially hazardous air pollutants released, the location of the release, the concentrations to which the public is exposed, and the resulting health risks.

To date, the most comprehensive study on air toxics in the Basin is the Multiple Air Toxics Exposure Study (MATES-III), conducted by the SCAQMD. The monitoring program measured more than 30 air pollutants, including both gases and particulates. The monitoring study was accompanied by a computer modeling study in which SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-III found that the average cancer risk in the region from carcinogenic air pollutants ranges from about 870 in a million to 1,400 in a million, with an average regional risk of about 1,200 in a million.

Diesel Particulate Matter. According to the 2006 California Almanac of Emissions and Air Quality, the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from the exhaust of diesel-fueled engines (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances.

Diesel exhaust is composed of two phases, gas and particle, and both phases contribute to the health risk. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and polycyclic aromatic hydrocarbons. The particle phase is also composed of many different types of particles by size

or composition. Fine and ultra fine diesel particulates are of the greatest health concern, and may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals and other trace elements. Diesel exhaust is emitted from a broad range of diesel engines; the on road diesel engines of trucks, buses and cars and the off road diesel engines that include locomotives, marine vessels and heavy duty equipment. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

The most common exposure to diesel PM is breathing the air that contains diesel PM. The fine and ultra-fine particles are respirable (similar to $PM_{2.5}$), which means that they can avoid many of the human respiratory system defense mechanisms and enter deeply into the lung. Exposure to diesel PM comes from both on-road and off-road engine exhaust that is either directly emitted from the engines or lingering in the atmosphere.

Diesel exhaust causes health effects from both short-term or acute exposures, and long-term chronic exposures. The type and severity of health effects depends upon several factors including the amount of chemical exposure and the duration of exposure. Individuals also react differently to different levels of exposure. There is limited information on exposure to just diesel PM but there is enough evidence to indicate that inhalation exposure to diesel exhaust causes acute and chronic health effects.

Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat and lungs, some neurological effects such as lightheadedness. Acute exposure may also elicit a cough or nausea as well as exacerbate asthma. Chronic exposure to diesel PM in experimental animal inhalation studies have shown a range of dose-dependent lung inflammation and cellular changes in the lung and immunological effects. Based upon human and laboratory studies, there is considerable evidence that diesel exhaust is a likely carcinogen. Human epidemiological studies demonstrate an association between diesel exhaust exposure and increased lung cancer rates in occupational settings.

Unlike other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, California Air Resources Board (CARB) has made preliminary concentration estimates based on a PM exposure method. This method uses the CARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of diesel PM.

Diesel PM poses the greatest health risk among these ten TACs mentioned. Based on receptor modeling techniques, SCAQMD estimated that diesel PM accounts for 84 percent of the total risk in the South Coast Air Basin.

Greenhouse Gases. Greenhouse gas (GHG) emissions refer to a group of emissions that are generally believed to affect global climate conditions. Simply put, 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 degrees Fahrenheit (°F). Without the GHG effect, the Earth would be a frozen globe with an average surface temperature of about 5°F.

In addition to CO_2, CH_4, and N_2O, GHGs include hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and water vapor. Of all the GHGs, CO_2 is the most abundant pollutant that contributes to climate change through fossil fuel combustion. CO_2 comprised 81 percent of the

total GHG emissions in California in 2002 and non-fossil fuel CO_2 comprised 2.3 percent.[3] 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 mass of CO_2, denoted as CO_2e. The CO_2e of CH_4 and N_2O represented 6.4 and 6.8 percent, respectively, of the 2002 California GHG emissions. Other high global warming potential gases represented 3.5 percent of these emissions.[4] In addition, there are a number of man-made pollutants, such as CO, NO_X, non-methane VOC, and SO_2, that have indirect effects on terrestrial or solar radiation absorption by influencing the formation or destruction of other climate change emissions.

3.2 REGULATORY SETTING

Federal

United States Environmental Protection Agency. The Federal Clean Air Act (CAA) governs air quality in the United States. The United State Environmental Protection Agency (USEPA) is responsible for enforcing the CAA. USEPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS). NAAQS are required under the 1977 CAA and subsequent amendments. USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. USEPA has jurisdiction over emission sources outside State waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet stricter emission standards established by CARB.

As required by the CAA, NAAQS have been established for seven major air pollutants: CO, NO_2, O_3, $PM_{2.5}$, PM_{10}, SO_2, and Pb. The CAA requires USEPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in **Table 3-1**. The USEPA has classified the South Coast Air Basin as maintenance for CO and nonattainment for O_3, $PM_{2.5}$, and PM_{10}.

[3] California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 11.
[4] Ibid.

TABLE 3-1: STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS FOR THE SOUTH COAST AIR BASIN

Pollutant	Averaging Period	California		National	
		Standards	Attainment Status	Standards	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm (180 µg/m^3)	Nonattainment	--	--
	8-hour	0.070 ppm (137 µg/m^3)	n/a	0.075 ppm (147 µg/m^3)	Nonattainment
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	Nonattainment	150 µg/m^3	Nonattainment
	Annual Arithmetic Mean	20 µg/m^3	Nonattainment	--	--
Fine Particulate Matter ($PM_{2.5}$)	24-hour	--	--	35 µg/m^3	Nonattainment
	Annual Arithmetic Mean	12 µg/m^3	Nonattainment	15 µg/m^3	Nonattainment
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Unclassified/ Attainment
	8-hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Unclassified/ Attainment
Nitrogen Dioxide (NO_2)	1-hour	0.18 ppm (338 µg/m^3)	Nonattainment	100 ppb (188 µg/m^3)	n/a
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Nonattainment	53 ppb (100 µg/m^3)	Unclassified/ Attainment
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm (655 µg/m^3)	Attainment	--	--
	24-hour	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	Attainment
	3-hour	--	--	--	--
	Annual Arithmetic Mean	--	--	0.030 ppm (80 µg/m^3)	Attainment
Lead (Pb)	30-day average	1.5 µg/m^3	Attainment	--	--
	Calendar Quarter	--	--	0.15 µg/m^3	Attainment

n/a = not available
SOURCE: CARB, *Ambient Air Quality Standards*, February 7, 2012.

State

California Air Resources Board. In addition to being subject to the requirements of CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). In California, the CCAA is administered by the CARB at the State level and by the air quality management districts and air pollution control districts at the regional and local levels. CARB, which became part of the California Environmental Protection Agency (Cal/EPA) in 1991, is responsible for meeting the State requirements of the CAA, administering the CCAA, and establishing the California Ambient Air Quality Standards (CAAQS). The CCAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the

CAAQS. CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. CARB regulates mobile air pollution sources, such as motor vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications, which became effective in March 1996. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The State standards are summarized in **Table 3-1**.

The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard and are not used as a basis for designating areas as nonattainment. Under the CCAA, the Los Angeles County portion of the Basin is designated as a nonattainment area for O_3, $PM_{2.5}$, PM_{10}, and NO_2.[5]

Toxic Air Contaminants. CARB's Statewide comprehensive air toxics program was established in the early 1980's. 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, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, CARB must consider criteria relating to "the risk of harm to public health, 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" [Health and Safety Code Section 39666(f)]. The Toxic Air Contaminant Identification and Control Act also requires CARB to use available information gathered from the Air Toxics "Hot Spots" Information and Assessment Act program to include in the prioritization of compounds.

California has established a two-step process of risk identification and risk management to address the potential health effects from air toxic substances and protect the public health of Californians. During the first step (identification), CARB and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified as a TAC in California. During this process, CARB and the OEHHA staff draft a report that serves as the basis for this determination. CARB staff assesses the potential for human exposure to a substance and the OEHHA staff evaluates the health effects. After CARB and the OEHHA staff hold several comment periods and workshops, the report is then submitted to an independent, nine-member Scientific Review Panel (SRP), who reviews the report for its scientific accuracy. If the SRP approves the report, they develop specific scientific findings which are officially submitted to CARB. CARB staff then prepares a hearing notice and draft regulation to formally identify the substance as a TAC. Based on the input from the public and the information gathered from the report, the CARB decides whether to identify a substance as a TAC. In 1993, the California Legislature amended the Toxic Air Contaminant Identification and Control Act by requiring CARB to identify 189 federal hazardous air pollutants as State TACs.

In the second step (risk management), CARB reviews the emission sources of an identified TAC to determine if any regulatory action is necessary to reduce the risk. The analysis includes a

[5]CARB, Area Designation Maps, available at http://www.arb.ca.gov/desig/adm/adm.htm, accessed March 8, 2012.

review of controls already in place, the available technologies and associated costs for reducing emissions, and the associated risk.

The Air Toxics "Hot Spots" Information and Assessment Act (Health and Safety Code Section 44360) supplements the Toxic Air Contaminant Identification and Control Act by requiring a Statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. The "Hot Spots" Act also requires facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

California's Diesel Risk Reduction Program. CARB identified particulate emissions from diesel-fueled engines (diesel PM) TACs in August 1998. Following the identification process, the ARB was required by law to determine if there is a need for further control, which led to the risk management phase of the program.

For the risk management phase, CARB formed the Diesel Advisory Committee to assist in the development of a risk management guidance document and a risk reduction plan. With the assistance of the Advisory Committee and its subcommittees, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines. The Diesel Advisory Committee approved these documents on September 28, 2000, paving the way for the next step in the regulatory process: the control measure phase.

During the control measure phase, specific Statewide regulations designed to further reduce diesel PM emissions from diesel-fueled engines and vehicles have and continue to be evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce diesel PM emissions.

Local

South Coast Air Quality Management District. The 1977 Lewis Air Quality Management Act created the SCAQMD to coordinate air quality planning efforts throughout Southern California. This Act merged four county air pollution control agencies into one regional district to better address the issue of improving air quality in Southern California. Under the Act, renamed the Lewis-Presley Air Quality Management Act in 1988, the SCAQMD is the agency principally responsible for comprehensive air pollution control in the region. Specifically, the SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain State and federal ambient air quality standards in the district. Programs that were developed include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. The SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

The SCAQMD monitors air quality within the project area. The SCAQMD has jurisdiction over an area of 10,743 square miles, consisting of Orange County; the non-desert portions of Los Angeles, Riverside, and San Bernardino counties; and the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin. The Basin is a subregion of the SCAQMD and covers an area of 6,745 square miles. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Basin is

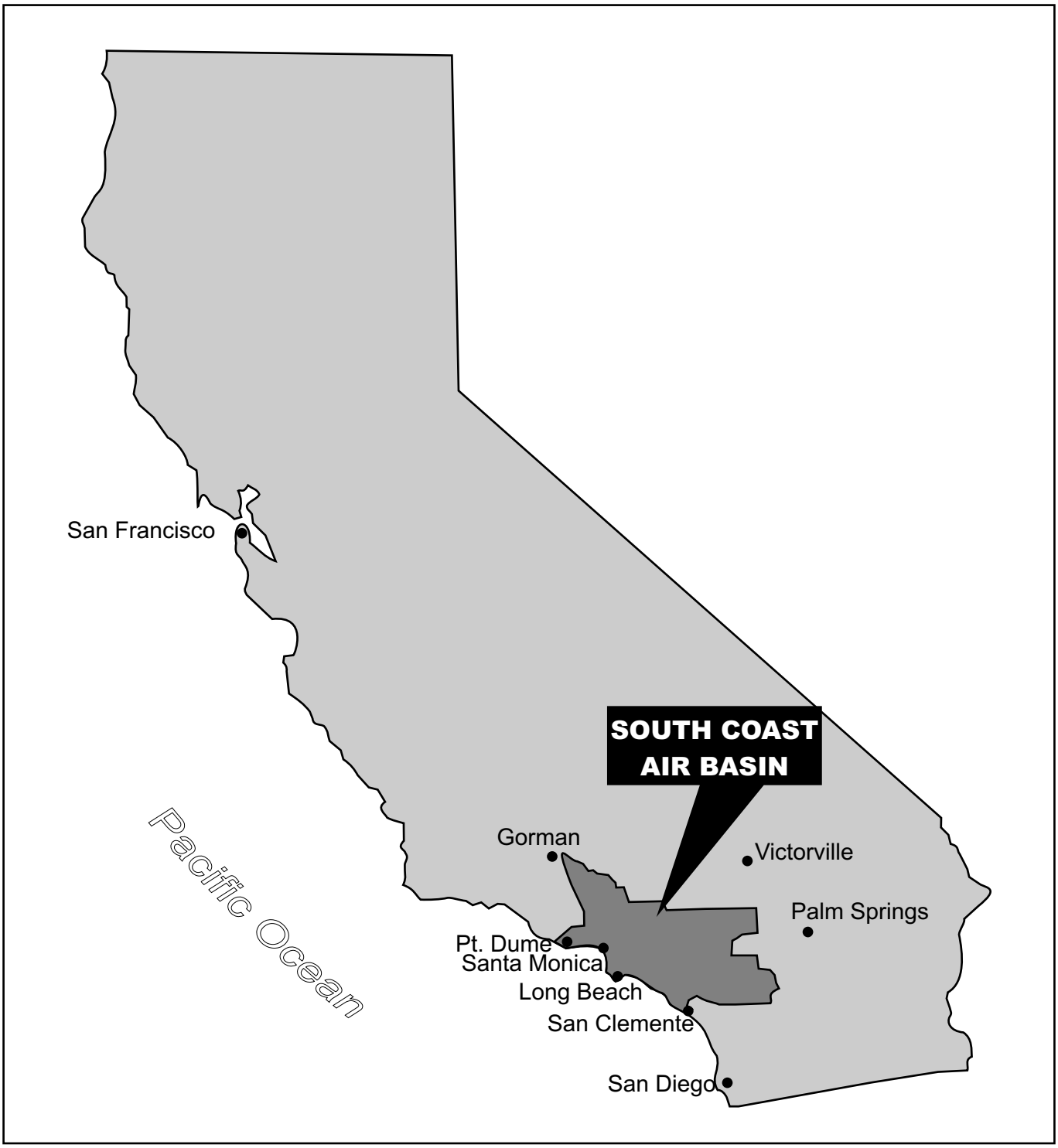
bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino and San Jacinto mountains to the north and east; and the San Diego County line to the south (**Figure 3-1**).

Air Quality Management Plan. All areas designated as nonattainment under the CCAA are required to prepare plans showing how the area would meet the State air quality standards by its attainment dates. The Air Quality Management Plan (AQMP) is the SCAQMD plan for improving regional air quality. It addresses CAA and CCAA requirements and demonstrates attainment with State and federal ambient air quality standards. The AQMP is prepared by SCAQMD and the Southern California Association of Governments (SCAG). The AQMP provides policies and control measures that reduce emissions to attain both State and federal ambient air quality standards by their applicable deadlines. Environmental review of individual projects within the Basin must demonstrate that daily construction and operational emissions thresholds, as established by the SCAQMD, would not be exceeded. The environmental review must also demonstrate that individual projects would not increase the number or severity of existing air quality violations.

The 2007 AQMP was adopted by the SCAQMD on June 1, 2007. The 2007 AQMP proposes attainment demonstration of the federal $PM_{2.5}$ standards through a more focused control of SO_X, directly-emitted $PM_{2.5}$, and NO_X supplemented with VOC by 2015. The eight-hour ozone control strategy builds upon the $PM_{2.5}$ strategy, augmented with additional NO_X and VOC reductions to meet the standard by 2024. The 2007 AQMP also addresses several federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2007 AQMP is consistent with and builds upon the approaches taken in the 2003 AQMP. However, the 2007 AQMP highlights the significant amount of reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the time frames allowed under the CAA.

Toxic Air Contaminants. The SCAQMD has a long and successful history of reducing air toxics and criteria emissions in the South Coast Air Basin (Basin). SCAQMD has an extensive control program, including traditional and innovative rules and policies. These policies can be viewed in the SCAQMD's *Air Toxics Control Plan for the Next Ten Years* (March 2000). To date, the most comprehensive study on air toxics in the Basin is the Multiple Air Toxics Exposure Study (MATES-III), conducted by the SCAQMD. The monitoring program measured more than 30 air pollutants, including both gases and particulates. The monitoring study was accompanied by a computer modeling study in which SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-III found that the cancer risk in the region from carcinogenic air pollutants ranges from about 870 in a million to 1,400 in a million, with an average regional risk of about 1,200 in a million.

An addendum to the plan was completed in March 2004 that included a status update on the implementation of the various mobile and stationary source strategies. Revised projections were based on accomplishments thus far and a new inventory was included to reflect the updated 2003 AQMP.



LEGEND:

South Coast Air Basin

State of California

SOURCE: California Air Resources Board, State and Local Air Monitoring Network Plan, October 1998

APPROX. SCALE

N

0 75 150 MILES

taha

San Fernando Valley Water Recycling Project
Air Quality Impact Report

taha 2012-017 AECOM

FIGURE 3-1

SOUTH COAST AIR BASIN

Global Climate Change

In response to growing scientific and political concern with global climate change, California adopted a series of laws to reduce emissions of GHGs into the atmosphere. Applicable regulations are provided below.

Executive Order S-3-05. On June 1, 2005, Executive Order (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. The Executive Order establishes State GHG emission targets of 1990 levels by 2020 (the same as AB 32) and 80 percent below 1990 levels by 2050. It calls for the Secretary of California Environmental Protection Agency (Cal/EPA) to be responsible for coordination of State agencies and progress reporting. A recent California Energy Commission report concludes, however, that the primary strategies to achieve this target should be major "decarbonization" of electricity supplies and fuels, and major improvements in energy efficiency.

In response to the E.O., the Secretary of the Cal/EPA created the Climate Action Team (CAT). California's CAT originated as a coordinating council organized by the Secretary for Environmental Protection. It included the Secretaries of the Natural Resources Agency, and the Department of Food and Agriculture, and the Chairs of the Air Resources Board, Energy Commission, and Public Utilities Commission. The original council was an informal collaboration between the agencies to develop potential mechanisms for reductions in GHG emissions in the State. The council was given formal recognition in E.O. S-3-05 and became the CAT.

The original mandate for the CAT was to develop proposed measures to meet the emission reduction targets set forth in the executive order. The CAT has since expanded and currently has members from 18 State agencies and departments. The CAT also has ten working groups which coordinate policies among their members. The working groups and their major areas of focus are:

- Agriculture: Focusing on opportunities for agriculture to reduce GHG emissions through efficiency improvements and alternative energy projects, while adapting agricultural systems to climate change
- Biodiversity: Designing policies to protect species and natural habitats from the effects of climate change
- Energy: Reducing GHG emissions through extensive energy efficiency policies and renewable energy generation
- Forestry: Coupling GHG mitigation efforts with climate change adaptation related to forest preservation and resilience, waste to energy programs and forest offset protocols
- Land Use and Infrastructure: Linking land use and infrastructure planning to efforts to reduce GHG from vehicles and adaptation to changing climatic conditions
- Oceans and Coastal: Evaluating the effects sea level rise and changes in coastal storm patterns on human and natural systems in California
- Public Health: Evaluating the effects of GHG mitigation policies on public health and adapting public health systems to cope with changing climatic conditions
- Research: Coordinating research concerning impacts of and responses to climate change in California
- State Government: Evaluating and implementing strategies to reduce GHG emissions resulting from State government operations; an

- Water: Reducing GHG impacts associated with the State's water systems and exploring strategies to protect water distribution and flood protection infrastructure

The CAT is responsible for preparing reports that summarize the State's progress in reducing GHG emissions. The most recent CAT Report was published in December 2010. The CAT Report discusses mitigation and adaptation strategies, State research programs, policy development, and future efforts.

Assembly Bill 32. In September 2006, the State passed the California Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32, into law. AB 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. To achieve this goal, AB 32 mandates that the CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce Statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. Because the intent of AB 32 is to limit 2020 emissions to the equivalent of 1990, it is expected that the regulations would affect many existing sources of GHG emissions and not just new general development projects. Senate Bill (SB) 1368, a companion bill to AB 32, requires the California Public Utilities Commission and the California Energy Commission to establish GHG emission performance standards for the generation of electricity. These standards will also apply to power that is generated outside of California and imported into the State.

AB 32 charges CARB with the responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. On June 1, 2007, CARB adopted three discrete early action measures to reduce GHG emissions. These measures involved complying with a low carbon fuel standard, reducing refrigerant loss from motor vehicle air conditioning maintenance, and increasing methane capture from landfills. On October 25, 2007, CARB tripled the set of previously approved early action measures. The approved measures include improving truck efficiency (i.e., reducing aerodynamic drag), electrifying port equipment, reducing perfluorocarbons from the semiconductor industry, reducing propellants in consumer products, promoting proper tire inflation in vehicles, and reducing sulfur hexaflouride emission from the non-electricity sector. The CARB has determined that the total Statewide aggregated GHG 1990 emissions level and 2020 emissions limit is 427 million metric tons of CO_2e. The 2020 target reductions are currently estimated to be 174 million metric tons of CO_2e.

The CARB AB 32 Scoping Plan contains the main strategies to achieve the 2020 emissions cap. The Scoping Plan was developed by the CARB with input from the CAT and proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve the environment, reduce oil dependency, diversify energy sources, and enhance public health while creating new jobs and improving the State economy. The GHG reduction strategies contained in the Scoping Plan include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. Key approaches for reducing greenhouse gas emissions to 1990 levels by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a Statewide renewable electricity standard of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;

- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets; and
- Adopting and implementing measures to reduce transportation sector emissions, including California's.

CARB has also developed the GHG mandatory reporting regulation, which required reporting beginning on January 1, 2008 pursuant to requirements of AB 32. The regulations require reporting for certain types of facilities that make up the bulk of the stationary source emissions in California. The regulation language identifies major facilities as those that generate more than 25,000 metric tons of CO_2 per year. Cement plants, oil refineries, electric generating facilities/providers, co-generation facilities, and hydrogen plants and other stationary combustion sources that emit more than 25,000 metric tons of CO_2 per year, make up 94 percent of the point source CO_2 emissions in California.

CEQA Guidelines Amendments. California Senate Bill (SB) 97 required the Governor's Office of Planning and Research (OPR) to develop CEQA Guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions." The CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. Noteworthy revisions to the CEQA Guidelines include:

- Lead agencies should quantify all relevant GHG emissions and consider the full range of project features that may increase or decrease GHG emissions as compared to the existing setting;
- Consistency with the CARB Scoping Plan is not a sufficient basis to determine that a project's GHG emissions would not be cumulatively considerable;
- A lead agency may appropriately look to thresholds developed by other public agencies, including the CARB's recommended CEQA thresholds;
- To qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project. General compliance with a plan, by itself, is not mitigation;
- The effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis; and
- Given that impacts resulting from GHG emissions are cumulative, significant advantages may result from analyzing such impacts on a programmatic level. If analyzed properly, later projects may tier, incorporate by reference, or otherwise rely on the programmatic analysis.

CARB Guidance. The CARB has published draft guidance for setting interim GHG significance thresholds (October 24, 2008). The guidance is the first step toward developing the recommended Statewide interim thresholds of significance for GHG emissions that may be adopted by local agencies for their own use. The guidance does not attempt to address every type of project that may be subject to CEQA, but instead focuses on common project types that are responsible for substantial GHG emissions (i.e., industrial, residential, and commercial projects). The CARB believes that thresholds in these important sectors will advance climate objectives, streamline project review, and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

SCAQMD Guidance. The SCAQMD has convened a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that will

provide input to the SCAQMD staff on developing GHG CEQA significance thresholds. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for projects where the SCAQMD is the lead agency. The SCAQMD has not adopted guidance for CEQA projects under other lead agencies.

Green LA Action Plan. The City of Los Angeles has issued guidance promoting green building to reduce GHG emissions. The goal of the Green LA Action Plan (Plan) is to reduce greenhouse gas emissions 35 percent below 1990 levels by 2030.[6] The Plan identifies objectives and actions designed to make the City a leader in confronting global climate change. The measures would reduce emissions directly from municipal facilities and operations, and create a framework to address City-wide GHG emissions. The Plan lists various focus areas in which to implement GHG reduction strategies. Focus areas listed in the Plan include energy, water, transportation, land use, waste, port, airport, and ensuring that changes to the local climate are incorporated into planning and building decisions. The Plan discusses City goals for each focus area, as follows:

Energy

- Increase the generation of renewable energy;
- Encourage the use of mass transit;
- Develop sustainable construction guidelines;
- Increase City-wide energy efficiency; and
- Promote energy conservation.

Water

- Decrease per capita water use to reduce electricity demand associated with water pumping and treatment.

Transportation

- Power the City vehicle fleet with alternative fuels; and
- Promote alternative transportation (e.g., mass transit and rideshare).

Other Goals

- Create a more livable City through land use regulations;
- Increase recycling, reducing emissions generated by activity associated with the Port of Los Angeles and regional airports;
- Create more City parks, promoting the environmental economic sector; and
- Adapt planning and building policies to incorporate climate change policy.

The City adopted an ordinance to establish a green building program in April 2008. The ordinance establishes green building requirements for projects involving 50 or more dwelling units. The Green Building Program was established 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 addresses the following five areas:

[6]City of Los Angeles, Green LA: An Action Plan to Lead the Nation in Fighting Global Warming, May 2007.

- Site: location, site planning, landscaping, storm water management, construction and demolition recycling
- Water Efficiency: efficient fixtures, wastewater reuse, and efficient irrigation
- Energy and Atmosphere: energy efficiency, and clean/renewable energy
- Materials and Resources: materials reuse, efficient building systems, and use of recycled and rapidly renewable materials
- Indoor Environmental Quality: improved indoor air quality, increased natural lighting, and thermal comfort/control

3.3 EXISTING AIR QUALITY

3.3.1 Air Pollution Climatology

The proposed alignment is located within the Los Angeles County portion of the Basin. Ambient pollution concentrations recorded in Los Angeles County are among the highest in the four counties comprising the Basin.

The Basin is in an area of high air pollution potential due to its climate and topography. The general region lies in the semi-permanent high pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The Basin experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of its perimeter. The mountains and hills within the area contribute to the variation of rainfall, temperature, and winds throughout the region.

The Basin experiences frequent temperature inversions. Temperature typically decreases with height. However, under inversion conditions, temperature increases as altitude increases, thereby preventing air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere. This interaction creates a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and NO_2 react under strong sunlight, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving air pollutants inland, toward the mountains. During the fall and winter, air quality problems are created due to CO and NO_2 emissions. CO concentrations are generally worse in the morning and late evening (around 10:00 p.m.). In the morning, CO levels are relatively high due to cold temperatures and the large number of cars traveling. High CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since CO emissions are produced almost entirely from automobiles, the highest CO concentrations in the Basin are associated with heavy traffic. NO_2 concentrations are also generally higher during fall and winter days.

3.3.2 Local Climate

The mountains and hills within the Basin contribute to the variation of rainfall, temperature, and winds throughout the region. Within the project site and its vicinity, the average wind speed, as recorded at the Canoga Park Wind Monitoring Station, is approximately three mph with calm

winds occurring 16.6 percent of the time. Wind in the vicinity of the project site predominately blows from the east.[7]

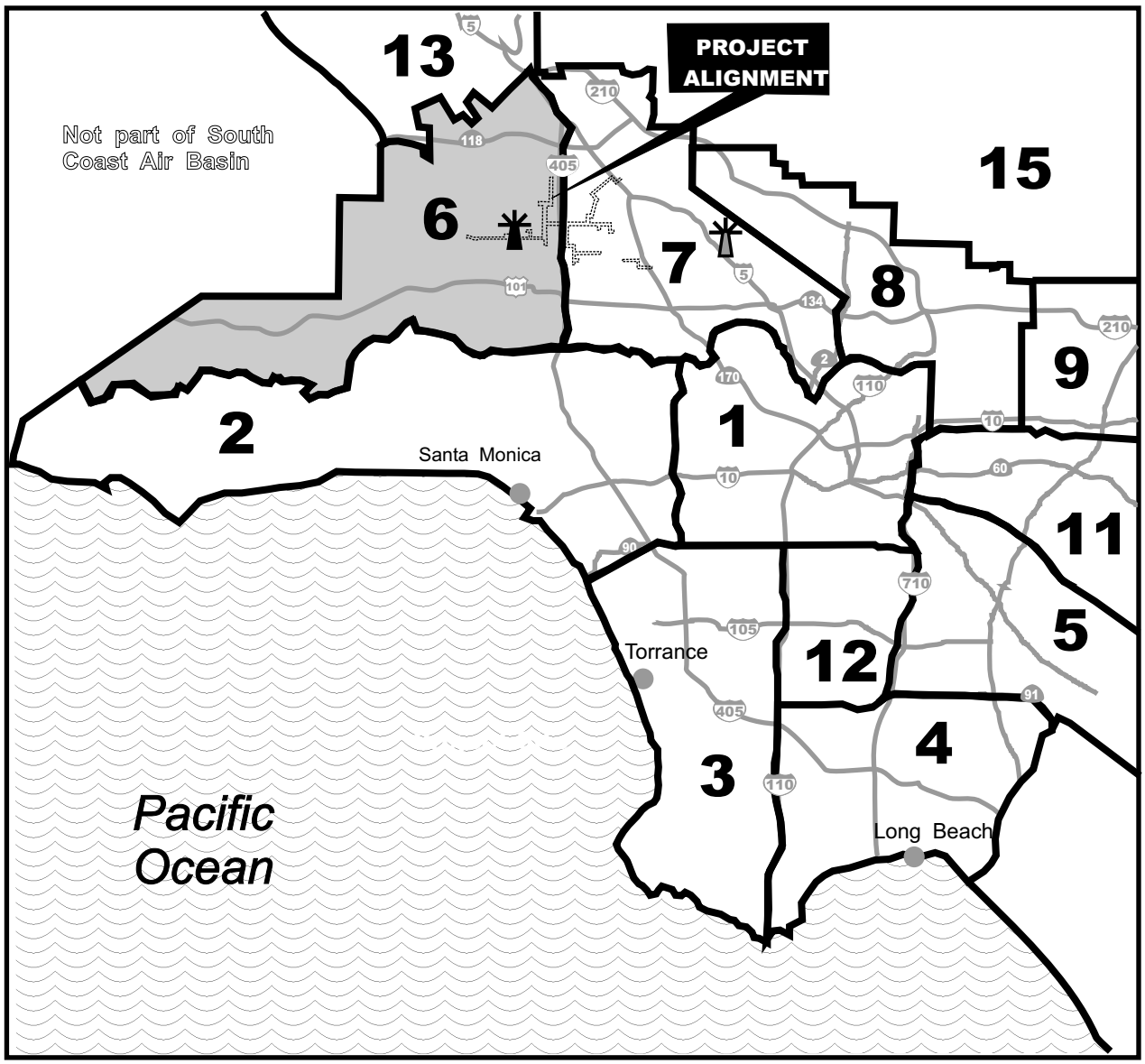
The annual average temperature in the project area is 63.7°F.[8] The project area experiences an average winter temperature of 55.0°F and an average summer temperature of 72.5°F. Total precipitation in the proposed project area averages approximately 16.2 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer. Precipitation averages 9.8 inches during the winter, 4.0 inches during the spring, 2.3 inches during the fall, and less than one inch during the summer.[9]

3.3.3 Air Monitoring Data

The SCAQMD monitors air quality conditions at 38 locations throughout the Basin. The project site is located in SCAQMD's West San Fernando Valley Air Monitoring Subregion, which is served by the Reseda Monitoring Station. The Reseda Monitoring Station is located on 18330 Gault Street and is approximately four miles east of the proposed alignment (**Figure 3-2**). Historical data from the Reseda Monitoring Station were used to characterize existing conditions in the vicinity of the project area. Criteria pollutants monitored at the Reseda Monitoring Station include O_3, CO, $PM_{2.5}$, and NO_2. The Reseda Monitoring Station does not monitor PM_{10} and SO_2 emissions. The most representative monitoring station that measures PM_{10} and SO_2 concentrations is the Burbank – West Palm Avenue located on 228 West Palm Avenue, approximately 18 miles east of the proposed alignment.

Table 3-2 shows pollutant levels, the State standards, and the number of exceedances recorded at the Reseda and Burbank – West Palm Avenue Monitoring Stations from 2009 to 2011. As **Table 3-2** indicates, criteria pollutants CO, NO_2, and SO_2 did not exceed the State standards from 2009 to 2011. However, the one-hour State standard for O_3 was exceeded 11 to 17 times during this period. The eight-hour State standard for O_3 was exceeded 31 to 37 times. The 24-hour State standard for PM_{10} was exceeded zero to ten times during this period and the annual State standard for $PM_{2.5}$ was also exceeded each year from 2009 to 2011.

[7]SCAQMD, Meteorological Data, available at http://www.aqmd.gov/smog/metdata/MeteorologicalData.html, accessed May 15, 2012. See Appendix A.
[8]Western Regional Climate Center, Historical Climate Information, available at http://www.wrcc.dri.edu, accessed May 15, 2012.
[9]Ibid.



LEGEND: Reseda Monitoring Station Burbank Monitoring Station

Air Monitoring Areas in Los Angeles County:

1. Central Los Angeles
2. Northwest Coastal
3. Southwest Coastal
4. South Coastal
5. Southeast Los Angeles County
6. West San Fernando Valley
7. East San Fernando Valley
8. West San Gabriel Valley
9. East San Gabriel Valley
10. Pomona/Walnut Valley (not shown)
11. South San Gabriel Valley
12. South Central Los Angeles
13. Santa Clarita Valley
14. Antelope Valley (not shown)
15. San Gabriel Mountains

APPROX. SCALE

0 4.5 9.0 MILES

SOURCE: South Coast Air Quality Management District Air Monitoring Areas Map, 1999

FIGURE 3-2

AIR MONITORING AREAS

TABLE 3-2: 2009-2011 AMBIENT AIR QUALITY DATA

Pollutant	Pollutant Concentration & Standards	2009	2010	2011
Ozone (O_3)	Maximum 1-hr Concentration (ppm) Days > 0.09 ppm (State 1-hr standard) Maximum 8-hr Concentration (ppm) Days > 0.07 ppm (State 8-hr standard)	0.14 15 0.10 31	0.12 11 0.09 37	0.13 17 0.10 35
Carbon Monoxide (CO)	Maximum 1-hr concentration (ppm) Days > 20 ppm (State1-hr standard) Maximum 8-hr concentration (ppm) Days > 9.0 ppm (State 8-hr standard)	4 0 3.3 0	3 0 2.6 0	n/a n/a 2.8 0
Nitrogen Dioxide (NO_2)	Maximum 1-hr Concentration (ppm) Days > 0.18 ppm (State 1-hr standard)	0.07 0	0.08 0	0.07 0
Respirable Particulate Matter (PM_{10})	Maximum 24-hr concentration ($\mu g/m^3$) Days > 50 $\mu g/m^3$ (State 24-hr standard)	76 10	50 0	60 2
Fine Particulate Matter ($PM_{2.5}$)	Maximum 24-hr concentration ($\mu g/m^3$) Exceed State Standard (12 $\mu g/m^3$)	54 Yes	50 Yes	53 Yes
Sulfur Dioxide(SO_2)	Maximum 24-hr Concentration (ppm) Days > 0.04 ppm (State 24-hr standard)	0.003 0	0.004 0	0.002 0

'n/a' = not available
SOURCE: CARB, Air Quality Data Statistics, *Top 4 Summary*, http://www.arb.ca.gov/adam/topfour/topfour1.php, accessed May 17, 2012.
CO pollutant concentration was obtained from SCAQMD, Historical Data by Year, available at http://www.aqmd.gov/smog/historicaldata.htm, accessed May 17, 2012.

3.3.4 Greenhouse Gas Emissions

The primary effect of rising global concentrations of atmospheric GHG levels is a rise in the average global temperature of approximately 0.2 degrees Celsius per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling using 2000 emission rates shows that further warming is likely to occur given the expected rise in global atmospheric GHG concentrations from innumerable sources of GHG emissions worldwide, which would induce further changes in the global climate system during the current century.[10] Adverse impacts from global climate change worldwide and in California include:

- Declining sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in atmospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures;[11]

- Rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets;[12]

- Changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;[13]

[10] USEPA, Draft Endangerment Finding, 74 Fed. Reg. 18886, 18904, April 24, 2009.
[11] Ibid.
[12] Intergovernmental Panel on Climate Change, *Climate Change 2007*.
[13] *Ibid*.

- Declining Sierra Mountains snowpack levels, which account for approximately half of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years;[14]

- Increasing the number of days conducive to ozone formation (e.g., clear days with intense sun light) by 25 to 85 percent (depending on the future temperature scenario) in high O_3 areas located in the Southern California area and the San Joaquin Valley by the end of the 21st Century;[15] and

- Increasing the potential for erosion of California's coastlines and seawater intrusion into the Sacramento Delta and associated levee systems due to the rise in sea level.[16]

Scientific understanding of the fundamental processes responsible for global climate change has improved over the past decade. However, there remain significant scientific uncertainties, for example, in predictions of local effects of climate change, occurrence of extreme weather events, and effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the climate system, the uncertainty surrounding the implications of climate change may never be completely eliminated. Because of these uncertainties, there continues to be significant debate as to the extent to which increased concentrations of GHGs have caused or will cause climate change, and with respect to the appropriate actions to limit and/or respond to climate change. In addition, it may not be possible to link specific development projects to future specific climate change impacts, though estimating project-specific impacts is possible.

California is the fifteenth largest emitter of GHG on the planet, representing about two percent of the worldwide emissions.[17] **Table 3-3** shows the California GHG emissions inventory for years 2000 to 2009. Statewide GHG emissions slightly decreased in 2009 due to a noticeable drop in on-road transportation, electricity generation, and industrial emissions.

TABLE 3-3: CALIFORNIA GREENHOUSE GAS EMISSIONS INVENTORY

	CO_2e Emissions (Million Metric Tons)									
Sector	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Transportation	172	175	181	179	183	186	187	187	178	173
Electric Power (In-State)	60	64	51	49	50	46	51	55	55	56
Electric Power (Imports)	46	59	59	65	66	63	55	60	66	48
Commercial and Residential	43	41	43	41	43	41	42	42	42	43
Industrial	97	93	94	92	94	93	92	90	87	81
Recycling and Waste	7	7	7	7	7	7	7	7	7	7
Agriculture	29	29	32	31	32	33	34	33	33	32
Forest Net Emissions	(4.5)	(4.3)	(4.2)	(4.2)	(4.2)	(4.0)	(3.9)	(3.9)	(3.8)	(3.8)
Emissions Total	**459**	**475**	**475**	**472**	**484**	**479**	**478**	**485**	**481**	**453**

SOURCE: CARB, *California Greenhouse Gas Inventory 2000-2009*, December 2011.

[14]Cal/EPA, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, 2006.
[15]*Ibid*.
[16]*Ibid*.
[17]CARB, Climate Change Scoping Plan, December 2008.

The transportation sector – largely the cars and trucks that move people and goods – is the largest contributor with 38 percent of the State's total GHG emissions in 2009. On-road emissions (from passenger vehicles and heavy duty trucks) constitute 93 percent of the transportation sector total emissions. Of the on-road vehicles, light duty passenger vehicles accounted for approximately 74 percent of the total sector emissions in 2009 GHG emissions. Transportation emissions showed a decline from 187 million metric tons of CO_2e in 2007 to 173 million metric tons of CO_2e in 2009.

The electricity sector is the next largest contributor at approximately 23 percent of the Statewide GHG emissions. This sector includes power plants and cogeneration facilities that generate electricity for on-site use and for sale to the power grid. In 2009, this sector emitted approximately 105 million metric ton of CO_2e. Emissions from imported electricity generation from specified imports, unspecified imports, and transmission and distribution accounts for 68, 31, and less than 1 percent, respectively. In-State electricity generation includes CHP commercial, CHP industrial, merchant owned, transmission and distribution, and utility owned. The percent contributions from CHP commercial is approximately 2, CHP industrial is approximately 30, merchant owned is approximately 57, transmission and distribution is approximately 1, and utility owned is approximately 18. Emissions from natural gas accounts for 87 percent of in-State GHG emissions associated with electricity generation.

The industrial sector is the third largest contributor to the Statewide GHG emissions. California's industrial sector includes industrial CHP useful heat, landfills, manufacturing, mining, oil and gas extraction, petroleum refining, petroleum marketing, pipelines, wastewater treatment, and other large industrial sources. Of these emitters, petroleum refining, manufacturing accounts for 32, oil extraction accounts for 25, gas extraction accounts for 15, CHP accounts for 12, and landfills accounts for 8 percent.

The sector termed recycling and waste management is a unique system, encompassing not just emissions from waste facilities but also the emissions associated with the production, distribution and disposal of products throughout the economy.

Although high global warming potential gases (e.g., PFCs, HFCs, and SF6) are a small contributor to historic GHG emissions, levels of these gases are projected to increase sharply over the next several decades making them a significant source by 2020. These gases are used in growing industries such as semiconductor manufacturing.
The forest sector GHG inventory includes CO_2 uptake and GHG emissions from wild and prescribed fires, the decomposition and combustion of residues from harvest and conversion/development, and wood products decomposition. The forest sector is unique in that forests both emit GHGs and absorb CO_2 through carbon sequestration. While the current inventory shows forests absorb 3.8 million metric tons of CO_2e, carbon sequestration has declined since 2000 due to losses of forest area and emission increases from decomposing wood products consumed in the State. For this reason, the 2020 projection assumes no net emissions from forests.

The agricultural GHG emissions shown are largely methane emissions from livestock, both from the animals and their waste. Emissions of GHG from fertilizer application are also important contributors from the agricultural sector. Opportunities to sequester CO_2 in the agricultural sector may also exist; however, additional research is needed to identify and quantify potential sequestration benefits.

3.3.5 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. CARB has identified the following groups who are most likely to be affected by 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, sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers and retirement homes.

As shown in **Figures 3-3 to 3-8**, samples of sensitive receptors within one-quarter mile (1,320 feet) along the six proposed pipeline segments include:

North Hollywood Park

- Single- and multi-family residences
- North Hollywood High School
- Amelia Earhart High School
- Oakwood Secondary School
- North Hollywood Library
- Toluca Lake Elementary School
- St. Paul's First Lutheran School
- East Valley High School
- North Hollywood Park
- Valley Village Park

Valley Plaza Park

- Single- and multi-family residences
- James Madison Middle School
- Valley Plaza Park
- Valley Plaza Library
- Roy Romer Middle School

Van Nuys Sherman Oaks Park

- Single- and multi-family
- Sherman Oaks Hospital
- Van Nuys – Sherman Oaks Park
- Los Angeles Valley College
- The Church of Jesus Christ of Latter-Day Saints
- Chandler Elementary School
- Van Nuys Middle School

Reseda Park

- Single- and multi-family
- Birmingham High School
- High Tech High School
- Valley Alternative School
- Mulholland Middle School
- Reseda Park
- Newcastle Elementary School

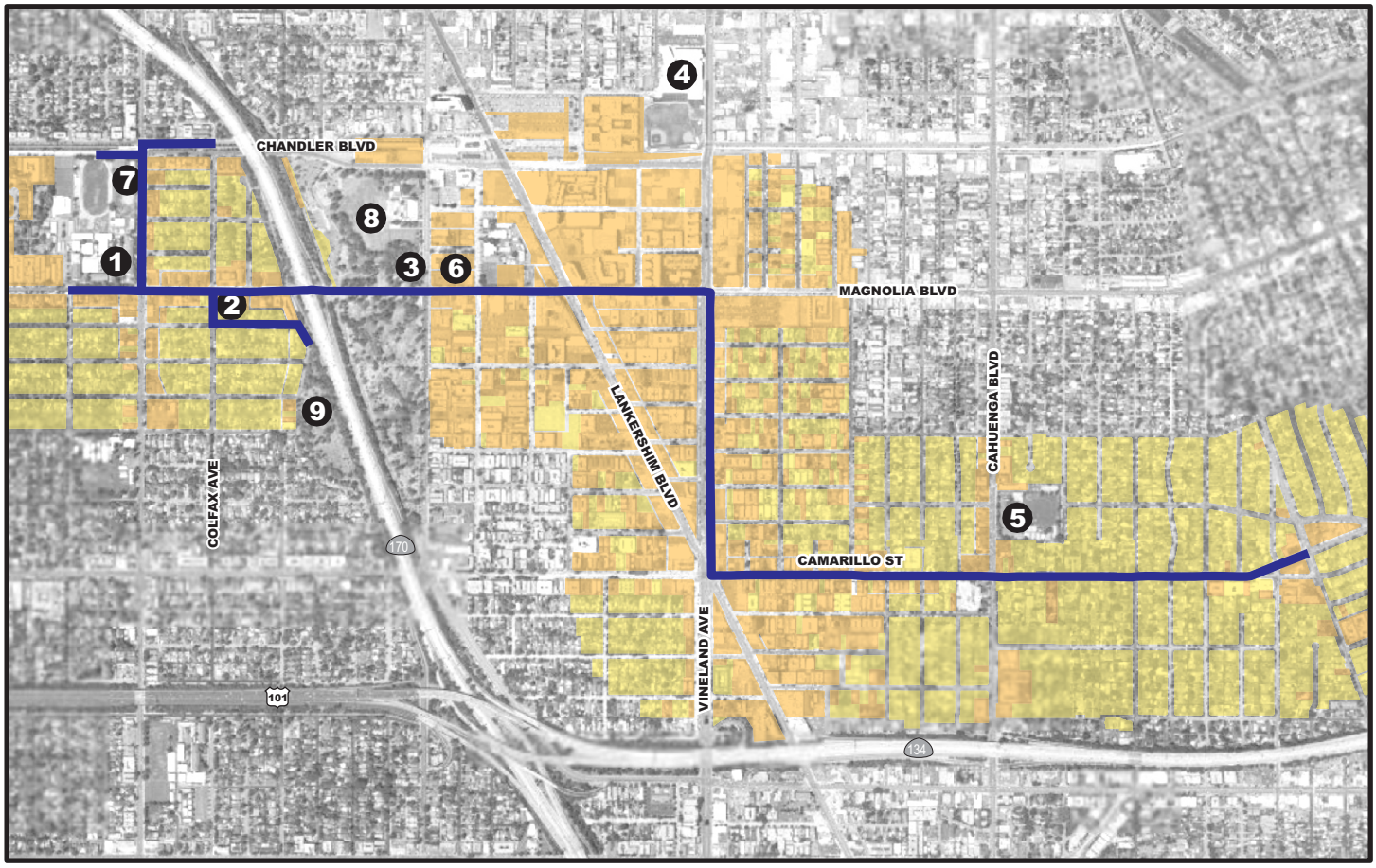
VA Hospital

- Single- and multi-family residences
- Monroe High School
- Centers of Learning
- VA Hospital
- Albert Einstein High School

Pierce College

- Sherman Oaks Center for Enriched Studies
- Single- and multi-family residences
- Pierce College
- Vanalden Elementary School

The above sensitive receptors represent the nearest residential land uses with the potential to be impacted by the proposed project. Additional sensitive receptors are located further from the project site in the surround community and would be less impacted by air emissions than the above sensitive receptors.



LEGEND:

Proposed Alignment - North Hollywood Park Segment

Single-Family Residences

Multi-Family Residences

Air Quality Sensitive Receptor Locations

1. North Hollywood High School
2. Oakwood Secondary School
3. North Hollywood Library
4. East Valley High Schoo
5. Toluca Lake Elementary Schooll
6. St. Paul's First Lutheran School
7. Amelia Earhart High School
8. North Hollywood Park
9. Valley Village Park

APPROX. SCALE

N

0 847 1,694 FEET

SOURCE: Google Earth and TAHA, 2013.

taha

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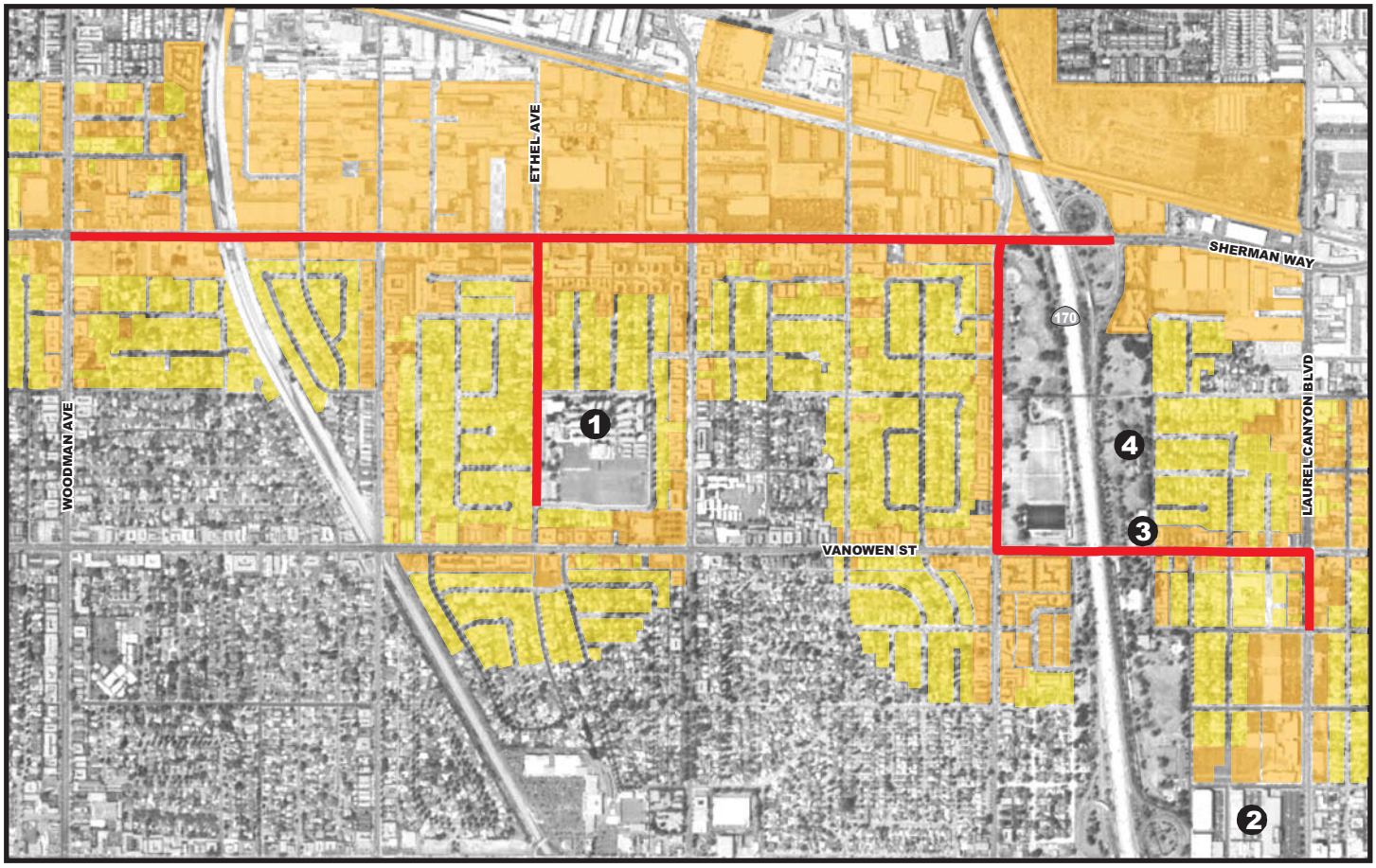
FIGURE 3-3

SENSITIVE RECEPTORS -
NORTH HOLLYWOOD PARK SEGMENT



LEGEND:

Proposed Alignment - Valley Plaza Park Segment

Single-Family Residences

Multi-Family Residences

(#) Air Quality Sensitive Receptor Locations

1. James Madison Middle School
2. Roy Romer Middle School
3. Valley Plaza Library
4. Valley Plaza Park

SOURCE: Google Earth and TAHA, 2012.

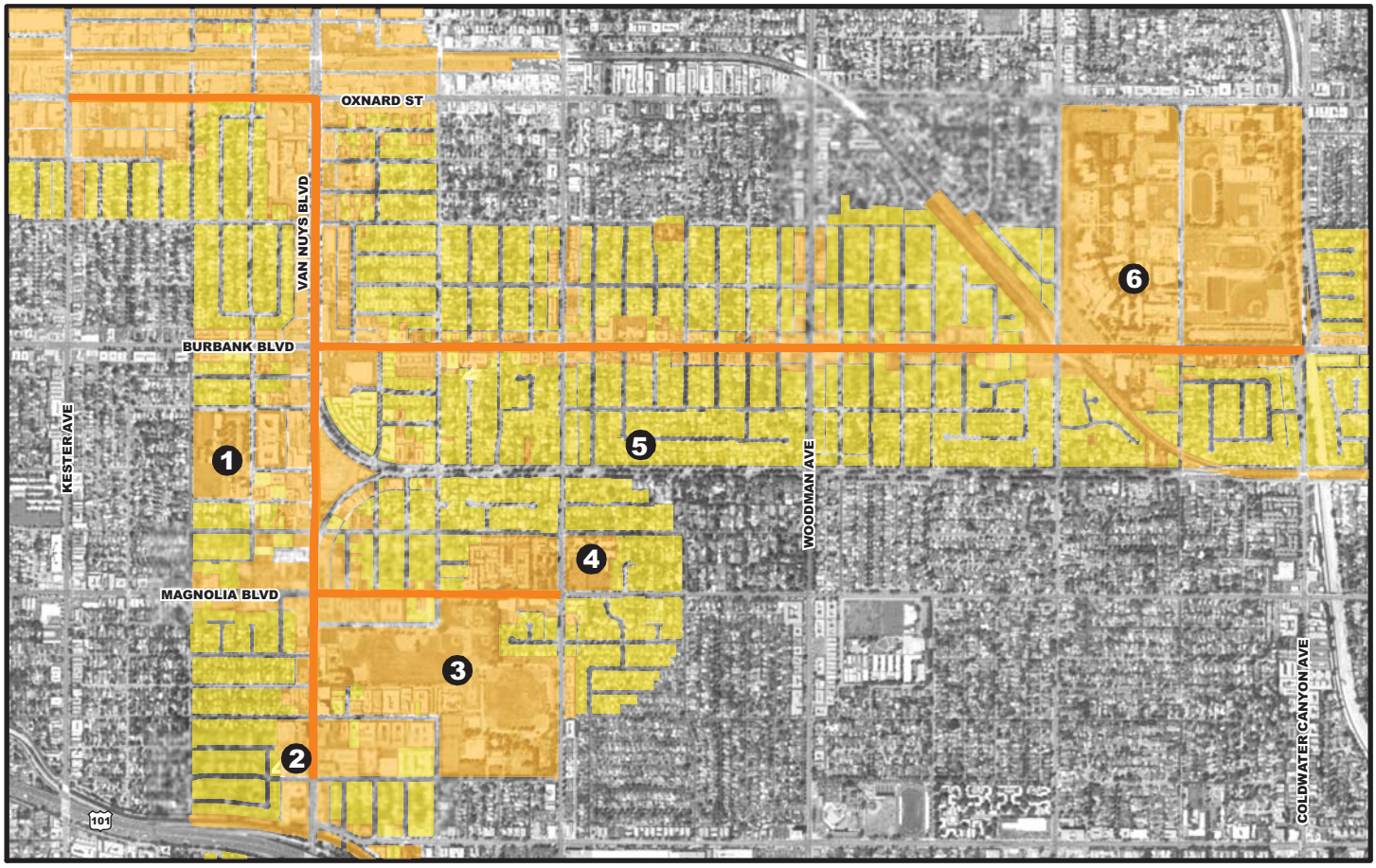
APPROX. SCALE

N

0 770 1,540 FEET

FIGURE 3-4

SENSITIVE RECEPTORS -
VALLEY PLAZA PARK SEGMENT



LEGEND:

Proposed Alignment - Van Nuys Sherman Oaks Park Segment

Single-Family Residences

Multi-Family Residences

Air Quality Sensitive Receptor Locations

1. Van Nuys Middle School
2. Sherman Oaks Hospital
3. Van Nuys-Sherman Oaks Park
4. Chandler Middle School
5. The Church of Jesus Christ of Latter-Day Saints
6. Los Angeles Valley College

Approx. Scale

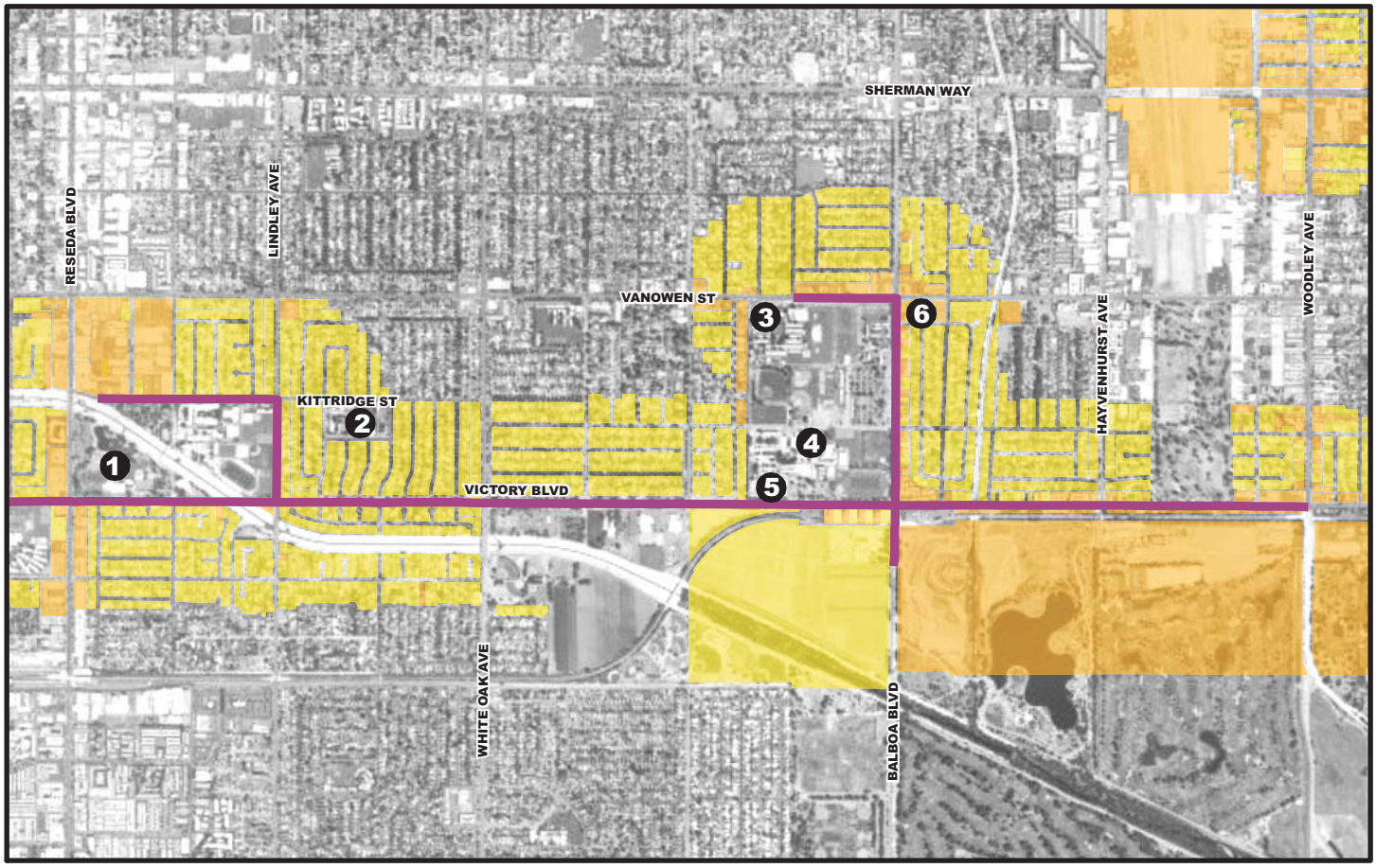
N

0 970 1,940 FEET

SOURCE: Google Earth and TAHA, 2012.

FIGURE 3-5

SENSITIVE RECEPTORS -
VAN NUYS SHERMAN OAKS PARK SEGMENT



LEGEND:

- Proposed Alignment - Reseda Park Segment
- Single-Family Residences
- Multi-Family Residences
- (#) Air Quality Sensitive Receptor Locations

1. Reseda Park
2. Newcastle Elementary School
3. Mulholland Middle School
4. Birmingham High School
5. High Tech High School
6. Valley Alternative School

APPROX. SCALE

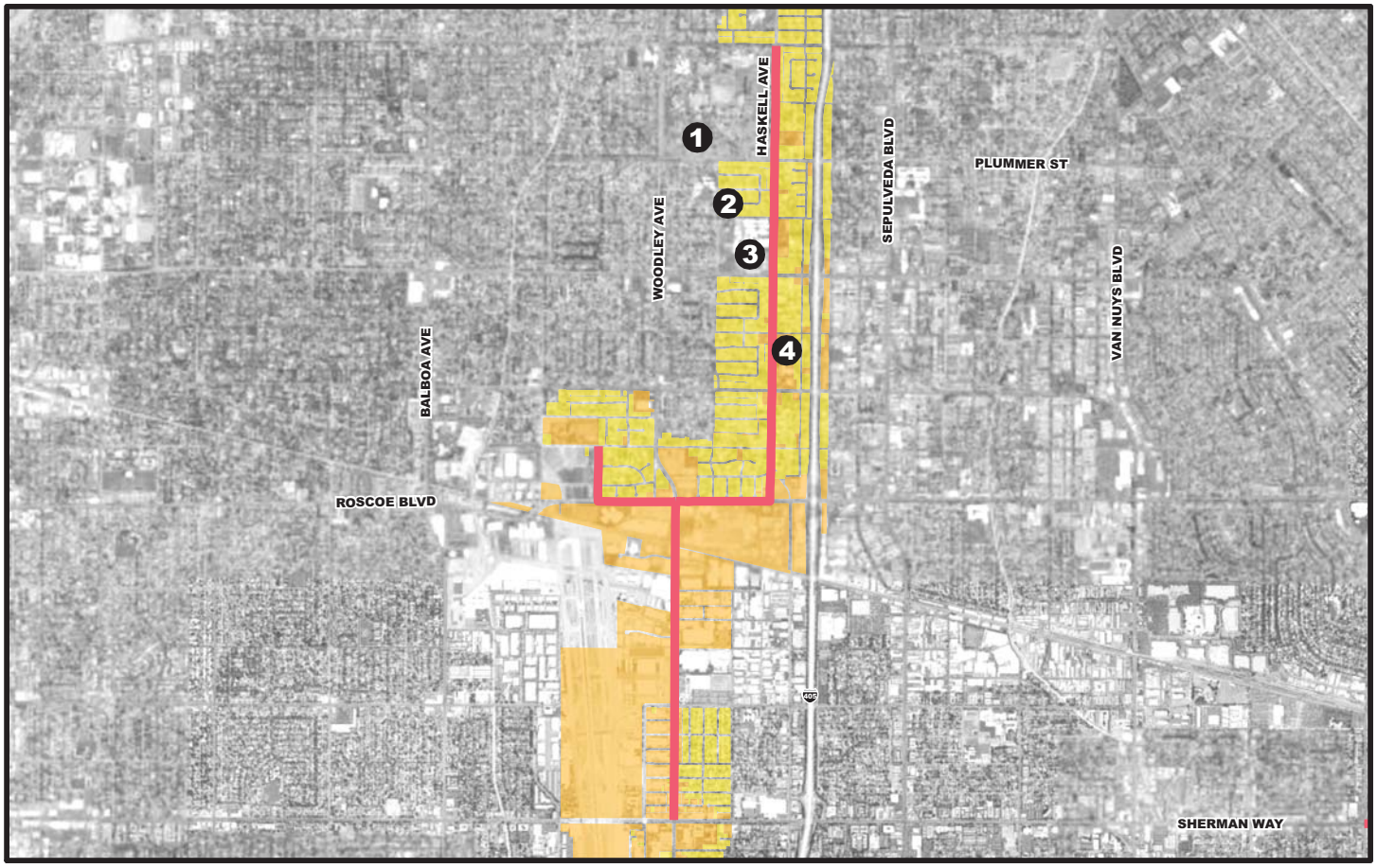
N

0 1,150 2,300 FEET

SOURCE: TAHA, 2012 and Google Earth, 2012.

FIGURE 3-6

SENSITIVE RECEPTORS - RESEDA PARK SEGMENT



LEGEND:

Proposed Alignment - Veterans Administration Hospital Segment

(#) Air Quality Sensitive Receptor Locations

1. Veterans Administration Hospital
2. Albert Einstein High School
3. Monroe High School
4. Centers of Learning

SOURCE: Google Earth and TAHA, 2012.

APPROX. SCALE

N

0 2,075 4,150 FEET

taha 2012-017

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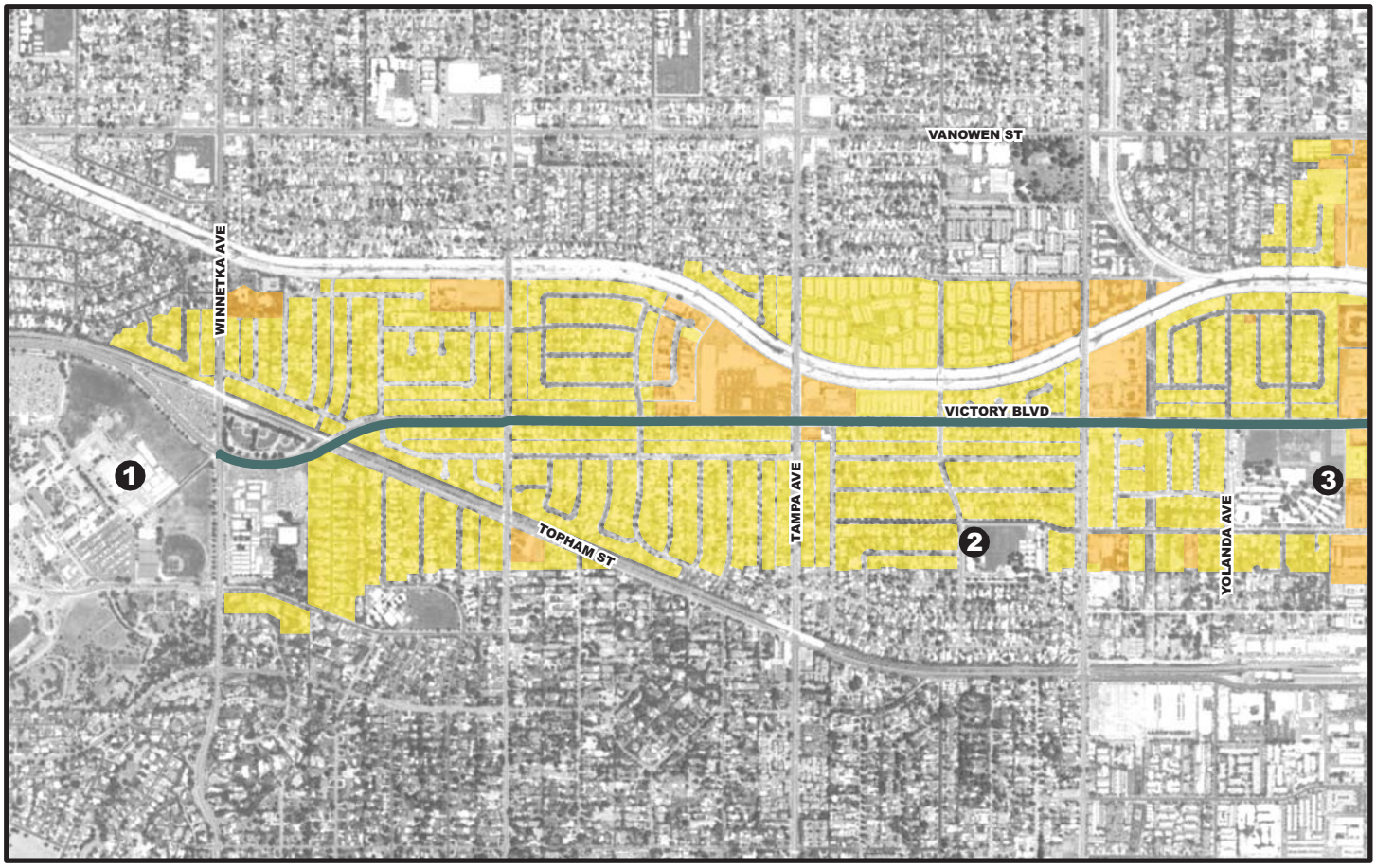
FIGURE 3-7

SENSITIVE RECEPTORS -
VETERANS ADMINISTRATION HOSPITAL SEGMENT



LEGEND:

- Proposed Alignment - Pierce College Segment
- Single-Family Residences
- Multi-Family Residences
- # Air Quality Sensitive Receptor Locations

1. Pierce College
2. Vanalden Elementary School
3. Sherman Oaks Center for Enriched Studies

SOURCE: Google Earth and TAHA, 2012.

APPROX. SCALE

N

0 830 1,660 FEET

FIGURE 3-8

SENSITIVE RECEPTORS -
PIERCE COLLEGE SEGMENT

3.4 METHODOLOGY AND SIGNIFICANCE CRITERIA

3.4.1 Methodology

Potential impacts associated with air emissions were evaluated based on current SCAQMD guidance. This includes the SCAQMD *CEQA Air Quality Handbook* and associated updates on the SCAQMD website, and the *Localized Significance Methodology for CEQA Evaluations*.[18] In addition, emissions estimations formulas were obtained from the USEPA AP-42 *Compilation of Air Pollutant Emission Factors*.

The estimate of emissions was based upon a detailed spreadsheet provided by LADWP that described the construction process. The following assumptions are used to calculate emissions generated from construction activities:

- Total full-time operating equipment: 9
- Maximum daily personnel: 12
- Maximum daily haul truck round-trips: 12
- Amount of excavated material: 1,647,000 cubic feet
- Distance travelled to waste facility: 22.3 miles (one-way)

The complete spreadsheet is included in Appendix C, *Construction Emission Calculations*. The spreadsheet was used to characterize daily activity throughout the construction process. Equipment engine emissions were estimated using OFFROAD2007 and truck and commute trips emissions were estimated using EMFAC2011. Fugitive dust emissions from sources including excavation were estimated using AP-42 emission factors. The analysis compares the worst-case emissions day from each year of construction activity to the SCAQMD regional significance thresholds.

Localized on-site emissions (i.e., equipment exhaust and fugitive dust) were estimated as described above. The mass emissions were compared to the localized screening thresholds (LSTs) established by the SCAQMD.

3.4.2 Significance Criteria

The following are significance criteria that SCAQMD has established to assess construction and GHG impacts. The proposed project would not include operational activity and operational significant criteria are not relevant.

Construction Phase Significance Criteria

The proposed project would have a significant impact if:

- Daily localized or regional, construction emissions were to exceed SCAQMD thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$ or PM_{10}, as presented in **Table 3-4**;
- The proposed project would generate significant emissions of TACs; and/or
- The proposed project would create an odor nuisance.

[18] SCAQMD, *Localized Significance Methodology*, June 2003, revised July 2008.

TABLE 3-4: SCAQMD DAILY CONSTRUCTION EMISSIONS THRESHOLDS

Criteria Pollutant	Regional Emissions (Pounds Per Day)	Localized Emissions (Pounds Per Day) /a/
Volatile Organic Compounds (VOC)	75	--
Nitrogen Oxides (NO_X)	100	103
Carbon Monoxide (CO)	550	426
Sulfur Oxides (SO_X)	150	--
Fine Particulates ($PM_{2.5}$)	55	3
Particulates (PM_{10})	150	4

/a/ Localized thresholds based on 25-meter receptor distance and a one-acre project site.
SOURCE: SCAQMD, 2012.

Greenhouse Gas Significance Criteria

The SCAQMD has not approved a GHG significance threshold for the development of non-SCAQMD and non-industrial projects. The significance threshold is based on the methodologies recommended by the California Air Pollution Control Officers Association (CAPCOA) CEQA and Climate Change white paper (January 2008). CAPCOA conducted an analysis of various approaches and significance thresholds, ranging from a zero threshold (all projects are cumulatively considerable) to a high of 40,000 to 50,000 metric tons of CO_2e per year. For example, an approach assuming a zero threshold and compliance with AB 32 2020 targets would require all discretionary projects to achieve a 33 percent reduction from projected "business-as-usual" emissions to be considered less than significant. A zero threshold approach could be considered on the basis that climate change is a global phenomenon, and not controlling small source emissions would potentially neglect a major portion of the GHG inventory. However, the CEQA Guidelines also recognize that there may be a point where a project's contribution, although above zero, would not be a considerable contribution to the cumulative impact (CEQA Guidelines, Section 15130 [a]). Therefore, a threshold of greater than zero is considered more appropriate for the analysis of GHG emissions under CEQA.

Another method would use a quantitative threshold of greater than 900 metric tons CO_2e per year based on a market capture approach that requires mitigation for greater than 90 percent of likely future discretionary development. Another potential threshold would be the 10,000 metric tons standard used by the Market Advisory Committee for inclusion in a GHG Cap and Trade System in California. The basic concepts for the various approaches suggested by CAPCOA are used herein to determine whether or not the proposed project's GHG emissions are "cumulatively considerable."

The most conservative (i.e., lowest) thresholds, suggested by CAPCOA, would not be appropriate for the proposed project given that it is located in a community that is highly urbanized. Similarly, the 900-ton threshold was also determined to be too conservative for general development in the South Coast Air Basin. Consequently, the threshold of 10,000 metric tons CO_2e is used as a quantitative benchmark for significance.

3.5 ENVIRONMENTAL IMPACTS

3.5.1 Construction Phase

Regional Impacts

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 generated by construction workers traveling to and from the project site. Fugitive dust emissions would primarily result from demolition and site preparation (e.g., excavation) activities. NO_X emissions would primarily result from the use of construction equipment. The assessment of construction air quality impacts considers each of these potential 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. Specific Rule 403 control requirements include, but are 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, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce regional $PM_{2.5}$ and PM_{10} emissions associated with construction activities by approximately 61 percent.

Table 3-5 shows the maximum daily emissions associated with construction activities. Regional construction emissions would not exceed the SCAQMD significance thresholds. Therefore, the proposed project would result in a less-than-significant impact related to regional construction emissions.

TABLE 3-5: REGIONAL CONSTRUCTION EMISSIONS

	Pounds Per Day					
Source	**VOC**	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$**	**PM_{10}**
Construction Equipment	5	34	25	5	2	2
Worker Vehicle	0.14	0.22	2.45	--	<1	<1
Off-Site Truck	0.22	3.46	1.07	--	<1	<1
Fugitive Dust	--	--	--	--	<1	<1
Maximum Regional Total	5	37	28	5	2	2
REGIONAL SIGNIFICANCE THRESHOLD	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	No	No	No	No	No	No

SOURCE: TAHA, 2012.

Localized Impacts

Construction activity would generate on-site pollutant emissions associated with equipment exhaust and fugitive dust. **Table 3-6** shows the estimated localized emissions associated with each construction year. Maximum daily VOC, NO_X, CO, SO_X, $PM_{2.5}$, and PM_{10} emissions would not exceed the SCAQMD LST. Therefore, the proposed project would result in a less-than-significant impacts related to localized concentrations.

TABLE 3-6: LOCALIZED CONSTRUCTION EMISSIONS

Source	Pounds Per Day					
	VOC	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$**	**PM_{10}**
Construction Equipment	5	34	25	5	2	2
Fugitive Dust	--	--	--	--	<1	<1
Maximum Localized Total	5	34	25	5	2	2
LOCALIZED SIGNIFICANCE THRESHOLD	**n/a**	**103**	**426**	**n/a**	**3**	**4**
Exceed Threshold?	No	No	No	No	No	No

SOURCE: TAHA, 2012.

Installation of the recycled water pipeline would restrict street parking and closure of up to two roadway lanes. Consequently, traffic flow would be affected whenever a mixed-flow traffic lane is closed for construction activities. Reduced speeds through construction zones would result in additional localized concentrations. Traffic congestion would lessen as some automobile travelers would reroute to parallel streets when lane closures would occur. The proposed project is not projected to substantially increase traffic congestion since road closures would be limited to off-peak periods. In addition, construction activities would be limited to 90 feet of the public roads at one time to minimize long-term traffic disruption. Therefore, the proposed project would result in a less-than-significant impact related to localized traffic concentrations.

Toxic Air Contaminant Impacts

The greatest potential for TAC emissions during construction would be diesel particulate emissions associated with heavy-duty equipment operations. The SCAQMD has not published guidance for assessing the risk from construction projects. The California Air Pollution Control Officers Association (CAPCOA) has published *Health Risk Assessments for Proposed Land Use Projects* (July 2009). Page 2 of the document states that, "This guidance does not include how risk assessments for construction projects should be addressed in CEQA. As this is intended to be a 'living document', the risks near construction projects are expected to be included at a later time as the toxic emissions from construction activities are better quantified. State risk assessment policy is likely to change to reflect current science, and therefore this document will need modification as this occurs." As regional and localized particulate matter emissions would not result in significant impacts, it is similarly anticipated that diesel particulate emissions would not result in a significant health impact. Therefore, the proposed project would result in a less-than-significant impact related to construction TAC emissions.

Odor Impacts

Potential sources that may emit odors during construction activities include equipment exhaust. Odors from these sources would be localized and generally confined to the immediate area surrounding the project site. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Therefore, the proposed project would result in a less-than-significant impact related to construction odors.

Construction Phase Mitigation Measures

Impacts related to regional and localized air emissions were determined to be less-than-significant without mitigation. In addition, the proposed project shall implement the following Best Management Practices during all phases of construction:

- The proposed shall implement Rule 403 dust control measures required by the SCAQMD.

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

- 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.

Impacts After Mitigation

Regional Impacts. Impacts related to regional air emissions were determined to be less-than significant without mitigation.

Localized Impacts. Impacts related to localized air emissions were determined to be less-than- significant without mitigation.

Toxic Air Contaminant Impacts. Impacts related to toxic air contaminant emissions were determined to be less-than-significant without mitigation.

Odor Impacts. Impacts related to odors were determined to be less-than-significant without mitigation.

3.5.2 Operational Phase

Upon completion of the proposed pipeline route, the proposed project would not include any operational activities. Therefore, no impacts related to operational emissions would occur.

Operational Phase Mitigation Measures

No impacts related to operational air quality emissions would occur. No mitigation measures are required.

Impacts After Mitigation

No impacts related to operational air quality emissions would occur.

3.6 CUMULATIVE IMPACTS

3.6.1 SCAQMD Methodology

A significant impact would occur if the proposed project resulted in a cumulative net increase in any criteria pollutant above threshold standards. The SCAQMD's approach for assessing cumulative air quality impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. The SCQAMD has set forth significance thresholds designed to assistant in the attainment of ambient air quality standards. The proposed project would not result in significant emissions after the implementation of mitigation. Therefore, the proposed project would not result in a cumulatively considerable impact related to construction air quality.

3.6.2 Global Climate Change

The GHG and climate change analysis considered project emissions and consistency with applicable GHG reduction plans and policies.

Greenhouse Gas Emissions

GHG emissions were estimated for equipment exhaust, truck trips, and worker commute trips. As mentioned previously, installation of the six pipeline segments is scheduled to be completed in five years (2017 to 2021). Based on SCAQMD guidance, construction emissions amortized over a 30-year span. As shown in **Table 3-7**, estimated GHG emission would be 131 tons per year. Estimated GHG emissions would be less than the 10,000 metric tons of CO_2e per year quantitative significance threshold. The proposed project would not include significant sources of constructional and operational emissions. The proposed project would in no way conflict with any State or local climate change policy or regulation. Therefore, the proposed project would result in a less-than-significant impact related to GHG emissions.

TABLE 3-7: ANNUAL GREENHOUSE GAS EMISSIONS

Source	Carbon Dioxide Equivalent (Metric Tons per Year)
Construction Emissions Amortized	131
SIGNIFICANCE THRESHOLD	**10,000**
Exceed Threshold?	No

SOURCE: TAHA, 2012.

Appendices

A. Wind & Climate Information
B. CARB Data
C. Construction Emission Calculations
D. GHG Emission Calculations
E. EMFAC2011 Output Files
F. SCAQMD Rule 403 – Fugitive Dust

Appendix A

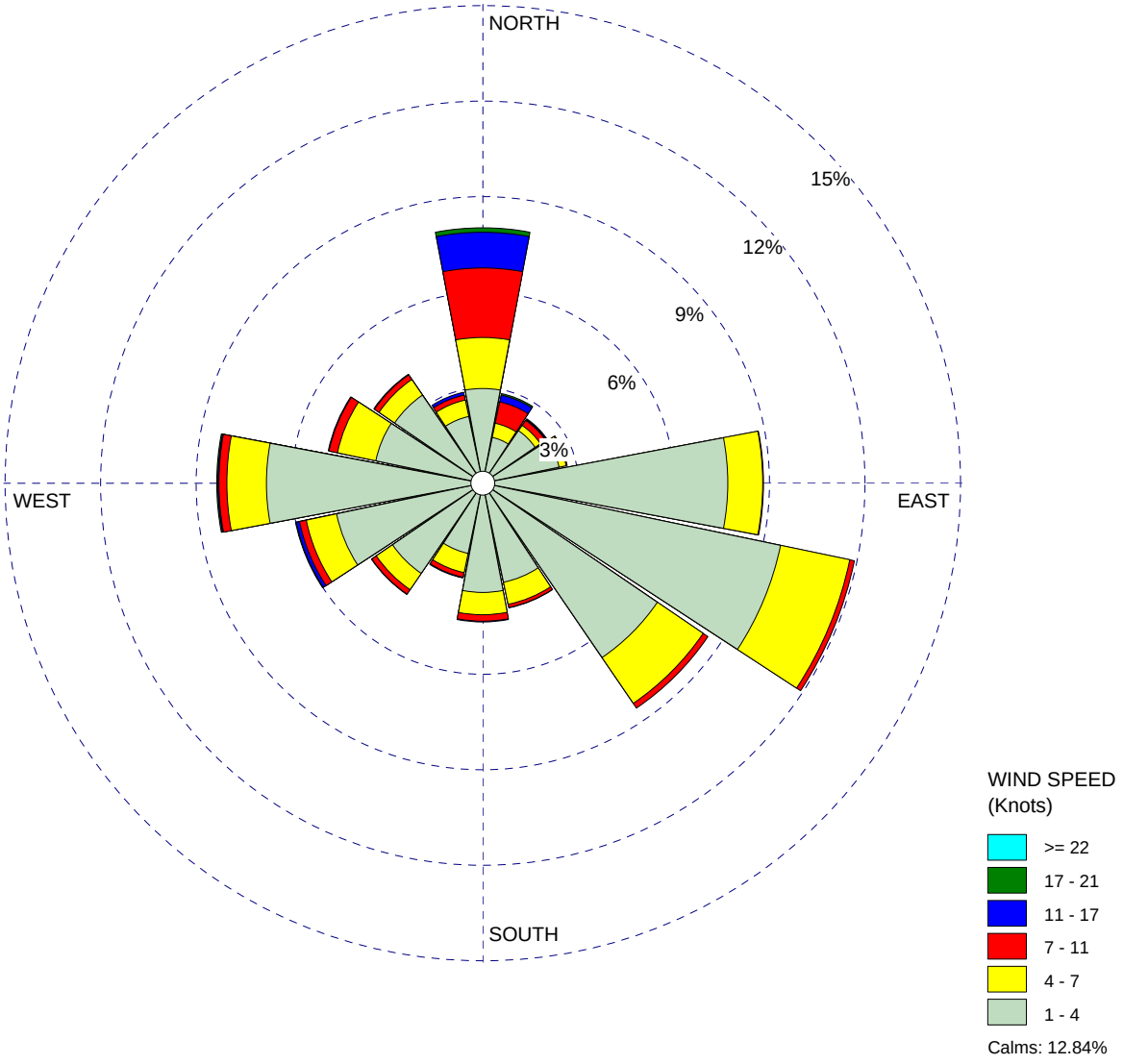
Wind and Climate Information

WIND ROSE PLOT:

San Fernando Valley Water Recycling Project
Reseda Wind Monitoring Station

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD: **Start Date: 1/1/1981 - 00:00** **End Date: 12/31/1981 - 23:00**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **12.84%**	TOTAL COUNT: **8760 hrs.**	
	AVG. WIND SPEED: **3.04 Knots**	DATE: **6/4/2012**	PROJECT NO.: **2012-017**

Southern California Climate Summaries

Back to: Western U.S. map Home Page
Alphabetical Station List

- Alpine
- Ash Mountain
- Avalon Pleasure Pier
- Bakersfield WSO
- Barstow
- Barstow Fire Station
- Beaumont 1 E
- Big Bear Lake
- Blythe
- Blythe CCA Airport
- Borrego Desert Park
- Brawley 2 SW
- Buttonwillow
- Cachuma Lake
- Campo
- Cantil
- Carmel Valley
- Chula Vista
- Coalinga
- Corcoran Irrig. Dist.
- Cuyamaca
- Daggett
- Death Valley
- Dry Canyon Reservoir
- Eagle Mountain
- El Cajon
- El Capitan Dam
- El Centro 2 SSW
- El Mirage Field
- Escondido
- Escondido 2
- Fairmont
- Five Points 5 SSW
- Fresno WSO
- Giant Forest
- Glennville
- Gold Rock Ranch
- Grant Grove
- Haiwee
- Hanford 1 S
- Hayfield Reservoir
- Henshaw Dam
- Hollister
- Idyllwild Fire Dept.
- Imperial
- Independence
- Indio Fire Station

Los Angeles Basin Area, California Climate Summaries

Back to: Western U.S. map Home Page
Alphabetical Station List

- Burbank Valley Pump Plant
- Canoga Park Pierce College
- Claremont Pomona College
- Corona
- Culver City
- Elsinore
- Fontana Kaiser
- Laguna Beach
- Lake Arrowhead
- Long Beach
- Los Angeles Airport
- Los Angeles Civic Center
- Montebello
- Mount Wilson
- Newport Beach Harbor
- Pasadena
- Pomona Cal Poly
- Redlands
- Riverside Citrus Exp. Farm
- Riverside Fire Station 3
- San Bernardino
- San Fernando
- San Gabriel Fire Dept.
- San Pedro
- Santa Ana Fire Station
- Santa Monica Pier
- Sun City
- Torrance
- Tujunga
- Tustin Irvine Ranch
- U. C. L. A.
- Yorba Linda

...back to Home Page.

Western Regional Climate Center,
wrcc@dri.edu

SAN FERNANDO, CALIFORNIA

Period of Record General Climate Summary - Temperature

Station:(047759) SAN FERNANDO

From Year=1927 To Year=1974

	Monthly Averages			Daily Extremes				Monthly Extremes				Max. Temp.		Min. Temp.	
	Max.	Min.	Mean	High	Date	Low	Date	Highest Mean	Year	Lowest Mean	Year	>= 90 F	<= 32 F	<= 32 F	<= 0 F
	F	F	F	F	dd/yyyy or yyyymmdd	F	dd/yyyy or yyyymmdd	F	-	F	-	# Days	# Days	# Days	# Day
January	65.0	43.2	54.1	92	01/1948	26	30/1949	61.0	1961	43.3	1937	0.0	0.0	2.9	0.
February	67.1	43.5	55.3	92	11/1971	26	10/1929	63.1	1954	49.5	1949	0.0	0.0	1.6	0.
March	70.5	44.1	57.3	97	31/1966	28	02/1951	65.6	1934	50.6	1952	0.4	0.0	0.9	0.
April	75.3	46.7	61.0	103	03/1961	30	05/1929	65.8	1959	52.7	1967	2.6	0.0	0.2	0.
May	78.7	49.8	64.3	105	20/1942	32	11/1933	69.7	1943	60.4	1930	4.3	0.0	0.0	0.
June	84.3	52.5	68.3	114	15/1961	36	09/1941	74.2	1957	63.6	1941	9.3	0.0	0.0	0.
July	92.7	56.3	74.5	113	26/1933	40	11/1970	79.8	1931	69.3	1944	21.5	0.0	0.0	0.
August	92.6	56.6	74.6	112	11/1933	41	31/1941	81.4	1967	69.5	1940	21.5	0.0	0.0	0.
September	89.6	54.7	72.1	114	13/1971	39	23/1941	77.6	1963	65.9	1941	15.1	0.0	0.0	0.
October	81.9	51.1	66.5	106	02/1933	32	20/1949	73.3	1965	62.4	1941	7.7	0.0	0.0	0.
November	73.8	47.9	60.9	97	01/1966	29	23/1931	68.0	1956	54.6	1952	1.4	0.0	0.3	0.
December	66.4	45.0	55.7	90	03/1958	26	23/1968	62.5	1929	49.4	1971	0.0	0.0	1.3	0.
Annual	78.2	49.3	63.7	114	19610615	26	19290210	65.8	1958	61.3	1949	84.0	0.0	7.4	0.
Winter	66.2	43.9	55.0	92	19480101	26	19290210	59.4	1961	47.5	1949	0.1	0.0	5.9	0.
Spring	74.8	46.9	60.9	105	19420520	28	19510302	66.1	1934	57.4	1935	7.4	0.0	1.1	0.
Summer	89.9	55.2	72.5	114	19610615	36	19410609	75.6	1957	68.7	1941	52.3	0.0	0.0	0.
Fall	81.8	51.2	66.5	114	19710913	29	19311123	70.4	1958	63.4	1944	24.3	0.0	0.4	0.

Table updated on Apr 5, 2006
For monthly and annual means, thresholds, and sums:
Months with 5 or more missing days are not considered
Years with 1 or more missing months are not considered
Seasons are climatological not calendar seasons

Back to:
State Map | Western U.S. map | Home Page

NOTE:
To print data frame (right side), click on right frame before printing.

1981 - 2010

- Daily Temp. & Precip.
- Daily Tabular data (~23 KB)
- Monthly Tabular data (~1 KB)
- NCDC 1981-2010 Normals (~3 KB)

1971 - 2000

- Daily Temp. & Precip.
- Daily Tabular data (~23 KB)
- Monthly Tabular data (~1 KB)
- NCDC 1971-2000 Normals (~3 KB)

1961 - 1990

- Daily Temp. & Precip.
- Daily Tabular data (~23 KB)
- Monthly Tabular data (~1 KB)
- NCDC 1961-1990 Normals (~3 KB)

Period of Record

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- Station Metadata Graphics

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SAN FERNANDO, CALIFORNIA

Period of Record General Climate Summary - Precipitation

Station:(047759) SAN FERNANDO

From Year=1927 To Year=1974

	Precipitation											Total Snowfall		
	Mean	High	Year	Low	Year	1 Day Max.		>= 0.01 in.	>= 0.10 in.	>= 0.50 in.	>= 1.00 in.	Mean	High	Year
	in.	in.	-	in.	-	in.	dd/yyyy or yyyymmdd	# Days	# Days	# Days	# Days	in.	in.	-
January	3.53	15.06	1969	0.00	1948	7.55	01/1934	6	4	2	1	0.1	4.5	1949
February	3.37	13.04	1962	0.00	1933	4.45	20/1944	6	4	2	1	0.0	0.0	1931
March	2.34	10.48	1941	0.00	1940	4.50	07/1952	5	4	2	1	0.0	0.0	1933
April	1.38	6.84	1965	0.00	1934	2.95	12/1956	4	3	1	0	0.0	0.0	1930
May	0.24	1.56	1957	0.00	1929	1.05	11/1957	2	1	0	0	0.0	0.0	1929
June	0.07	0.57	1934	0.00	1928	0.50	01/1948	1	0	0	0	0.0	0.0	1928
July	0.02	0.39	1969	0.00	1928	0.39	11/1969	0	0	0	0	0.0	0.0	1928
August	0.03	0.51	1942	0.00	1928	0.51	10/1942	0	0	0	0	0.0	0.0	1928
September	0.10	0.95	1967	0.00	1928	0.44	17/1950	1	0	0	0	0.0	0.0	1930
October	0.41	1.92	1957	0.00	1929	1.52	28/1942	2	1	0	0	0.0	0.0	1929
November	1.79	12.27	1965	0.00	1929	3.70	07/1966	3	2	1	0	0.0	0.0	1930
December	2.86	10.59	1938	0.00	1929	4.31	15/1938	5	4	2	1	0.1	2.0	1931
Annual	16.16	37.87	1941	4.76	1972	7.55	19340101	36	23	10	5	0.2	4.5	1949
Winter	9.77	24.91	1969	1.35	1961	7.55	19340101	17	12	6	3	0.2	4.5	1949
Spring	3.97	15.80	1941	0.02	1934	4.50	19520307	11	7	3	1	0.0	0.0	1933
Summer	0.12	0.59	1934	0.00	1928	0.51	19420810	2	0	0	0	0.0	0.0	1928
Fall	2.30	12.84	1965	0.10	1937	3.70	19661107	6	4	1	0	0.0	0.0	1930

Table updated on Apr 5, 2006
For monthly and annual means, thresholds, and sums:
Months with 5 or more missing days are not considered
Years with 1 or more missing months are not considered
Seasons are climatological not calendar seasons
Winter = Dec., Jan., and Feb. Spring = Mar., Apr., and May
Summer = Jun., Jul., and Aug. Fall = Sep., Oct., and Nov.

Western Regional Climate Center, wrcc@dri.edu

Appendix B

CARB Data

Top 4 Summary: Highest 4 Daily Maximum Hourly Ozone Measurements

at Reseda

	2009		2010		2011	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Aug 31	0.135	Sep 3	0.122	Aug 25	0.130
Second High:	Sep 2	0.119	Jul 15	0.120	Jul 2	0.129
Third High:	Aug 28	0.117	Aug 25	0.116	Jun 21	0.128
Fourth High:	Jun 28	0.115	Aug 24	0.114	Jul 1	0.119
California:						
# Days Above the Standard:		15		11		17
California Designation Value:		0.13		0.12		0.12
Expected Peak Day Concentration:		0.129		0.126		0.123
National:						
# Days Above the Standard:		*1*		*0*		*3*
Nat'l Standard Design Value:		*0.123*		*0.121*		*0.128*
Year Coverage:		98		96		93

◄ Shift Backward [1 year] Shift Forward ►

Notes:

Hourly ozone measurements and related statistics are available at Reseda between 1978 and 2011. Some years in this range may not be represented.

All concentrations expressed in parts per million.

The national 1-hour ozone standard was revoked in June 2005 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or *italics*.

yellow exceeds a California ambient air quality standard. *orange* exceeds the revoked 1-hour national ambient air quality standard.

An exceedance of a standard is not necessarily related to a violation of the standard.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

* means there was insufficient data available to determine the value.

Available Pollutants:

8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

Top 4 Summary: Highest 4 Daily Maximum 8-Hour Ozone Averages

at Reseda

	2009		2010		2011	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National:						
First High:	Aug 30	0.100	Jul 10	0.091	Jul 2	0.103
Second High:	Aug 28	0.094	Aug 25	0.089	Jul 1	0.099
Third High:	Sep 27	0.094	Jun 5	0.087	Jun 21	0.095
Fourth High:	Sep 2	0.093	Jul 15	0.086	May 4	0.091
California:						
First High:	Aug 30	0.100	Jul 10	0.092	Jul 2	0.103
Second High:	Sep 27	0.095	Aug 25	0.090	Jul 1	0.099
Third High:	Aug 28	0.094	Jun 5	0.087	Jun 21	0.095
Fourth High:	Sep 2	0.094	Jul 15	0.086	May 4	0.092
National:						
# Days Above the Standard:		19		19		26
Nat'l Standard Design Value:		0.093		0.091		0.090
National Year Coverage:		97		97		93
California:						
# Days Above the Standard:		31		37		35
California Designation Value:		0.105		0.103		0.100
Expected Peak Day Concentration:		0.108		0.106		0.101
California Year Coverage:		97		95		91

◄ Shift Backward [1] Shift Forward ►

Notes:

Eight-hour ozone averages and related statistics are available at Reseda between 1978 and 2011. Some years in this range may not be represented.

All averages expressed in parts per million.

yellow exceeds a California ambient air quality standard. orange exceeds a national ambient air quality standard.

An exceedance of a standard is not necessarily related to a violation of the standard.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

* means there was insufficient data available to determine the value.

Available Pollutants:

8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

Top 4 Summary: Highest 4 Daily Maximum Hourly Nitrogen Dioxide Measurements

at Reseda

	2009		2010		2011	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Oct 22	0.070	Dec 3	0.075	Dec 29	0.070
Second High:	Oct 17	0.058	Jan 7	0.066	Dec 30	0.067
Third High:	Nov 3	0.056	Sep 27	0.064	Oct 31	0.060
Fourth High:	Sep 25	0.055	Sep 26	0.062	Jan 18	0.056
California:						
# Days Above the Standard:	0		0		0	
Annual Average:	0.017		0.017		0.016	
Year Coverage:	99		99		93	

◄ Shift Backward [1] Shift Forward ►

Notes:

Hourly nitrogen dioxide measurements and related statistics are available at Reseda between 1965 and 2011. Some years in this range may not be represented.

All concentrations expressed in parts per million.

yellow exceeds a California ambient air quality standard. orange exceeds a national ambient air quality standard.

An exceedance of a standard is not necessarily related to a violation of the standard.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

* means there was insufficient data available to determine the value.

Available Pollutants:

8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

Top 4 Summary: Highest 4 Daily Maximum 8-Hour Carbon Monoxide Averages

at Reseda

	2009		2010		2011	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National:						
First High:	Jan 1	2.84	Dec 3	2.60	Nov 29	2.77
Second High:	Dec 25	2.57	Dec 4	2.51	Dec 10	2.58
Third High:	Jan 2	2.54	Dec 25	2.24	Dec 28	2.55
Fourth High:	Jan 8	2.53	Dec 10	2.17	Dec 30	2.40
California:						
First High:	Jan 1	3.31	Dec 2	2.60	Nov 28	2.77
Second High:	Dec 25	2.57	Dec 3	2.51	Dec 9	2.58
Third High:	Jan 2	2.54	Dec 25	2.24	Dec 27	2.55
Fourth High:	Jan 7	2.53	Dec 10	2.17	Dec 29	2.40
National:						
# Days Above the Standard:	0		0			0
California:						
# Days Above the Standard:	0		0			0
Expected Peak Day Concentration:	2.97		2.91			2.91
Year Coverage:	97		99			84

◄ Shift Backward 1 Shift Forward ►

Notes:

Eight-hour carbon monoxide averages and related statistics are available at Reseda between 1965 and 2011. Some years in this range may not be represented.

All averages expressed in parts per million.

yellow exceeds a California ambient air quality standard. orange exceeds a national ambient air quality standard.

An exceedance of a standard is not necessarily related to a violation of the standard.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

* means there was insufficient data available to determine the value.

Available Pollutants:

8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

Top 4 Summary: Highest 4 Daily 24-Hour PM10 Averages

at Burbank-W Palm Avenue

	2009		2010		2011	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
National:						
First High:	Oct 27	130.3	Aug 24	51.0	Dec 1	96.7
Second High:	Nov 25	105.5	Jun 1	50.0	Dec 2	64.0
Third High:	Nov 24	91.9	Jul 19	46.0	Nov 30	57.4
Fourth High:	Nov 29	61.9	Jan 14	43.0	Jul 5	48.0
California:						
First High:	Sep 22	76.0	Aug 24	50.0	Oct 24	60.0
Second High:	Jan 1	75.0	Jun 1	49.0	Dec 29	52.0
Third High:	Mar 20	66.0	Jul 19	45.0	Oct 18	46.0
Fourth High:	Aug 11	62.0	Jan 14	42.0	Dec 5	42.0
National:						
Estimated # Days > 24-Hour Std:		*		*		0.0
Measured # Days > 24-Hour Std:		0		0		0
3-Yr Avg Est # Days > 24-Hr Std:		*		*		*
Annual Average:		*25.7*		*27.5*		*25.0*
3-Year Average:		*		*34*		*24*
California:						
Estimated # Days > 24-Hour Std:		60.9		*		*
Measured # Days > 24-Hour Std:		10		0		2
Annual Average:		38.9		*		*
3-Year Maximum Annual Average:		39		*		*
Year Coverage:		0		95		0

◄ Shift Backward [1] Shift Forward ►

Notes:

Daily PM10 averages and related statistics are available at Burbank-W Palm Avenue between 1988 and 2011. Some years in this range may not be represented.

All averages expressed in micrograms per cubic meter.

The national annual average PM10 standard was revoked in December 2006 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or *italics*.

yellow exceeds a California ambient air quality standard. orange exceeds a national ambient air quality standard.

An exceedance of a standard is not necessarily related to a violation of the standard.

All values listed above represent midnight-to-midnight 24-hour averages and may be related to an exceptional event.

State and national statistics may differ for the following reasons:

State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers.

State statistics for 1998 and later are based on local conditions (except for sites in the South Coast Air Basin, where State statistics for 2002 and later are based on local conditions). National statistics are based on standard conditions.

State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

Measurements are usually collected every six days. Measured days counts the days that a measurement was greater than the level of the standard; Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored.

3-Year statistics represent the listed year and the 2 years before the listed year.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

* means there was insufficient data available to determine the value.

Available Pollutants:

8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

Top 4 Summary: Highest 4 Daily 24-Hour PM2.5 Averages

at Reseda

	2009		2010		2011	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
National:						
First High:	Mar 20	39.9	Dec 4	40.7	Oct 24	39.8
Second High:	Dec 27	32.2	Dec 25	33.8	Jan 9	24.0
Third High:	Dec 24	27.2	Oct 14	30.4	Dec 11	23.6
Fourth High:	Jan 7	24.8	Feb 1	22.4	Oct 21	23.2
California:						
First High:	Mar 20	54.4	Oct 15	50.3	Oct 24	52.7
Second High:	Dec 25	46.4	Oct 14	49.3	Oct 20	49.3
Third High:	Dec 26	41.7	Dec 4	45.3	Oct 19	47.9
Fourth High:	Dec 27	34.6	Nov 17	41.4	Sep 28	41.2
National:						
Estimated # Days > 24-Hour Std:	3.1		*		3.3	
Measured # Days > 24-Hour Std:	1		1		1	
24-Hour Standard Design Value:	*		*		*	
24-Hour Standard 98th Percentile:	27.2		*		23.6	
Annual Standard Design Value:	*		*		*	
Annual Average:	11.3		*		10.1	
California:						
Annual Std Designation Value:	12		12		10	
Annual Average:	*		*		10.2	
Year Coverage:	91		82		95	

◄ Shift Backward [1] Shift Forward ►

Notes:

Daily PM2.5 averages and related statistics are available at Reseda between 1999 and 2011. Some years in this range may not be represented.

All averages expressed in micrograms per cubic meter.

yellow exceeds a California ambient air quality standard. orange exceeds a national ambient air quality standard.

An exceedance of a standard is not necessarily related to a violation of the standard.

State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

* means there was insufficient data available to determine the value.

Available Pollutants:

8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

Top 4 Summary: Highest 4 Daily Maximum State 24-Hour Sulfur Dioxide Averages

at Burbank-W Palm Avenue

	2009		2010		2011	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
First High:	Aug 6	0.003	Feb 26	0.004	Dec 30	0.002
Second High:	Aug 5	0.003	Jan 5	0.004	Sep 9	0.002
Third High:	Aug 2	0.003	Feb 28	0.004	Dec 9	0.002
Fourth High:	Aug 3	0.002	Jan 4	0.004	Aug 29	0.002
Annual Average:	*		*		*	
Year Coverage:	49		83		69	

◄ Shift Backward 1 Shift Forward ►

Notes:

Hourly sulfur dioxide measurements and related statistics are available at Burbank-W Palm Avenue between 1963 and 2011. Some years in this range may not be represented.

All averages expressed in parts per million.

yellow exceeds a California ambient air quality standard.

An exceedance of a standard is not necessarily related to a violation of the standard.

Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.

* means there was insufficient data available to determine the value.

Available Pollutants:

8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

Appendix C

Construction Emission Calculations

PROJECT: SAN FERNANDO WATER RECYCLING PROJECT

Work Schedule

Total footage of pipe (LF)	Pipe lay rate (LF/day)	Total days required to install pipe	Working days per year	Number of years required to install total pipe
114,080	90	1268	251	5.1

Excavation of Soils

Total soil excavated incl. 20% expansion (ft^3)[1]	Soil hauled per day (ft^3/day)	Soil hauled per day (yd^3/day)	Maximum volume allowed in a 10-yd. Dump Truck (yd^3)	Number of loads (loads per day)	Number of 10 yd^3 Dump Trucks used	Round trips per truck
1,711,200	1,350	50.0	8.5	6	3	2

Dump Site Locations

NU-WAY 1270 Arrow HighWay Irwindale Ca. I -10 E 19.0 miles
Vulcan 11520 Sheldon St. Sun Valley Ca. I - 5 N (4.7 miles - 22.3 miles)

Construction Crew		Crew Equipment	
1-Supervisor	2-Operator	2-Pick-up Trk	1-Truck Mounted Crane
1-Sr.W.U.W.	3- H.D.T.O.	1-Gang Trk	1-Back Hoe W/ Carrier
2-W.U.W.	1-Field Engineer	1-5 yd^3 Dump Trk	1-Pipe Trk
2-M.C.H		3-10 yd^3 Dump Trk	

CNG
DIESEL
GAS

Trips per vehicle

Pick-up truck - varies
5 yd^3 dump truck - varies
Gang Trk - 1 trip to and from job
Pipe Truck - 1 trip to & from job
Backhow w/carrier - 1 trip to and from job
Truck mounted crane - 1 trip to and from job
10 $yard^3$ dump trucks - see round trips above

Best Management Practices

Geotextile Fabrics / sandbag on all storm drain catch basins opening
All spoils being transported covered with tarp
Comply with City approved traffic control plans

[1] *assumed a 2.5' wide x 5' deep trench*

San Fernando Valley Water Recycling Project- Summary of Construction Emissions

TOTAL EMISSIONS	Emissions (ppd)					
	ROG	CO	NOX	SOX	PM10	PM2.5
Construction Equipments	5.120	25	34	4.8	2	2
Worker Vehicle	0.143	2.45	0.22	0.00	0.009	0.008
Off-Site Trucks	0.219	1.07	3.46	0.00	0.050	0.046
Water Trucks	0.002	0.011	0.010	0.000	0.0013	0.0012
Excavation					0.004	0.000
Regional Daily Maximum	**5**	**28**	**37**	**5**	**2**	**2**
THRESHOLD	**75**	**550**	**100**	**150**	**150**	**55**
IMPACT?	NO	NO	NO	NO	NO	NO
On-Site Daily Maximum	**5**	**25**	**34**	**5**	**2**	**2**
THRESHOLD /a/	**n/a**	**426**	**103**	**n/a**	**4**	**3**
IMPACT?	n/a	NO	NO	n/a	NO	NO

/a/ The proposed project is assumed to be one acre. The closest residential receptor is approximately 25 meter from the project site.

San Fernando Water Recycling Project - Construction Equipment Emissions

Estimated Equipment Construction Emissions

Equipment Type	Qty	Operating Hrs/WD/ each	Operating Hours per Day	Rog Rate (lbs/hr)	Rog (lbs/day)	CO rate (lbs/hr)	CO (lbs/day)	NOX rate (lbs/hr)	NOX (lbs/day)	SOX rate (lbs/hr)	SOX (lbs/day)	PM rate (lbs/hr)	PM (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	CO2 Rate (lbs/hr)	CO2 (lbs/day)	CH4 rate (lbs/hr)	CH4 (lbs/day)
Construction Equipment /a/																			
Cement and Mortar Mixers	1	8	8	0.0087	0.07	0.0417	0.33	0.0539	0.43	0.0001	0.00	0.0022	0.02	0.02	0.02	7	58	0.0008	0.01
Cranes	1	8	8	0.1073	0.86	0.4152	3.32	0.8625	6.90	0.0014	0.01	0.0352	0.28	0.28	0.26	129	1029	0.0097	0.08
Backhoe with Carrier	1	8	8	0.0559	0.45	0.3666	2.93	0.3681	2.94	0.0008	0.01	0.0222	0.18	0.18	0.16	67	534	0.0050	0.04
Excavators	1	8	8	0.0916	0.73	0.5184	4.15	0.5858	4.69	0.0013	0.01	0.0289	0.23	0.23	0.21	120	957	0.0083	0.07
Forklift	1	8	8	0.0399	0.32	0.2181	1.74	0.2493	1.99	0.0006	0.00	0.0119	0.09	0.09	0.09	54	435	0.0036	0.03
Generator Sets	1	8	8	0.0527	0.42	0.2821	2.26	0.4052	3.24	0.0007	0.01	0.0216	0.17	0.17	0.16	61	488	0.0048	0.04
Pavers	1	8	8	0.1193	0.95	0.4165	3.33	0.5965	4.77	0.5965	4.77	0.0404	0.32	0.32	0.30	69	552	0.0082	0.07
Paving Equipment	1	8	8	0.0910	0.73	0.4165	3.33	0.5965	4.77	0.0008	0.01	0.0404	0.32	0.32	0.30	69	552	0.0082	0.07
Rollers	1	8	8	0.0736	0.59	0.3913	3.13	0.4866	3.89	0.0008	0.01	0.0322	0.26	0.26	0.24	67	536	0.0066	0.05
Year 2017 Construction Equipment Total Emissions					**5.12**		**24.53**		**33.64**		**4.82**			**1.88**	**1.73**		**5,140.55**		**0.44**

/a/ Construction would take approximately five years to complete (begin in summer of 2017 and conclude in summer 2021). Offroad emission factors for year 2017 would be used for a conservative analysis since older construction equipment would generate more emissions.

EMFAC2011 RATES (grams per mile)							
Vehicle Type	**ROG**	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**
Year 2017							
Haul Truck @ 30 MPH	0.1859039	0.904	2.937	0.000	0.042	0.039	522.681
Water Truck @ 5 MPH	0.088049	0.586	0.538	0.000	0.07	0.064	408.872
Worker Vehicle @30 MPH	0.0261625	1.089	0.092	0	0.002	0.002	358.521
Light-Duty Truck @30 MPH	0.3803589	5.867	0.531	0	0.024	0.022	1055.15

Assumptions:

Construction Year	2017-2022
Season	Annual

San Fernando Valley Water Recycling Project- Mobile Emissions

WORKER VEHICLES				Worker Vehicle Emissions (ppd)						
		# of Workers	Total VMT/Day	ROG	CO	NOX	SOX	PM10	PM2.5	CO2
Construction Crew										
Worker Vehicles Emissions		**12**	**319.20**	**0.14**	**2.45**	**0.22**	**0.00**	**0.009**	**0.008**	**496.97**
	Cars	*6.0*	159.60	0.01	0.38	0.03	0.00	0.001	0.001	126.04
	Trucks	*6.0*	159.60	*0.13*	*2.06*	*0.19*	*0.00*	*0.008*	*0.008*	*370.93*
Total Year 2017 Worker Vehicles Emissions (tons per year)				*0.018*	*0.307*	*0.027*	*0.000*	*0.001*	*0.001*	*62.369*

OFF-SITE TRUCK TRIPS /a		Heavy-duty Truck Emissions									
		Trips per Day	Round Trip Length /b/	VMT/day	ROG	CO	NOX	SOX	PM10	PM2.5	CO2
Haul Truck Trips (pounds per day)		12	45	535	0.219	1.065	3.462	0.000	0.050	0.046	616.165
Year 2017- Haul Truck Trips (tons per year)					*0.0275*	*0.1337*	*0.4345*	*0.0000*	*0.0063*	*0.0058*	*77.3287*

/b/ Obtained from the client, there will be three 10 cubic yards dump trucks that will carry a maximum amount of 8.5 cubic yards of material (total of six loads per day).
Each dump trucks would do two loads per day (total of 12 trips per day).
/a/ Dump site is located at 11520 Sheldon Street, Sun Valley, CA, which is approximately 22.3 miles (one-way trip) from project site.

WATER TRUCK EMISSIONS/b/				Heavy-duty Truck Emissions (ppd)						
	# of Water Trucks	Hours of Operation Per Month	VMT/day	ROG	CO	NOX	SOX	PM10	PM2.5	CO2
Year 2017 - Water Truck Emission	1	40	8.70	0.00	0.01	0.01	0.00	0.0013	0.0012	7.83
Year 2017 - Water Truck Emission (tons per year)				0.0002	0.0014	0.0013	0.0000	0.0002	0.0002	0.9828

[b] Water trucks would operate on site two hours each day at a rate of 5 mph (compliance with Rule 403).
The proposed project assumes 23 work days per average month.

San Fernando Valley Water Recycling Project - Fugitive Dust Emissions from Excavation Year 2017

Construction Activity

Fugitive Dust Stockpiling Parameters

Silt Content[c]	Precipitation Days[d]	Mean Wind Speed Percent[e]	TSP Fraction	Area[f] (acres)
6.9	10	0.13	0.5	0.02

Fugitive Dust Material Handling

Aerodynamic Particle Size Multiplier[g]	Mean Wind Speed (mph)[h]	Moisture Content[i]	Dirt Handled (cy/day)[a]	Dirt Handled (lbs./day)[j]
0.35	3.49837	7.9	50	125,000

Dragline Parameters

Drop Height (feet)	Moisture Content[i]	PM_{10} Scaling Factor	$PM_{2.5}$ Scaling Factor
3	7.9%	0.75	0.017

Incremental Increase in Fugitive Dust Emissions from Construction Operations

Equations:

Grading[k]: PM10 Emissions (lb/day) = 0.60 x 0.051 x mean vehicle speed$^{2.0}$ x VMT x (1 - control efficiency)

Storage Piles[l]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[m]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton) (1 - control efficiency)

Dragline Equation for PM_{10} Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{0.7}$) / (moisture content)$^{0.3}$] x 0.75 x Dirt Handled x Control Efficiency

Dragline Equation for $PM_{2.5}$ Emissions[o] (lbs/day) = [((0.0021) x (drop height)$^{1.1}$) / (moisture content)$^{0.3}$] x 0.017 x Dirt Handled x Control Efficiency

Description	Control Efficiency	Unmitigated PM10[n]	Unmitigated PM2.5
	%	lb/day	lb/day
Storage Piles	61	0.0000	0.0000
Material Handling	61	0.0000	0.0000
Dragline	61	0.0035	0.0002
Total		**0.004**	**0.000**

Notes:

a) Obtained from client.
b) Caterpillar Performance Handbook, Edition 33, October 2003 Operating Speeds, p 2-3.
c) USEPA, AP-42, July 1998, Table 11.9-3 Typical Values for Corection Factors Applicable to the Predictive Emission Factor Equations
d) Table A9-9-E2, SCAQMD CEQA Air Quality Handbook, 1993
e) Mean wind speed percent - percent of time mean wind speed exceeds 12 mph.
f) Assumed storage piles are 0.02 acres in size
g) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, p 13.2.4-3 Aerodynamic particle size multiplier for < 10 µm
h) Mean wind speed at the Reseda Wind Monitoring Station.
i) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, equation 2-13, p 2-28.
j) Assuming 050 cubic yards of dirt handled [(050 cyd x 2,500 lb/cyd)/1 days = 125,000 lb/day]
k) USEPA, AP-42, July 1998, Table 11.9-1, Equation for Site Grading ≤ 10 µm
l) USEPA, AP-42, Jan 1995, Section 13.2.4 Aggretate Handling and Storage Piles, Equation 1
m) USEPA, Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, Sept 1992, EPA-450/2-92-004, Equation 2-12.
n) Includes watering at least three times a day per Rule 403 (61% control efficiency).
o) Source: USEPA, AP-42, Emission Factor Equations for Uncontrolled Dust Sources at Western Surface Coal Mines, Table 11.9-1, Dragline calculations for PM_{10} and $PM_{2.5}$.

Appendix D

GHG Emission Calculations

San Fernando Valley Water Recycling Project -GHG Emissions

TOTAL EMISSIONS		Emissions (tonnes per year)	
		CO2	CH4
Year 2017			
	Construction Equipment	645	0.055
	Worker Vehicle	62.37	0.00
	Off-Site Trucks	77.33	0.00
	Water Trucks	0.98	0.00
Tonnes per year CO2e		785.82	1.16
Total tonnes/year			**786.98**
Year 2017 CO2e (tonnes per year)			**786.98**

Appendix E

EMFAC 2011 Output Files

EMFAC 2011
2017 Estimated Annual Emission Rates
EMFAC 2011 Vehicle Categories
Los Angeles COUNTY
South Coast AIR BASIN
South Coast AQMD

Area	CalYr	Season	Veh	Fuel	MdlYr	Speed (Miles/hr	VMT (Miles/day)	ROG_RUNE (gms/mile)	TOG_RUI (gms/mil	CO_RUN (gms/mil	NOX_RU (gms/mil	CO2_RUI (gms/mil	CO2_RUI (gms/mil	PM10_RUI (gms/mile)	PM2_5_RU (gms/mile)	SOX_RUNEX (gms/mile)
Los Angeles (SC)	2017	Annual	LDA	GAS	AllMYr	5	278561.9	0.131914	0.202	1.9375	0.1523	1100.9	871.72	0.010671	0.009849	0
Los Angeles (SC)	2017	Annual	LDA	DSL	AllMYr	5	956.1318	0.091326	0.104	0.6064	0.5873	476.66	365.01	0.066963	0.061606	0
Los Angeles (SC)	2017	Annual	LDA	GAS	AllMYr	30	2.39E+07	0.026163	0.0387	1.0892	0.0918	358.52	283.9	0.001918	0.001766	0
Los Angeles (SC)	2017	Annual	LDA	DSL	AllMYr	30	81938.86	0.036217	0.0412	0.1913	0.3674	295.57	231.92	0.026592	0.024465	0
Los Angeles (SC)	2017	Annual	LDT1	GAS	AllMYr	5	30524.22	0.380359	0.52	5.8669	0.5314	1268.2	1055.2	0.024121	0.022297	0
Los Angeles (SC)	2017	Annual	LDT1	DSL	AllMYr	5	44.70869	0.18725	0.2132	1.1146	0.8519	460.73	354.12	0.154354	0.142005	0
Los Angeles (SC)	2017	Annual	LDT1	GAS	AllMYr	30	2615874	0.080641	0.1093	3.0608	0.2836	413.03	343.64	0.004772	0.004406	0
Los Angeles (SC)	2017	Annual	LDT1	DSL	AllMYr	30	3831.459	0.074628	0.085	0.3259	0.517	311.27	249.21	0.06161	0.056682	0
Los Angeles (SC)	2017	Annual	LDT2	GAS	AllMYr	5	93499.71	0.186169	0.2858	2.771	0.3024	1499.3	1268.7	0.011573	0.01069	0
Los Angeles (SC)	2017	Annual	LDT2	DSL	AllMYr	5	45.19461	0.103423	0.1177	0.7398	0.7479	466.16	373.22	0.078036	0.071793	0
Los Angeles (SC)	2017	Annual	LDT2	GAS	AllMYr	30	8012766	0.036136	0.0542	1.5995	0.1724	488.28	413.17	0.002066	0.001905	0
Los Angeles (SC)	2017	Annual	LDT2	DSL	AllMYr	30	3873.101	0.041047	0.0467	0.2279	0.4607	300.67	246.89	0.03105	0.028566	0
Los Angeles (SC)	2017	Annual	LHD1	GAS	AllMYr	5	14528.18	0.620673	0.7307	7.3329	0.3702	2513.5	2387.8	0.00785	0.007246	0
Los Angeles (SC)	2017	Annual	LHD1	DSL	AllMYr	5	1948.083	0.464509	0.5288	3.364	5.1326	522.68	496.55	0.105746	0.097286	0
Los Angeles (SC)	2017	Annual	LHD1	GAS	AllMYr	30	961136.2	0.127016	0.1508	1.8034	0.4578	619.43	588.46	0.001624	0.001499	0
Los Angeles (SC)	2017	Annual	LHD1	DSL	AllMYr	30	165774.8	0.185904	0.2116	0.9036	2.9369	522.68	496.55	0.042321	0.038935	0
Los Angeles (SC)	2017	Annual	LHD2	GAS	AllMYr	5	1640.922	0.407014	0.4971	5.3825	0.3244	2513.5	2387.8	0.006558	0.006037	0
Los Angeles (SC)	2017	Annual	LHD2	DSL	AllMYr	5	744.0679	0.440346	0.5013	3.2296	4.8853	523.9	497.7	0.10519	0.096775	0
Los Angeles (SC)	2017	Annual	LHD2	GAS	AllMYr	30	108558	0.083245	0.1027	1.3248	0.401	619.43	588.46	0.001357	0.001249	0
Los Angeles (SC)	2017	Annual	LHD2	DSL	AllMYr	30	63317.49	0.176234	0.2006	0.8674	2.7954	523.9	497.7	0.042099	0.038731	0
Los Angeles (SC)	2017	Annual	MCY	GAS	AllMYr	5	1934.334	4.716036	5.1949	25.501	1.1698	260.28	247.26	8.32E-04	6.90E-04	0
Los Angeles (SC)	2017	Annual	MCY	GAS	AllMYr	30	165769.1	2.061991	2.2682	16.261	1.1086	145.19	137.93	3.77E-04	3.09E-04	0
Los Angeles (SC)	2017	Annual	MDV	GAS	AllMYr	5	65613.15	0.35415	0.5099	4.4883	0.52	1907.4	1670.4	0.013276	0.012251	0
Los Angeles (SC)	2017	Annual	MDV	DSL	AllMYr	5	75.27808	0.088049	0.1002	0.5855	0.5375	481.67	408.87	0.069934	0.064339	0
Los Angeles (SC)	2017	Annual	MDV	GAS	AllMYr	30	5622935	0.068361	0.0976	2.4894	0.2946	621.2	544	0.002425	0.002233	0
Los Angeles (SC)	2017	Annual	MDV	DSL	AllMYr	30	6451.203	0.034864	0.0397	0.1893	0.3426	294.58	252.74	0.027757	0.025537	0

Appendix F

SCAQMD Rule 403

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Unpaved roads/parking lots	19-1	Stabilize soils to meet the applicable performance standards; and	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
	19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
Vacant land	20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

APPENDIX C

CULTURAL RESOURCES ASSESSMENT AND SUPPLEMENTAL MEMORANDUM

DRAFT PHASE I CULTURAL RESOURCES ASSESSMENT
SAN FERNANDO VALLEY WATER RECYCLING PROJECT
CITY OF LOS ANGELES, CALIFORNIA

Prepared for:

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

Prepared by:

AECOM
515 South Flower Street, 9th Floor
Los Angeles, California 90071

Authors:

James R. Wallace, M.A., RPA
Sara Dietler, B.A.
Linda Kry, B.A.

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U.S.G.S. Quadrangle: Burbank, Canoga Park, and Van Nuys, CA

Keywords:, Gabrieliño, Mission San Fernando Rey, North Hollywood, San Fernando Valley, Van Nuys, Sherman Oaks, Reseda

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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). The project proposes to maximize the use of recycled water to replace potable water sources for irrigation and industrial uses by extending the recycled water pipeline network to the San Fernando Valley. This project is being undertaken in accordance with the 2010 Urban Water Management Plan and would include six segments. The construction of these six segments would expand the supply of recycled water to customers located throughout the San Fernando Valley. The 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 approximately 25 percent of the proposed project area had been subject to previous cultural resources study and no cultural resources had been identified within any of the six segments.

A Native American contact program was implemented consisting of an information letter, response form, and map that were sent to local Native American representatives as designated by the Native American Heritage Commission (NAHC). Additionally, a Sacred Lands File search conducted for this project by the NAHC did result in the identification of documented sacred lands within, or in the vicinity of, the proposed project area.

In addition, a field survey was conducted as part of this assessment to identify the presence of any cultural resources in the proposed project area. The field survey did not result in the identification of any cultural resources.

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. During prehistoric times, the Project area may have been occupied by the *Gabrielino/Fernandeño* Indians. Development in the project area extends back almost 100 years. As such, a mitigation measure has been recommended that archaeological monitoring of the North Hollywood Park segment, Van Nuys Sherman Oaks Park segment, and the VA Hospital segment pipe jacking entry and exit pits in the location of the former S.P.R.R. crossing, during ground disturbing activities will 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.

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INTRODUCTION

This document reports a Phase I cultural resources assessment in connection with the San Fernando Valley Water Recycling Project (San Fernando Valley WRP). The City of Los Angeles Department of Water and Power (LADWP) proposes to extend the existing recycled water pipeline network to the San Fernando Valley. The project would expand the use of recycled water at customers along Sherman Way, Victory Boulevard, Van Nuys Boulevard, and various other roadways.

In order to achieve the objectives of the project to expand the existing recycled water pipeline network within the San Fernando Valley, the proposed project would be broken down into six segments: North Hollywood Park, Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, VA Hospital, and Pierce College. All segments would connect to existing recycled water pipeline systems in the area using a 16-inch connection and 16-inch diameter distribution lines and will all be constructed entirely within the public road right-of-way. In total, approximately 109,800 linear feet of new recycled water pipeline would be installed with the implementation of the proposed project.

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 which also includes a description of the Sacred Lands File search and discussion of the results including the Native American Contact Program. In addition, a paleontological records search and the results are provided. 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: James Wallace, M.A., R.P.A., served as report author and conducted archival research; Linda Kry, B.A., served as report co-author, conducted archival research and archaeological survey; Sara Dietler, B.A., performed senior review; Adela Amaral, M.A. R.P.A. archaeological surveyor; and Tim Harris, B.A., provided graphics and GIS support. Resumes of key personnel are included in Appendix A.

PROJECT DESCRIPTION

PROJECT LOCATION AND SETTING

The project area is situated in developed areas within the San Fernando Valley area of the City of Los Angeles. It is bordered by the San Gabriel Mountains to the northeast, Santa Susanna Mountains to the northwest, and the Santa Monica Mountains to the south (Figure 1). The project area is located on the Burbank, Canoga Park, and Van Nuys 7.5-minute topographic quadrangles in sectioned portions of Township 1 North, Ranges 14, 15, and 16 West, and Township 2 North, Range 15 West.

The proposed project would consist of six segments, which would be located within public road rights-of-way in urbanized and fully developed areas. The six segments would extend to North Hollywood Park (Figure 2a), Valley Plaza Park (Figure 2b), Van Nuys Sherman Oaks Park (Figure 2c), Reseda Park (Figure 2d), the Veteran's Administration Hospital (VA Hospital) (Figure 2e), and Pierce College (Figure 2f). All six segments abut residential, commercial, public facilities, and recreational or open space uses. Additionally, the VA Hospital segment would run adjacent to industrial uses.

PROPOSED UNDERTAKING

The project is part of a broader effort by the City of Los Angeles to create reliable and sustainable sources of water for the future of the city. A key component of this effort is to maximize the use of recycled water. With imported water supplies becoming increasingly restricted and unreliable, the LADWP 2010 Urban Water Management Plan sets a goal for 59,000 acre-feet per year (AFY) of potable supplies to be replaced by recycled water by 2035. Specific objectives related to the goal of creating reliable and sustainable sources of water are to:

- Improve the reliability of the City of Los Angeles water supply through increased recycled water use;
- Comply with LADWP's 2010 Urban Water Management Plan outlining the steps to sustain a reliable water supply to meet current and future demand;
- Construct the necessary infrastructure to convey recycled water to the various industrial and irrigation customers in the San Fernando Valley portion of Los Angeles;
- Provide recycled water to some of the City of Los Angeles' largest water customers, and where feasible, switch their potable water connection to recycled water for supplying their non-potable uses.

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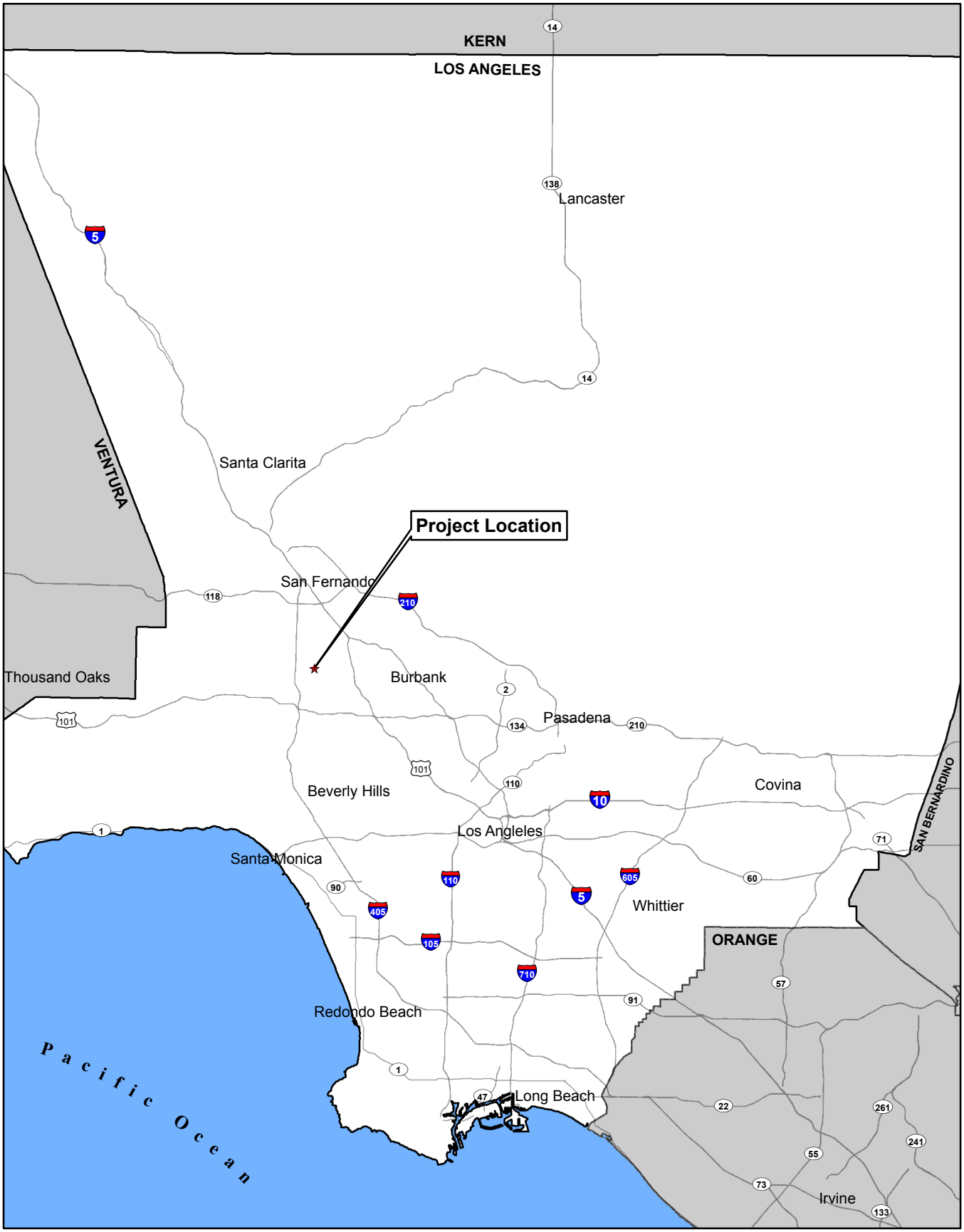

Source: ESRI 2012 Imagery

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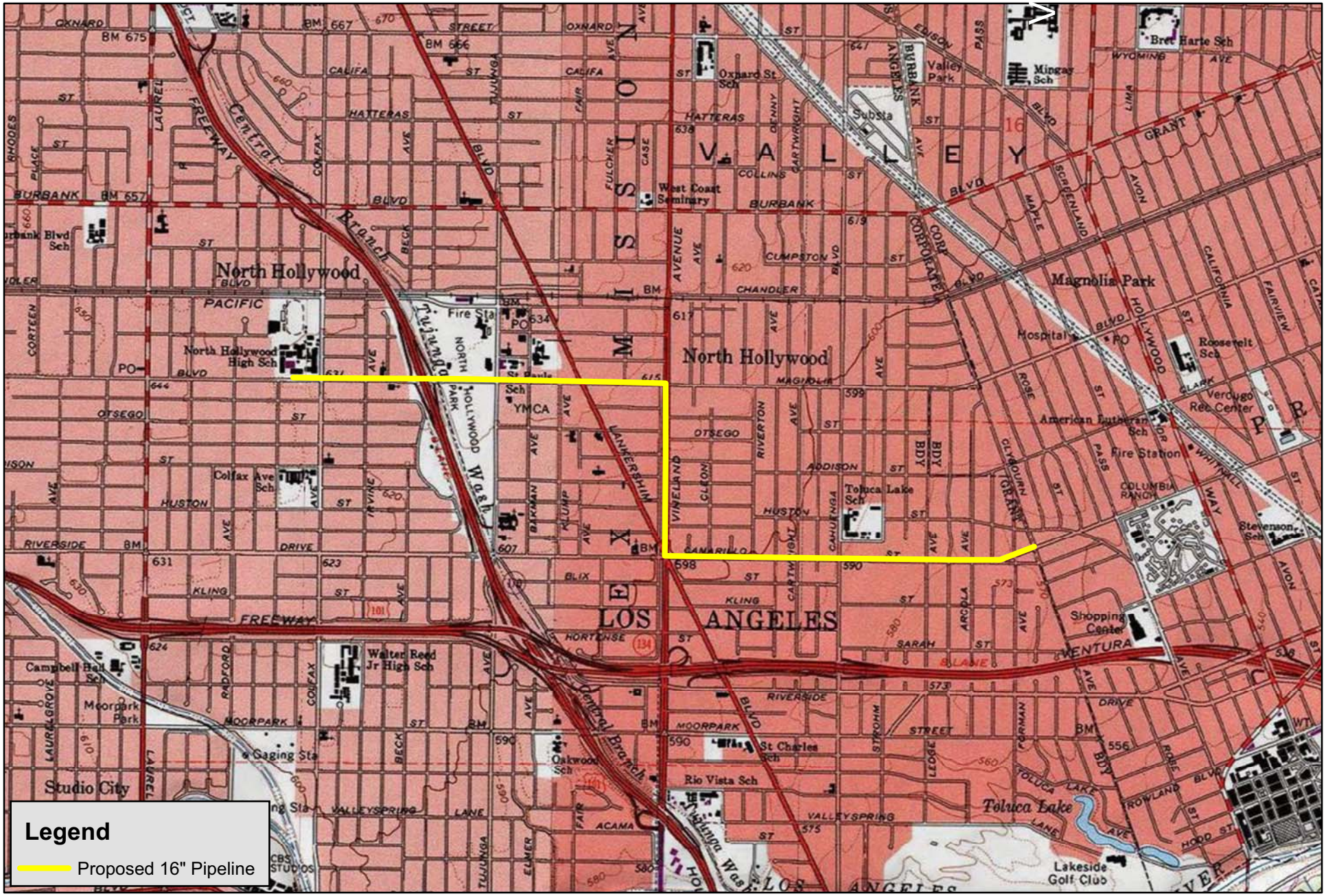
AECOM

Figure 1

Regional Location Map



Source: National Geographic USA TOPO Maps 2011; Van Nuys (1972); Burbank (1972)

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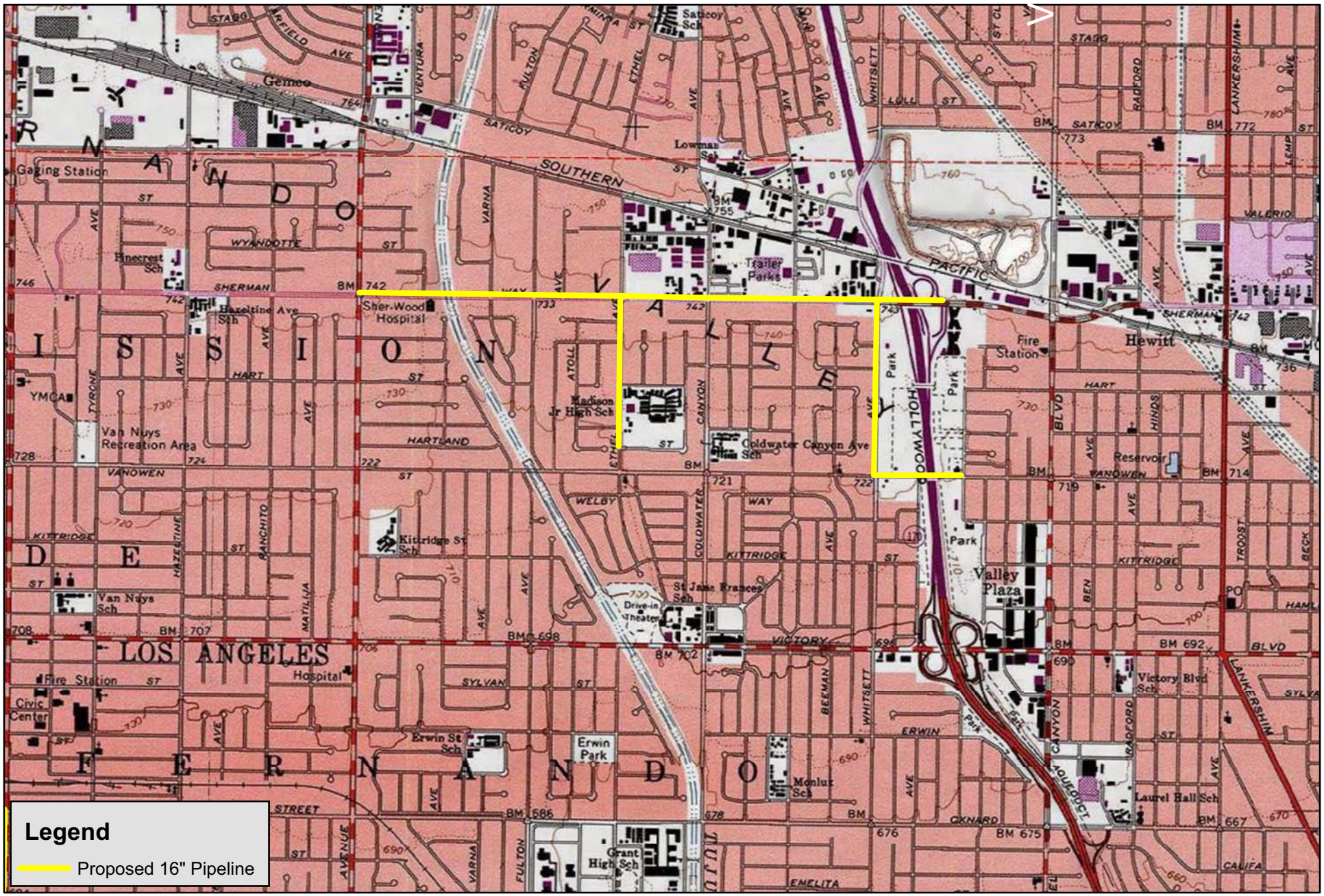
Figure 2a
North Hollywood Park Segment

San Fernando Water Recycling Project



Source: National Geographic USA TOPO Maps 2011; Van Nuys (1972)

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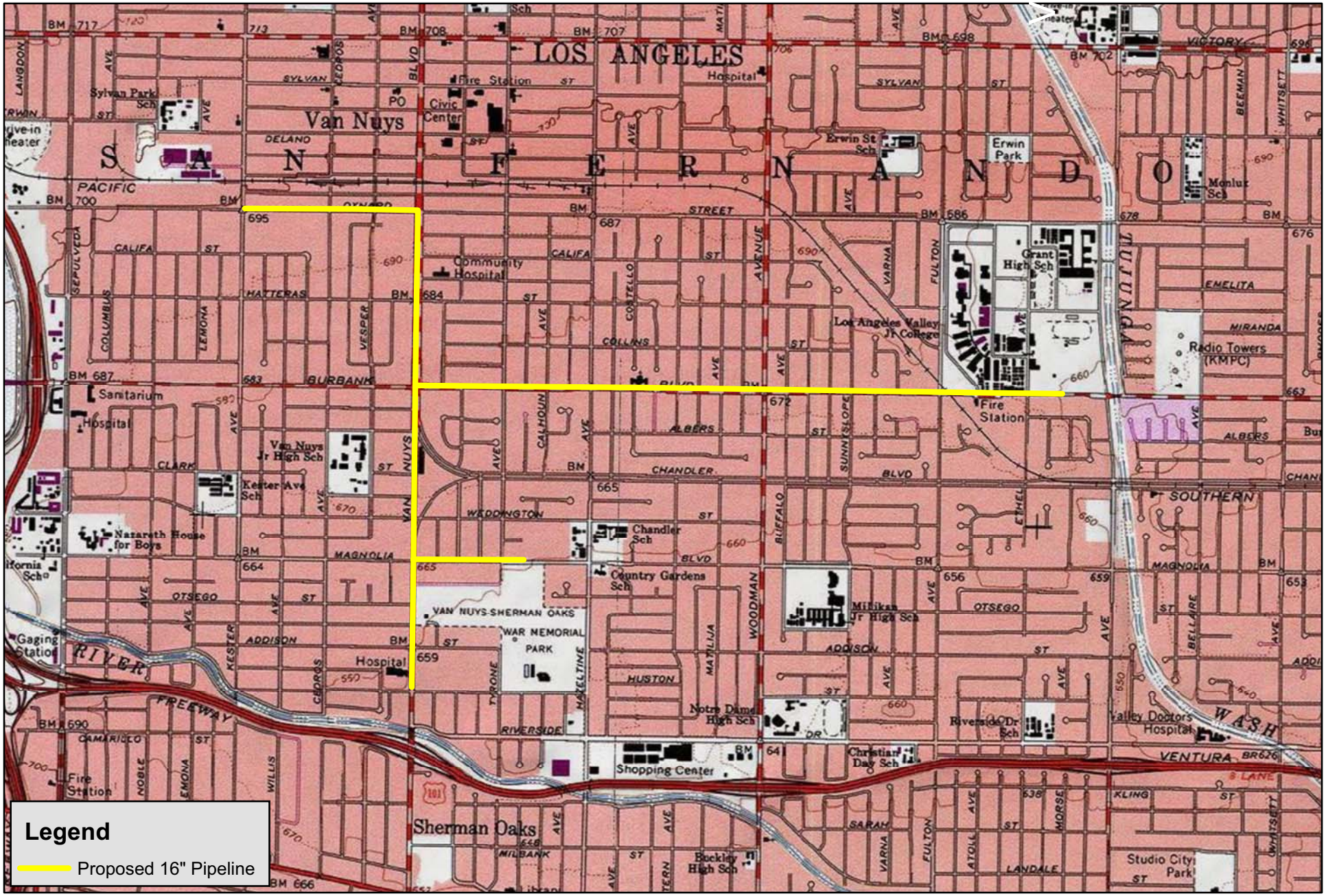
Figure 2b

Valley Plaza Park Segment

San Fernando Water Recycling Project



Source: National Geographic USA TOPO Maps 2011; Van Nuys (1972)

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Figure 2c

Van Nuys Sherman Oaks Park Segment

San Fernando Water Recycling Project

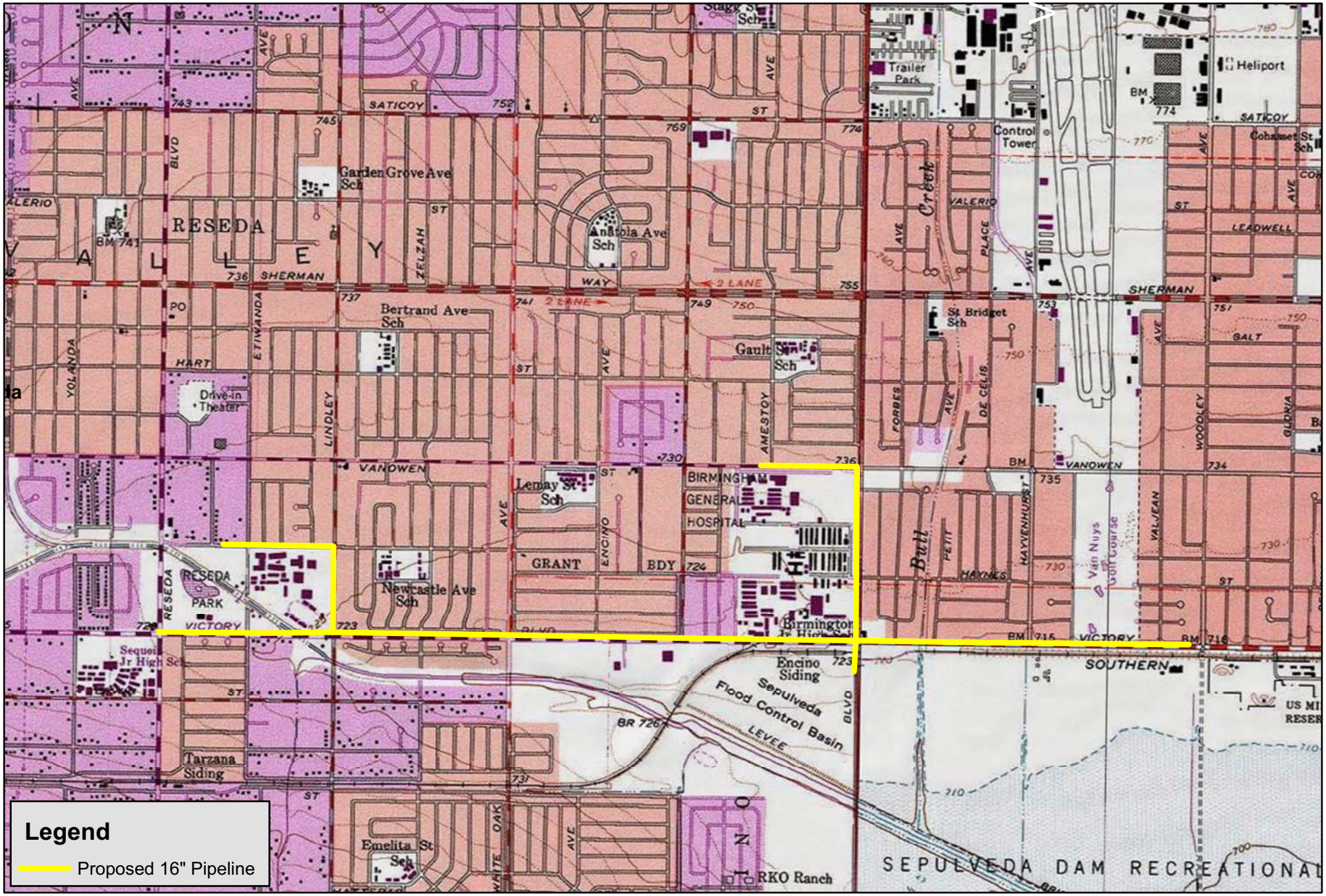

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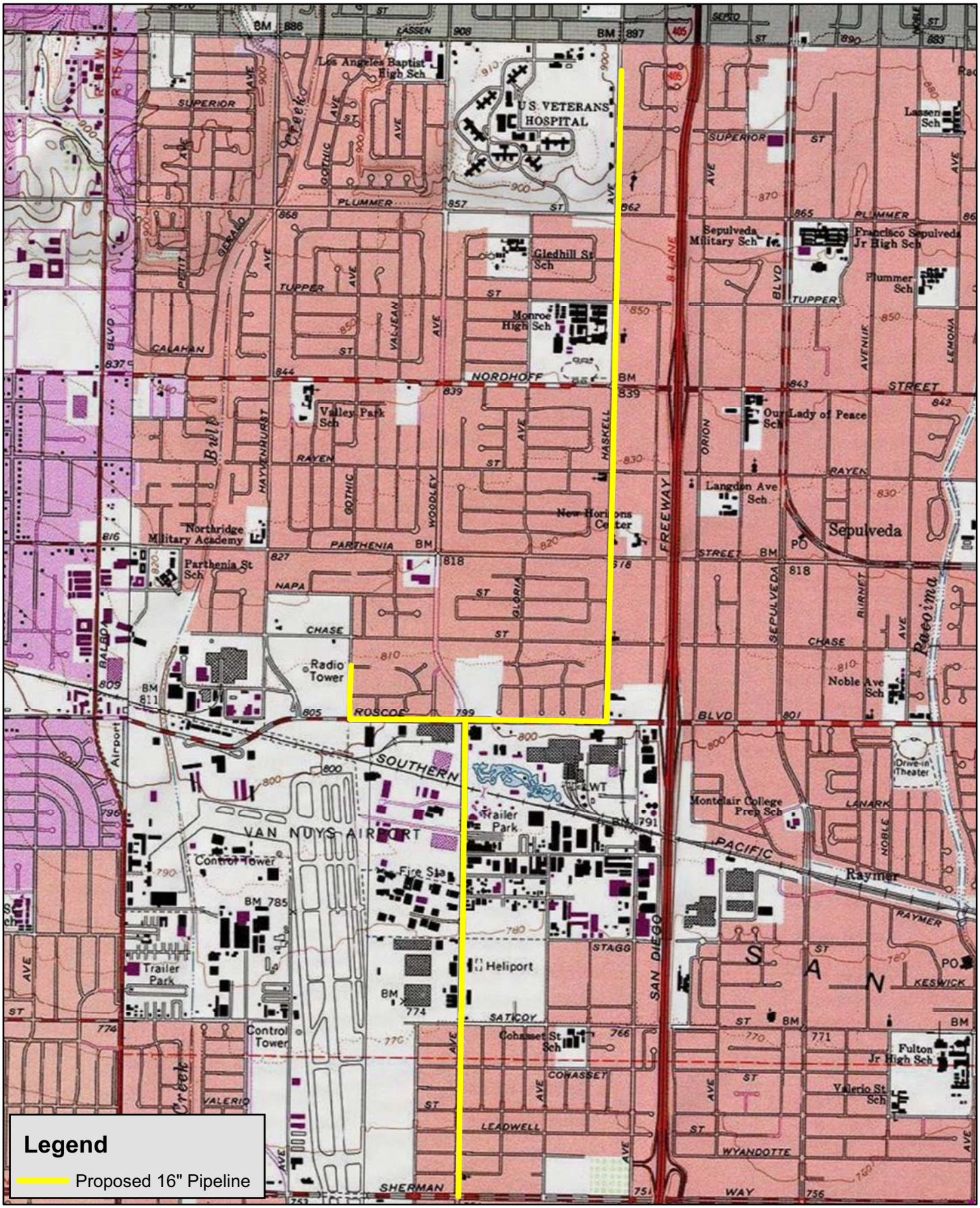
Figure 2d

Reseda Park Segment

San Fernando Water Recycling Project



Source: National Geographic USA TOPO Maps 2011; Van Nuys (1972)

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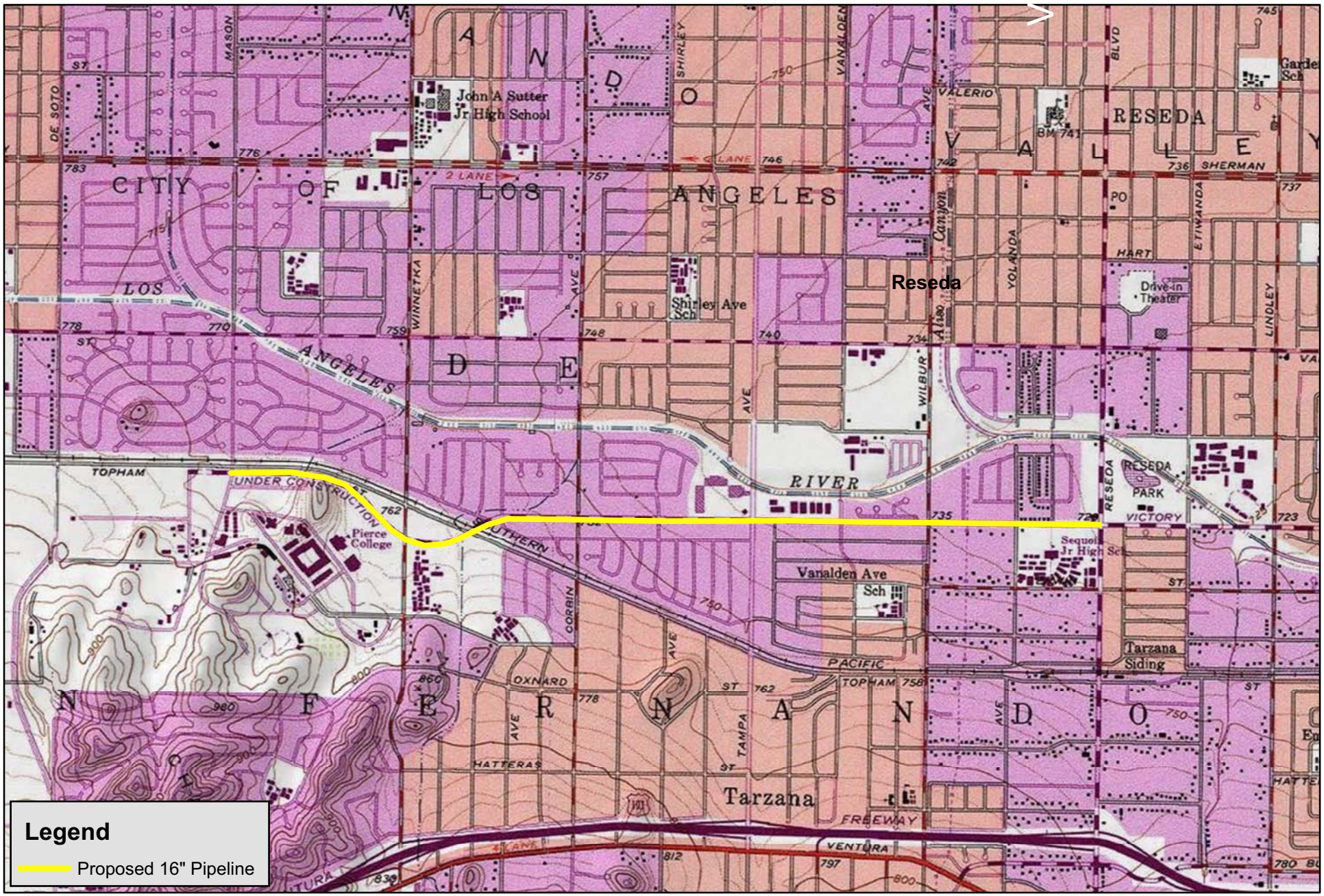
Figure 2e

VA Hospital Segment



Source: Canoga Park (1967)

AECOM

N

0 0.25 0.5 0.75 1 Miles

Figure 2f

Pierce College Segment

San Fernando Water Recycling Project

PROJECT DESCRIPTION

The project proposes to maximize the use of recycled water to replace potable water sources for irrigation and industrial uses by extending the recycled water pipeline network to the San Fernando Valley. This project is being undertaken in accordance with the 2010 Urban Water Management Plan and would include the six segments discussed below (Figure 3).

The proposed San Fernando Valley WRP (proposed project) would be located within the Valley Service Area and supplied with recycled water from the Donald C. Tillman Water Reclamation Plant. Additionally, the proposed project would include a connection to the City of Burbank recycled water system, which receives recycled water from the Burbank Water Reclamation Plant. The construction of these six segments would expand the supply of recycled water to customers located throughout the San Fernando Valley. All segments would connect to existing recycled water pipeline systems in the area using a 16-inch connection and 16-inch diameter distribution lines. The North Hollywood Park segment would connect to the existing City of Burbank recycled water pipeline; the Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, and VA Hospital segments would connect to the existing LADWP recycled water pipeline; and the Pierce College segment would connect to the Reseda Park segment. In total, approximately 109,800 linear feet of new recycled water pipeline would be installed with implementation of the proposed project.

The North Hollywood Park segment would connect to an existing 16-inch City of Burbank pipeline via a 16-inch point connection on the City of Los Angeles border at Verdugo Avenue and Clybourn Avenue. From the Burbank pipeline connection point, this segment would extend approximately 600 feet west on Verdugo Avenue to Camarillo Street, approximately 5,200 feet west on Camarillo Street to Vineland Avenue, approximately 2,600 feet north on Vineland Avenue to Magnolia Boulevard, and approximately 5,600 feet west on Magnolia Boulevard. It would terminate at North Hollywood High School, located at 5231 Colfax Avenue on the corner of Magnolia Boulevard and Colfax Avenue. This segment would be trenched across the San Fernando Wash on Magnolia Boulevard approximately 900 feet west of Tujunga Avenue.

The Valley Plaza Park segment would connect to the existing 54-inch LADWP pipeline via a 16-inch connection point at the intersection of Sherman Way and Woodman Avenue. This segment would extend approximately 8,800 feet east on Sherman Way from the connection point to State Route (SR) 170. Two extensions would connect to this main segment. One extension would travel approximately 2,200 feet south on Ethel Avenue from Sherman Way and terminate at James Madison Middle School, located at 13000 Hart Street. The second extension would travel approximately 2,600 feet south on Whitsett Avenue from Sherman Way to Vanowen Street, and approximately 1,100 feet east on Vanowen Street terminating at Valley Plaza Park, located at 12240 Archwood Street. This segment would cross the San Fernando Wash in two places. The first channel crossing would occur on Sherman Way approximately 1,300 feet east of Woodman Avenue, and the second channel crossing would occur on Vanowen Street approximately 1,021 feet east of Whitsett Avenue. For the channel crossing on Sherman Way, the pipe would be hung from the side of the roadway or installed through an existing utility duct. For the channel

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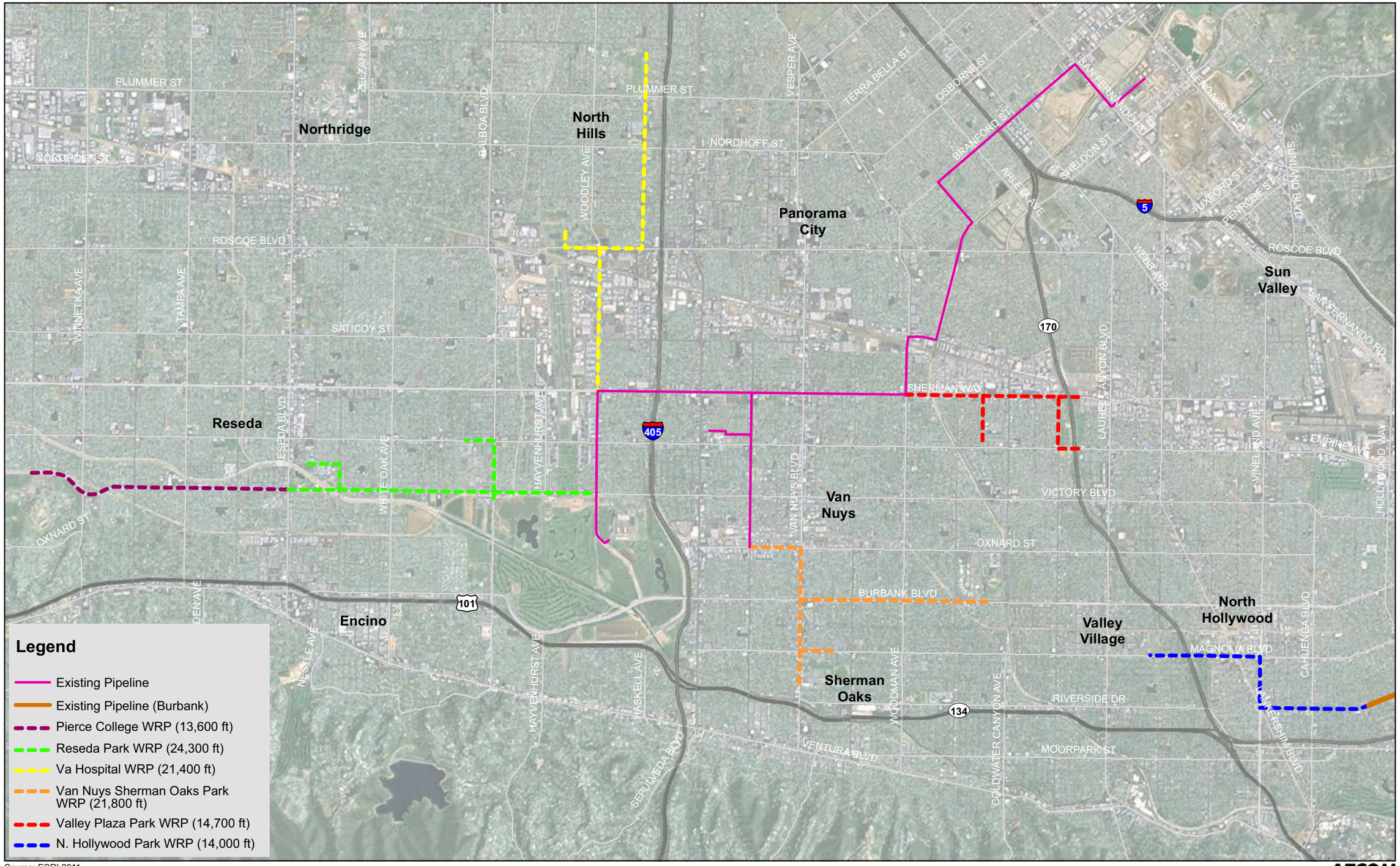

Source: ESRI 2011

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AECOM

Figure 3

Project Location Map

San Fernando Water Recycling Project

crossing on Vanowen Street, trenching would be used. Additionally, this route would cross over the SR 170 freeway overpass bridge on Sherman Way, which would require installation through an existing utility duct.

The Van Nuys Sherman Oaks Park segment would begin on Kester Avenue just south of the Metro Orange Line Busway via an extension of the existing 16-inch LADWP pipeline. This segment would extend approximately 360 feet south on Kester Avenue from the connection point to Oxnard Street, approximately 2,600 feet east on Oxnard to Van Nuys Boulevard, and approximately 6,940 feet south on Van Nuys Boulevard terminating at Sherman Oaks Hospital, located at 4929 Van Nuys Boulevard. This segment would also include two east extensions. One of these extensions would travel approximately 10,000 feet east on Burbank Boulevard from Van Nuys Boulevard and terminate at Los Angeles Valley College, located at 5800 Fulton Avenue. The other extension would travel approximately 1,900 feet east on Magnolia Boulevard from Van Nuys Boulevard and terminate at Van Nuys Sherman Oaks Park, located at 14201 Huston Street.

The Reseda Park segment would connect to the existing 54-inch LADWP pipeline via a 16-inch connection point at the intersection of Victory Boulevard and Woodley Avenue. This segment would extend approximately 15,800 feet west on Victory Boulevard from the connection point terminating at the intersection of Victory Boulevard and Reseda Boulevard. Three extensions would connect to this main segment. One extension would travel approximately 1,000 feet south on Balboa Boulevard from Victory Boulevard and terminate at the Sepulveda Basin Sports Complex, located 6200 North Louise Avenue. Another extension would travel approximately 2,650 feet north on Balboa Boulevard from Victory Boulevard to Vanowen Street, and approximately 1,350 feet west on Vanowen Street terminating at Mulholland Middle School, located at 17120 Vanowen Street. A third extension would travel approximately 1,400 feet north on Lindley Avenue from Victory Boulevard to Kittridge Street, and approximately 2,100 feet west on Kittridge Street and terminate on the north side of Reseda Park just east of the intersection of Kittridge Street and Reseda Boulevard. There would be two channel crossings on Victory Boulevard. The first channel crossing would occur over Bull Creek approximately 1,050 feet east of Balboa Boulevard, and the other crossing would occur over the Los Angeles River approximately 600 feet west of Lindley Avenue. For both channel crossings, the pipelines would be hung from the side or underneath the bridge.

The VA Hospital segment would connect to the existing 54-inch LADWP pipeline via a 16-inch connection point at the intersection of Sherman Way and Woodley Avenue. This segment would extend approximately 7,300 feet north on Woodley Avenue from the connection point and terminate at the intersection of Woodley Avenue and Roscoe Boulevard. Two extensions would branch off of this main segment. One extension would travel approximately 1,800 feet west on Roscoe Boulevard from Woodley Avenue to Gothic Avenue, and approximately 600 feet north on Gothic Avenue terminating at Valley Sod Farms, located at 16405 Chase Street. Another extension would travel approximately 2,200 feet east on Roscoe Boulevard from Woodley Avenue to Haskell Avenue, then approximately 9,500 feet north on Haskell Avenue and terminate at the VA Hospital, located at 16111 Plummer Street. This segment would cross the

Amtrak/Metrolink tracks located on Woodley Avenue approximately 1,000 feet south of Roscoe Boulevard. Trenchless construction would be required for this rail crossing.

The Pierce College segment would connect to the westernmost termination point of the Reseda Park segment via a 16-inch pipeline extension at the intersection of Reseda Boulevard and Victory Boulevard and travel approximately 13,600 feet west on Victory Boulevard, terminating at the intersection of Victory Boulevard and Mason Avenue at Pierce College, located at 6201 Winnetka Avenue. This segment would cross the Metro Orange Line Busway on Victory Boulevard approximately 1,000 feet east of Winnetka Avenue.

Installation of the recycled water pipeline would occur within public roads and using a cut and cover trenching technique. An approximately 3-foot wide by 5-foot deep trench would be excavated within the roadway that could be covered with metal plates during periods of the day when construction is not ongoing. Once the pipeline has been installed within a segment, the trench would be backfilled with imported slurry and returned to its original condition. Recycled water pipeline installation would necessitate restrictions of on street parking and closure of up to two lanes of the roadway depending on the location of construction. In general, approximately 90 linear feet of pipeline would be installed per day.

Construction is anticipated to occur sequentially along the alignment of each segment to minimize long-term disruption within any one area. Construction would generally occur from east to west, beginning with the North Hollywood Park segment. Subsequent segments would be constructed in the following order: Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, VA Hospital, and Pierce College. Materials and equipment staging and construction worker parking would use City facilities and public parking lots located along or near the proposed alignments.

Railroad crossings would require tunneling instead of trenching via a procedure called "pipe jacking." Launching and receiving pits would be located on either end of the tunnel. Hydraulic jacks would drive pipes through the ground. Excavated soil and other material would be removed from the pits and disposed of at an appropriate regional landfill. The launching and receiving pits would be backfilled with imported slurry and returned to their existing condition.

CONSTRUCTION SCHEDULE

Construction of the San Fernando Valley WRP is anticipated to begin in summer 2017 and take approximately 5 years to complete, concluding in summer 2022.

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SETTING

ENVIRONMENTAL SETTING

The project is located within the San Fernando Valley of the Los Angeles Basin. The Central Transverse Ranges Province forms an east-west trending northern backdrop, while the northwest-oriented Peninsular Ranges Province bounds to the south. The Los Angeles Reservoir is nestled at the foot of San Fernando Pass that straddles the San Gabriel Mountains to the northeast and Santa Susana Mountains to the north. The generally Mediterranean climate is characterized as mild, with warm, nearly rainless summers and mild winters with only occasional storms.

The San Fernando Valley is located within a valley floor with elevations ranging from 500 feet above sea level in the southeast to 1,000 feet above sea level in the west. Natural vegetation communities located within the vicinity of the Project consist mostly of willow woodland, mulefat scrub, and coastal sage scrub. Also present are areas of disturbed and non-native vegetation including park, ruderal, and pond that can be characterized as primarily park/ruderal habitat. Landscaping consists of ornamental tree plantings and maintained grass lawns, as well as areas comprised of ornamental trees with understory of ruderal species. Ruderal grassland occurs in disturbed areas where vegetation consists mainly of early successional native herbaceous plants. Black mustard and wild radish (*Ralphanus sativus*) are 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, 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.

Gabrielino villages are reported by early explorers to have been most abundant along the dominant rivers of the Los Angeles Basin, including the Los Angeles, San Gabriel, and Santa Ana Rivers. Ten important villages were located within the San Fernando Valley, and the most populous of these was *Pasheeknga*, located near where the Mission was established. Other northern San Fernando Valley communities included *Tohuunga* and *Muuhonga*. *Tohuunga* was likely located near the mouth of Little Tujunga Canyon, while according to Gabrielino informant Jose Zalvidea, *Muuhonga* was located "about two and a half miles from San Fernando, farther up the canyon from San Fernando" (McCawley 1996:40).

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). Upon his 1852 visit to Los Angeles, John Russel Barlett wrote,

> I saw more Indians about this place than in any part of California I had yet visited. They were chiefly mission Indians, i.e., those who had been connected with the missions and had derived their support from them until the suppression of those

> establishments. They are a miserable, squalid-looking set, squatting or lying about the corners of the streets with no occupation. They have no means of obtaining a living, as their lands are taken from them, and the missions for which they labored and which provided after a sort for many thousands of them, are abolished (as cited in Sugranes 1909:77).

The first party of U.S. immigrants arrived in Los Angeles in 1841, although surreptitious commerce had previously been conducted between Mexican California and residents of the 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

San Fernando Valley

Mission *San Fernando Rey de España* was founded by Fermín Francisco de Lasuén, Junipero Serra's successor, in 1797. The mission was established midway between San Gabriel and San Buenaventura missions. The placement of Mission San Fernando, and missions in Alta California in general, was far from incidental since Franciscans carefully selected spaces with ample room for agriculture, access to water, and nearby sizeable Native American populations (Gentilcore 1961), which were needed in order to first erect the mission and second, to maintain an eventual mission system.

Under the direction of Father Francisco Dumetz and Father Juan Cortés, Native Americans built an adobe church, a storeroom, a weaving room, and a granary within one year of the mission's founding. Larger churches to accommodate the increasing numbers of Native Americans were built in 1800 and 1806 (MacMillan 1996). Construction efforts were not simply large scale, but also scaled down in the quotidian production activities at Mission San Fernando. Native Americans produced shoes and saddles from the extensive mission cattle. Rawhides were also used in the architectural construction of the mission as they were used to hold boards together. Native Americans also produced cloth, brick, tile, soap, olive oil, and wine. The Mission also had a blacksmith shop where Natives fashioned iron tools and plows (MacMillan 1996). The

new work schedules at Mission San Fernando undoubtedly contrasted to how time was perceived and made use of by the Gabrielinos and Chumash before Spanish contact. MacMillan (1996) notes that many Native Americans at Mission San Fernando rebelled by refusing to work or by working slow. It was also common for Native Americans to flee from the missions.

Native Americans at Mission San Fernando also produced art. The fathers at Mission San Fernando selected certain Native individuals to paint murals and decorate doorways and windows with designs (Phillips 1976). The paintings have been dated to 1806-07 and have been attributed to Juan Antonio. According to Mission San Fernando records, a Juan Antonio was baptized at the mission in 1798. Phillips (1976) deduced that Juan Antonio was unlikely a child when he was baptized in 1798 since it was improbable that mission officials would delegate such an artistic endeavor to a child. Juan Antonio must have entered the mission system at a later age and therefore with memories, understandings, and practices of a pre-contact Native American ways of life (Phillips 1976).

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.

The new republic was characterized by chaotic rule. This characterization did not circumvent Alta California and added to the post-Mexican independence social cataclysm. In California, the disorder was witnessed in the dozen governors that ruled in the 26 years following independence and in the several uprisings that took place. Two of these rebellions took place near the Cahuenga Pass (Link 1991). In 1831, Jose Carillo and Abel Stearns battled the governor, Manuel Victoria, near the pass. Soon after the skirmish, Victoria resigned. In 1845, then Governor Manuel Micheltorena was met by a band of 284 rebels led by Juan Bautista Alvarado and Jose Castro. Peace was negotiated and again, a governor resigned from office. Micheltorena was followed by Pio Pico, the last governor under Mexican rule (Link 1991).

Amid the rebellions, 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).

The Mexican-American war was yet another circumstance that added to the San Fernando Valley's early 19th century turmoil. 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.

The Mexican-American war terminated in Alta California with the Treaty of Cahuenga. The agreement was signed in the San Fernando Valley on January 13, 1847. Andres Pico and John C. Fremont, along with five men from each side, signed the treaty.

In 1852, de Celis' filed a claim with the Board of Land Commission, a board specifically created by Congress to investigate Spanish and Mexican land titles in their newly acquired territories. The divergent Mexican and American legal as well as social practices often clashed in these investigations. These proceedings were also stagnant processes. For example, although de Celis' proprietary rights were validated by the Board after his appeal (Link 1991), it was not until 1873 that the United States District Court upheld the Board's findings (Robinson 1942).

de Celis, though, 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 (Plate 1). 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 northern portion was bought by George K. Porter and Charles Maclay from Eulogio de Celis' son in 1874. Also in 1874, Maclay registered the city of San Fernando with the County Recorder in Los Angeles. He presented a map depicting streets, blocks, and several thousand twenty-five foot lots. The Southern Pacific Railroad extended from Los Angeles to the new city and essentially helped colonize it. The Southern Pacific offered passengers from Los Angeles to San Fernando half-rate if they traveled with the intention to purchase lands (Keffer 1934; Robinson 1942). The novelty of a new city created a tourist attraction. Having a leisurely lunch at the old mission (Robinson 1942) likely aided in constructing a tourist attraction as feelings of charm, fantasy and exoticism were created by the aged mission (Plate 2). Affective qualities were also likely drawn from the new city's comparison to the clamor of Los Angeles. San Fernando, its mission and its quiet and calm, represented a time and space gone by. San Fernando was thus packaged and consumed at $10-$25 for each town lot or $5-$40 an acre for farming lands (Robinson 1942).

Plate 1. Refurbished living room in Andres Pico House (San Fernando Valley Historical Society).

Plate 2. "San Fernando Mission around 1900" (Oviatt Digital Collection).

However, the San Fernando Valley was not simply a romanticized, remote oasis. In addition to having Los Angeles readily accessible in 1874 through the Southern Pacific Railroad line, in just 2 short years the San Fernando Valley was connected to San Francisco. With Chinese men as the primary labor, the San Fernando Tunnel was completed in a near 16 month construction feat 1876 (Robinson 1942, 1961).

In addition, the valley experienced a real estate boom from 1887-88 and its immense fertile lands lured residents and developers. The Lankershim Ranch Land and Water Company purchased the east 1,200 acres of the southern half of the Rancho Ex-Mission of San Fernando from the Los Angeles Farm and Milling Company (formerly known as the San Fernando Homestead Association mentioned above). These acres were subdivided by the company in ten to forty-acre parcels that sold for $5 to $150 each. In the northern half of the valley, land was also purchased for subdivision, and once again the San Fernando Valley was packaged and sold on the real estate market as a fertile agriculture endeavor. This agronomic promise was also a reality, however. The wheat producing business that was pioneered by Lankershim and Van Nuys in the early 1870s had become a production machine by the late 1800s. Flour milling was supplemented to wheat farming and in 1888; 510,000 bushels of wheat were produced and milled by the Los Angeles Farm and Milling Company (Robinson 1961).

Another critical moment in the valley's history came in 1913 when the irrigation plan proposed by Los Angeles mayor, Fred Eaton, and Los Angeles water department engineer, William Mullholand, took its material form. The Los Angeles Aqueduct brought water from the Owens Valley in the High Sierra to Los Angeles. In order to take advantage of the water supply for the dry farming area, the various valley communities agreed to be annexed by Los Angeles at different times from 1915 to 1923 (Robinson 1963).

The eastern most segment of the project area lies in the vicinity of two historic resources, Pierce College and the Southern Pacific Railroad. Today, Los Angeles Pierce College is a two-year public college that is among the nine institutes of the Los Angeles Community College District. However, the genesis of Pierce College coincides with the importance of Los Angeles as the major agricultural producing county in the nation up until the mid-20th century.

The Clarence W. Pierce School of Agricultural was founded in 1947 and constructed on lands purchased by the L.A. City School District (present day L.A.U.S.D.). It was named after Clarence W. Pierce, M.D. and initially focused on agriculture and animal husbandry (Plate 3). In 1947, it served an all-male student body. The original goals of the institution were: 1) Educate future farmers and ranchers, veterinarians, veterinary technicians, florists, equestrians, horticulturists and others involved with our vast industry; 2) Educate "city folk" on where their food and fiber comes from; 3) Prepare students to transfer to a four year institution or graduate school (Pierce College, Department of Agriculture and Natural Resources).

Plate 3. Horse Show Participant Pierce College 1949 (Los Angeles Public Library Images).

Although Pierce College's academic agenda has amplified since its beginnings, it continues to offer training in agricultural and animal economics. The Pierce College campus includes a 226-acre farm, an equestrian center, as well as other recently facilities that reproduce the institution's initial educational goals. In addition, Pierce College hosts two yearly festivals that align activities to animals and agriculture, the Farmwalk and Harvest Festival (Pierce College official website).

The Pierce College campus also contains several historic buildings that date back to the school's foundation in 1947. The Horticulture Building, for example, was among the first buildings erected in 1947. The older constructions that date to the late 1940s were constructed in a Mediterranean style. However, the majority of the historic Pierce College construction phase dates to the mid-1950s through the 1960s (Supernowicz, Dana 2009).

A segment of the Southern Pacific Railroad also overlaps with the project area, but currently the Metro Silver Line occupies its space. The Metro Silver Line began its service in 2009 with the aim of joining the South Bay and San Gabriel Valley to downtown Los Angeles. From the survey conducted as part of this study, it appeared that the Metro Silver annexed the precise historic railroad path. This perhaps suggests that although the form of transportation became obsolete, the historic routes that remain important and functional.

Another segment of the project begins at the existing City of Burbank pipeline, cuts through sections of North Hollywood, and ends at North Hollywood High School. In 1890 the town Toluca was founded in the San Fernando Valley (Hatheway 1981). The town changed its name

to Lankershim and by 1927; the town decidedly became North Hollywood (Westec Services, Inc. 1983). In 1913, community members voted in favor of annexation by Los Angeles in order to benefit from the water supply from the newly developed Owens Aqueduct (Gust and Puckett 2004). The dry region's direct access to water impelled its rapid population of North Hollywood and the Valley in general.

North Hollywood High School (Plate 4), located at 5231 Colfax Avenue., was originally named Lankershim High School and built in 1927. The construction project was a half million dollar project that had a dual aim of pedagogy and attracting new residents (Link1991). In comparison to other cities in the San Fernando Valley, North Hollywood developed rapidly. It was the first of its valley counterparts to erect a traffic light and in 1940 North Hollywood led in number of building permits. WWII, in particular propelled North Hollywood's physical and political development. North Hollywood became an important center for the war industry and defense plants proliferated in the area (Link 1991).

Plate 4. Lankershim High School in 1927 (www.nhhs.net/historical_fotoz.jsp).

ARCHIVAL RESEARCH

Archival research for this project was conducted in May 2012, at the SCCIC housed at California State University, Fullerton. The research focused on the identification of previously recorded cultural resources within the Project Area, as well as within a 0.25-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 including Sanborn Fire Insurance 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 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 67 cultural resource investigations were previously conducted within 0.25-mile of the project area (Table 1). These cultural resource investigations include: 15 cultural resources assessments, 14 records search and site visit results, seven surveys, seven Phase I reports, four records search results, two studies, two environmental assessments, three Environmental Statement and/or Environmental Impact Reports, one report regarding a zone change, one evaluation report of dams in Los Angeles County, two cultural resources inventory and/or evaluation reports, one report pertaining to Route 170, a report on the expansion of Reseda High School, one cultural resources overview and architectural evaluation report, one report on improvement to Caltrans property, one report on the Los Angeles Metro Red Line, one monitoring report, one architectural assessment, one report on the relocation of a building, and one Determination of Eligibility report. Less than 25 percent of the project area has been previously surveyed and/or investigated.

Table 1. Previous Surveys Conducted within 0.25-mile of the Project Area

Author	Report (LA-)	Description	Date
Anonymous	1578	Technical Report Archaeological Resources Los Angeles Rapid Rail Transit Project Draft Environmental Impact Statement and Environmental Impact Report.	1983
Anonymous	2903	Draft Environmental Assessment Tillman Water Reclamation Plant Flood Protection Project.	1990
Anonymous	2908	Draft Environmental Assessment Tillman Reclamation Plant Flood Protection Project.	1990
Anonymous	3496	Draft Environmental Impact Report Transit Corridor Specific Plan Park Mile Specific Plan Amendments	N.D.

Table 1. (continued)

Author	Report (LA-)	Description	Date
Anonymous	3720	Historic Property Survey Havenhurst Avenue-Between Sherman Way and Victory Boulevard W.o.21263.	N.D.
Anonymous	3762	Historical Property Survey Saticoy Street Between Sepulveda Boulevard and Woodley Avenue.	1977
Anonymous	3763	Historic Property Survey Hazeltine Avenue - Vanowen Street to Magnolia Boulevard.	1977
Anonymous	3789	Phase 1 Archaeological Survey/class III Inventory, San Fernando Valley East-West Transportation Corridor Study Area, Los Angeles, California.	1996
Anonymous	10507	Technical Report - Historical/Architectural Resources - Los Angeles Rail Rapid Transit Project "Metro Rail" Draft Environmental Impact Statement and Environmental Impact Report	1983
Arrington, Cindy and Nancy Sikes	8255	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project State of California: Volumes I and II	2006
Baker, Cindy and Mary L. Maniery	8898	Cultural Resource Inventory and Evaluation of United States Army Reserve 63d Regional Readiness Command Facilities.	2007
Billat, Lorna	9358	Vanowen/CA-6393B 7304 Varna Ave, Los Angeles, CA.	2005
Billat, Scott	7144	Stonehenge Pierce/CA-7566a Telecommunications Facility, Los Angeles Community Pierce College 6201 Winnetka Avenue, Woodland Hills, California.	2004
Bonner, Wayne	10926	Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate SV12455-A (Reseda Tarzana), 6360 Reseda Boulevard, Reseda, Los Angeles County, California.	2011
Bonner, Wayne H.	7801	Cultural Resources Records Search Results and Site Visit for Cingular Wireless Site NI-047-02 (sawyer Petroleum), 14117 Aetna Street, Van Nuys, Los Angeles County, California.	2005
Bonner, Wayne H.	7803	Cultural Resources Records Search Results and Site Visit for T-mobile Candidate Sv00588 (new Horizons), 15725 Parthenia Street, North Hills, Los Angeles County, California.	2006
Bonner, Wayne H.	7812	Cultural Resource Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate La-698-01 (nl-074-01) Karsten Imports, 55338 Fulton Avenue, Van Nuys, Los Angeles County, California.	2005
Bonner, Wayne H.	8051	Cultural Resources Records Search Results and Site Visit for Cingular Wireless Candidate NI-135-01 (Canoga Park) 6543 North Corbin Avenue, Woodland Hills, Los Angeles County, California.	2005

Table 1. (continued)

Author	Report (LA-)	Description	Date
Bonner, Wayne H.	8876	Cultural Resources Records Search and Site Visit Results for Royal Street Communications, Llc Candidate La0061b (Burbank Blvd. -Nextel Palm), 13222 Burbank Boulevard, Sherman Oaks, Los Angeles County, California.	2006
Bonner, Wayne H.	9097	Cultural Resources Records Search Results and Site Visit for Cingular Wireless NI-073-01 (sbc-magnolia), 11272 Magnolia Boulevard, North Hollywood, Los Angeles County, California.	2005
Bonner, Wayne H.	9307	Cultural Resources Records Search and Site Visit Results for T-Mobile Candidate SV01484F® (13709 Burbank Building), 13709 Burbank Boulevard, Van Nuys, Los Angeles County, California.	2008
Bonner, Wayne H.	9312	Cultural Resources Records Search and Site Visit Results for T-Mobile Candidate SV01484F (13709 Burbank Building), 13709 Burbank Boulevard, Van Nuys, Los Angeles County, California.	2008
Bonner, Wayne H.	9598	Cultural Resources Records Search and Site Visit Results for T-Mobile Candidate SV00614J (15020 Oxnard Monopole), 15020 Oxnard St., Van Nuys, Los Angeles County, California.	2008
Bonner, Wayne H. and Arabesque Said	10255	Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate SV00118A (Hydra Building), 8201 Woodley Avenue, Van Nuys, Los Angeles County, California.	2010
Bonner, Wayne H. and Kathleen A. Crawford	9484	Cultural Resources Records Search and Site Visit Results for T-Mobile, USA Candidate SV1178D (Jaclyn Rooftop), 4907 Lankershim Boulevard, North Hollywood, Los Angeles County, California.	2008
Bonner, Wayne H. and Loupe, Alynne	8108	Cultural Resource Records Search and Site Visit Results for T-mobile Telecommunications Facility Candidate Sv00559f (Johnny's Auto), 4865 Lankershim Boulevard, North Hollywood, Los Angeles County, California.	2006
Bonner, Wayne, Sarah Williams, and Kathleen Crawford	10663	Cultural Resources Records Search, Site Visit Results, and Direct APE Historic Architectural Assessment for Clearwire Candidate CA-LOS0061B (Toluca Towers), 4660 Cahuenga Boulevard, Toluca Lake, Los Angeles County, California.	2010
Chattel, Robert Jay	10177	Relocation of Phil's Diner, Los Angeles (North Hollywood), CA.	2008
Crawford, Kathleen	9454	Direct APE Historic Architectural Assessment for T-Mobile Candidate SV01484F (13709 Burbank Building), 13709 Burbank Blvd., Van Nuys, Los Angeles County, CA	2008

Table 1. (continued)

Author	Report (LA-)	Description	Date
Dames and Moore	160	Phase 1 Cultural Resources Survey Fiber Optic Cable Project Burbank to Santa Barbara, California for Us Sprint Communications Company	1988
Demcak, Carol R.	6778	Report of Cultural Resources Records Search for 6639 Darby Avenue, City of Reseda, Los Angeles County, California.	2001
Duke, Curt	5594	Cultural Resource assessment for Pacific Bell Mobile Services Facility La 118-01, in the County of Los Angeles, California.	2000
Duke, Curt	5599	Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 698-02, County of Los Angeles, California.	1999
Duke, Curt	5606	Cultural Resource Assessment for At&t Wireless Services Facility Number C925.1 County of Los Angeles, California.	2000
Duke, Curt	6481	Cultural Resource Assessment Cingular Wireless Facility No. Vy 023-01 Los Angeles County, California.	2001
Duke, Curt	6755	Cultural Resource Assessment for the At&t Wireless Services Facility Number R278, County of Los Angeles, California.	2000
Duke, Curt	6759	Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 968-01, County of Los Angeles, California.	2000
Fielding F. Glenn	68	Zone Change From Ra-1 to Rd 1.5 for Development of 230 2-story Apartments at 6545 Avenue, Reseda.	1974
Gust, Sherri and Heather Puckett	8251	Los Angeles Metro Red Line Project, Segments 2 and 3 Archaeological Resources Impact Mitigation Program Final Report of Findings	2004
Hatheway, Roger G.	10180	Determination of Eligibility Report, North Hollywood Redevelopment Project.	1981
Horne, Melinda C.	6007	Archaeological Survey Report Los Angeles Pierce College Los Angeles County, California.	2002
Horne, Melinda C.	7784	Archaeological Survey Report Los Angeles Valley College Los Angeles County, California.	2003
Jertberg, Patricia R.	3902	Cultural Resource Record Search and Archival Research Report for a Single Parcel Located on Cedros Avenue Between Oxnard and Aetna Street, City of Van Nuys, Los Angeles County, California.	1998
Killeen, John J.	8194	Sepulveda Basin Sports Complex Project, Records and Literature Search and Archaeological Survey.	2006
Kyle, Carolyn E.	7277	Cultural Resource Assessment for Cingular Wireless Facility Vy234-03 City of Woodland Hills Los Angeles County, California.	2002
Lapin, Phillippe	4854	Cultural Resource Assessment for Pacific Bell Wireless Facility La 118-03, County of Los Angeles, California.	2000

Table 1. (continued)

Author	Report (LA-)	Description	Date
Martz, Patricia	384	Description and Evaluation of the cultural Resources Within Haines Debris Basin, Hadsen Dam, Lopez Dam, and Selpulveda Dam, Los Angeles County.	1977
Mason, Roger D. and Mark L. Peterson	7776	Cultural Resources Records Survey Report for the City Magnolia Trunk Line Project City of Los Angeles Department of Water and Power, Los Angeles County, California.	2002
Mason, Roger D. and Patricia A. Peterson	7777	Cultural Resources Records Search and Literature Review Report for the City Trunk Line South Project City of Los Angeles Department of Water and Power Los Angeles County, California	2002
McKenna, Jeanette A.	8103	A Cultural Resources Overview and Architectural Evaluation of the Citibank Building on Lankershim Blvd., North Hollywood, Los Angeles County, California.	2006
McKenna, Jeanette A.	8254	Results of a Phase 1 Cultural Resources Investigation of the Proposed Los Angeles Department of Water and Power River Supply Conduit, Los Angeles County , California.	2004
McKenna, Jeanette A.	10756	A Cultural Resources Overview and Preliminary Assessment of the Pacoima/Panorama City Redevelopment Plan Amendment/Expansion Project Area, Los Angeles County, California	2010
McLean, Deborah K.	4022	Archaeological Assessment for Pacific Bell Mobile Services Telecommunications Facility La 694-01, 11605 Magnolia Boulevard, North Hollywood, City and County of Los Angeles, California.	1998
McLean, Deborah K.	4318	Cultural Resource Assessment for Pacific Bell Mobile Services Telecommunications Facility La 694-09, 11272 Magnolia Boulevard, North Hollywood, City and County of Los Angeles, California.	1999
Neuenschwander, Neal J.	3521	Cultural Resource Assessment of the Proposed Expansion of National Guard Facilities at Van Nuys, Los Angeles County, California.	1996
Peak and Associates, Inc.	2645	Class 3 Cultural Resource Assessment of the Proposed Carpinteria and Southern Reroutes, Santa Barbara, Ventura, and Los Angeles Counties, California.	1991
Smith, Philomene C.	4858	Nasr Cold Plane Existing Pavement on Various On/off-ramps on Route 170 and One on Ramp Route 5 with Rubberized Asphalt Concrete	2000
Stickel, Gary E.	3486	A Cultural Resources Inventory for the East Valley Water Reclamation Project.	1994
Supernowicz, Dana	10616	Cultural Resources Study of the Pierce College Project, AT&T Site No. LAR278A, 6201 N. Winnetka Avenue, Woodland Hills, Los Angeles County, California 91371.	2009

Table 1. (continued)

Author	Report (LA-)	Description	Date
Sylvia, Barbara	7840	Negative Archaeological Survey Report for the Beatification and Modernization along Route 134 From the 134/170 Separation to Shoup Ave Uc, and Along Route 101/170 Separation to Concord Street Uc.	2001
Sylvia, Barbara	8247	The Project Proposes to Rehabilitate the Pavement at the Caltrans Shop 7 Equipment Service Center in North Hollywood to Replace the Existing Fence with a Security Fence Along the Perimeter of the Facility and to Install High Mast Lighting	2000
Sylvia, Barbara	10208	Negative Archaeological Survey Report: Metal Beam Guardrail (MBGR) Along Sections of Route 101 From Route 134 to the Ventura County Line.	2001
Unknown	6142	Expansion of the Reseda High School Facilities Located at 18230 Kittridge Street in the City of Los Angeles.	2002
Whitley, David S. and Joseph M. Simon	7835	Phase I Archaeological Survey/class III Inventory, San Fernando Valley East-west Transit Corridor, Brt Alternative Study Area, Los Angeles, California.	2000
Wlodarski, Robert J.	4475	A Phase I Archaeological Study: a Proposed Senior Housing Project Located at 6639 Darby Avenue, City of Reseda, Los Angeles County, California	1999
Wlodarski, Robert J.	7782	A Phase 1 Archaeological Study for the Proposed Sherman Way and 13741-13747 Cantlay Street City of Los Angeles, Los Angeles County, California.	2005
Wlodarski, Robert J.	10618	Record Search Results for the Proposed Bechtel Wireless Telecommunications Site LA0313/VN0197 (Horizon), located at 15725 Parthenia Street, North Hills, California.	2009

Previously Recorded Cultural Resources Site Records

The records search also indicated that a total of 13 cultural resources have been previously recorded within 0.25-mile of the project area (Table 2). None of these resources occur within the project area. Of the 13 previously recorded resources, 11 of these resources are comprised of commercial, educational, industrial, military, or residential buildings (P-19-167303, P-19-170966, P-19-170967, P-19-173061, P-19-175261, P-19-186585, P-19-186642, P-19-187950, P-19-188173, P-19-188464, and P-19-188848). One resource (P-19-3306) was a historic trash dump. The only prehistoric resource documented was an isolated sandstone bowl (P-19-100281) found during construction monitoring activities. Seven of the 13 resources have been evaluated for federal, state, and/or local historic listings. Three resources (P-19-186642, P-19-188464, and P-19-188848) were found to be ineligible for federal, state, or local historic listings. P-188464 was considered ineligible for the National Register, but was not evaluated for state or local significance.

Table 2. Previously Recorded Archaeological Sites within 0.25-Mile of the Project Area

Primary Number (P-19-)	Site Type	Time Period	Eligibility
3306	Trash Dump	Historic	
100281	Sandstone bowl	Prehistoric	
167303	Library	Historic	
170966	Theater commercial	1926	
170967	Commercial building	1923	eligible for NR determined by Section 106 process, listed in CR, needs re-evaluation
173061	Commercial building	1920	appears eligible for NR or CR
175261	Education Building	1926	eligible for NR as contributor of a district determined by Section 106 process, listed in CR
186585	Railroad Depot	1896-1950s	eligible for NR determined by section 106 process, listed in CR
186642	Commercial Structure	Historic	ineligible
187950	Military Property	1943, 1959	
188173	Industrial building	1954	
188464	Commercial building	1936	ineligible determined by Section 106 process, not evaluated for CR or local listings
188848	Apartment Building	1962	found ineligible for NR, CR, or local listings

California Historic Landmarks

Two California Historic Landmarks were identified as points of historic interest and are located in the project vicinity, but do not overlap with the project area. One is the 20th Century Fox Art Environments Old Trappers Lodge (CHL 939). Second historic monument is the North Hollywood Branch Library at 5211 N. Tujunga Avenue in the city of North Hollywood (P-19-167303; NR-8700108).

Los Angeles Cultural Monuments

A total of seven cultural monuments have been identified within a 0.25-mile radius of the project area (Table 3). Phil's Diner, El Portal Theater, and Amelia Earhart Branch Library were also documented in the HRI, site records, and/or California Historic Landmarks

Table 3. Los Angeles Historic Cultural Monuments within 0.25-Mile of the Project Area

LAHCM #	Name
232	Department of Water and Power Building
2451	Phil's Diner
302	Amelia Earhart Branch Library
573	El Portal Theater
2179	Toluca Southern Pacific Depot
2359	Amelia Earhart Branch Library
2518	Masonic Temple

NATIVE AMERICAN CONTACT PROGRAM

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 Native American Heritage Commission (NAHC) on May 11, 2012. 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 May 15, 2012. The letter stated, "The Native American Heritage Commission (NAHC) conducted a Sacred Lands File search of the 'area of potential effect,' (APE) based on the USGS coordinates provided and Native American cultural resources were identified in the project area of potential effect (e.g. APE): you specified. There are Native American cultural resources in the APE and in close proximity to the APE. Also, please note; the NAHC Sacred Lands Inventory is not exhaustive and does not preclude the discovery of cultural resources during any project's groundbreaking activity." The letter also provided a list of Native American groups to contact for their interests in this proposed project.

Letters were mailed on May 21, 2012, to each group or individual provided on the contact list. A total of seven parties were indicated on the contact list including; Ron Andrade of the Los Angeles City/County Native American Indian Commission, Delia Dominguez of the Kitanemuk & Yowlumne Tejon Indians, Beverly Salazar Folkes, Randy Guzman-Folkes, John Tommy Rosas of the Tongva Ancestral Territorial Tribal Nation, Ronnie Salas of the Fernadeno Tataviam Band of Mission Indians, and John Valenzuela of the San Fernando Band of Mission Indians. Maps depicting the Project area and response forms were attached to each letter. Follow-up phone calls were made to each party on June 21, 2012. A total of two responses were received.

Mr. Randy Guzman-Folkes was contacted by phone and then he replied and provided additional information via email and letter attachment on June 21, 2012. Mr. Guzman-Folkes indicated that there are sites within the vicinity of the Project area and that cultural resources and Native American monitoring should be conducted for the project. In his email he stated that "I believe cultural resources monitoring is required on the San Fernando Valley Water Recycling Project." The attached letter included information regarding Mr. Guzman-Folkes company R. Indigenous Consultants Tribal Monitoring LLC, which provides consultation and monitoring.

Mr. Johntommy Rosas responded to the initial receipt of a contact letter via email on May 22, 2012. Mr. Rosas indicated that he would respond later after he reviewed the proposal and that, "I do have some serious concerns about the jurisdiction so this project has to be reviewed under NHPA, and we require that notice be legal under NHPA, there are many documented and undocumented sites there, we want to support legal water [re]cyling projects but this appears not to be legal now on process grounds." Mr. Rosas has not responded with further comments to-date.

PALEONTOLOGICAL RECORDS SEARCH

A paleontological records search was requested from the Los Angeles Natural History Museum on May 11, 2012 in order to determine the level of paleontological sensitivity within the project area. The request was accompanied by a project description and a map of the project area.

Results

A paleontological records search was conducted by Dr. Samuel McLeod, Vertebrate Paleontology Division of the Natural History Museum of Los Angeles County on June 26, 2012. The records check indicated that there is no known vertebrate fossil locality that lies within the proposed project area boundaries. However, there are fossil localities nearby from the same sedimentary deposits that occur in the proposed project areas.

North Hollywood Park Segment
The North Hollywood Park segment surface deposits consists of younger Quaternary Alluvium, derived primarily as fluvial deposits from the Central Branch of Tujunga Wash and probably from the Los Angeles River that flows to the south. Our closest vertebrate fossil localities from these deposits is LACM 6970, located along Lankershim Boulevard at Highway 134, that produced fossil specimens of camel, *Camelops hesternus,* bison, *Bison antiquus*, and ground sloth, *Glossotherium harlani*, at approximately 60 to 80 feet below grade excavated during the construction of the Metrorail Redline Universal City Tunnel.

Valley Plaza Park Segment
The surface deposits within the vicinity of the Valley Plaza Park segment consists entirely of younger Quaternary Alluvium, derived primarily as fluvial deposits from the Tujunga Wash that crosses the western portion or the Central Branch of the Tujunga Wash that crosses the eastern portion of this segment. There are no localities that lie within or adjacent to this segment.

Van Nuys Sherman Oaks Park Segment
Within the vicinity of the Van Nuys Sherman Oaks Park segment are surface deposits comprised entirely of younger Quaternary Alluvium, derived primarily as fluvial deposits from the Los Angeles River that is adjacent to the southern-most portion of this segment or from the Tujunga Wash that is adjacent to the eastern portion of the segment. Along the western portion of the segment, east of the Sepulveda Dam Recreation Area and north of the Ventura Freeway (Highway 101), lies locality LACM 3822, near Kester Avenue and Sepulveda Boulevard north

of Oxnard Street, that produced fossil specimens of extinct peccary, *Platygonus*, camel, *Camelops*, and bison, *Bison*, at depths between 75 to 100 feet below the surface. South of this locality, along Kester Avenue near Burbank Boulevard, lies LACM 6208, this produced fossil specimens of extinct bison, Bison, at a depth of 20 feet below the surface. Further south of this location is locality LACM 3263, near the intersection of Kester Avenue and Otsego Street, that produced fossil specimens of extinct horse, *Equus*, at a depth of 14 feet below the surface.

Reseda Park Segment and Pierce College Segment

Within the vicinity of the western terminus of the Pierce College segment, exists some exposures of the marine late Miocene Upper Modelo Formation (also known as the Monterey Formation), and may occur at depth within the area of this segment. Localities from the Upper Modelo Formation, LACM 3173, 5125, 5657, and 6021, occur south-southwest of the western terminus of the Pierce College segment. Locality LACM 3173, west of Mulholland Drive, produced fossil specimens of shearwater, *Puffinus*. Locality LACM 5125, near San Feliciano Drive in Woodland Hills, produced fossil specimens of lanternfish, *Myctophidae*. Locality LACM 5657, south of Mulholland Highway, produced a fossil specimen of baleen whale, *Mysticeti*. Locality LACM 6021, just north of Mulholland Drive and east of Canoga Avenue, produced a rare fossil specimen of leatherback turtle, *Psephophorus*.

Surface deposits within the vicinity of the Pierce College and Reseda Park segments consists of soil and younger Quaternary Alluvium, derived predominantly as fluvial deposits from the Los Angeles River that flows adjacent to and bisects the segments. Deposits found throughout the San Fernando Valley typically do not contain significant vertebrate fossils, at least in the uppermost layers, but older Quaternary deposits found at depth may contain significant fossil vertebrate remains. Locality LACM 1213 is the closest vertebrate fossil locality from older Quaternary deposits and is located south-southwest of the Pierce College and Reseda Park segments, off of Mulholland Highway south of Woodland Hills. This locality produced fossil specimens of horse, *Equus*, and ground sloth, *Paramylodon*. Locality LACM 5878, located south-southwest of the western terminus of the Pierce College segment, is off of Long Valley Road in Hidden Hills and produced a fossil mastodon skeleton, *Mammut*. To the north in the Santa Susana Pass, lies locality LACM 1406 which also produced fossil specimen of mastodon, *Mammut*.

VA Hospital Segment

The VA Hospital segment surface deposits consist entirely of younger Quaternary Alluvium, derived as a mixture of alluvial fan deposits from the Santa Susana Mountains to the northwest as well as fluvial deposits from the Bull Creek that flows to the west and the Pacoima Wash that flows to the east. The closest vertebrate fossil localities in the older Quaternary deposits occur at or near the Van Norman Reservoir, located north of the segment. These localities include LACM 3397 that produced fossil bison, *Bison*, at 75 feet below surface level, LACM 7152 that produced fossil mammoth, *Mammuthus*, and bison, *Bison*, in terrace deposits and LACM 1733 that produced fossil horse, *Equus*, at unknown depth. Further to the north-northwest and just east of Interstate 5 (I-5) and south of the Foothill Freeway (I-210), lies fossil locality LACM 5745, which produced fossil mastodon, *Mammut*, and horse, *Equus*, in fill dirt.

Historic Maps

Historic map research based on Sanborn Fire Insurance (Sanborn) maps and historic 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 along the various segments. This research yielded detail information on only two segments of the project, the North Hollywood Park segment and the Van Nuys Sherman Oaks Park segment. Detailed Sanborn map, and historic topographic map coverage for the Valley Plaza Park, Reseda Park, VA Hospital, and Pierce College segments were not available.

North Hollywood Park Segment

Sanborn maps from March 1927 depicted Magnolia Boulevard from Bakman Street to just east of Lankershim Boulevard as a 60 foot wide street, with an eight foot wide utility pipe running east-west along the southern border. On the north side of the street, an office, three single family dwellings, several small stores and one sizeable store on the northwestern corner were present. Two parking lots, the larger of the two at the northeastern corner of Lankershim and Magnolia, were also present. Further east passing Lankershim to Vineland, Magnolia's north side of the street was assembled with nine additional stores, an auto parking space, and nine single story dwellings (along with one single story room). In addition, The Valley Times and a "Little Theatre" were also present (LAPL 1927, N. Hollywood Distr. of Los Angeles City, Sheets 9 and 10).

In another portion of the 1927 map, the southern lateral of Magnolia, between Tujunga and Klump Avenues, was depicted. No single family dwellings were recorded in this sector, but offices that included The Pacific Telephone & Telegraph Co., stores, a restaurant and a parking garage occupied the area (LAPL 1927, N. Hollywood Distr. of Los Angeles City, Sheet 11). Also on the southern side, from Klump to Blakeslee Avenue (just east of Lankershim), the 1927 historic map shows three restaurants, two furniture stores as well as several other undefined stores, an auto sales lot, and a gas and oil shop (LAPL 1927, N. Hollywood Distr. of Los Angeles City, Sheet 12).

The block of Magnolia between Tujunga and Bakman listed majority businesses, such as stores and an auto repair shop, and only one single family dwelling on the southern side of the street. The northern boundary was less occupied, having only three businesses, two general stores and one large undertaking business at the northeastern corner of Bakman and Tujunga (LAPL 1927, N. Hollywood Distr. of Los Angeles City, Sheet 13). Just west, the blocks of Magnolia between Colfax Avenue and Westpark Dr. was recorded as primarily residential nearly 30 years later in 1955 (LAPL, Los Angeles, Vol. 41, Sheet 4126).

From Magnolia Boulevard, the North Hollywood Park segment then travels south on Vineland Avenue. A Sanborn map from 1946 illustrates the two blocks south of Magnolia to Otsego Street as majority stores and service shops such as auto repair and gas/oil. Three single family dwellings were recorded near the intersection of Vineland and Otsego. These depictions apply to the eastern side of Vineland. With the exception of St. David's church, the majority of the buildings were single family dwellings or apartment buildings (LAPL, N. Hollywood Distr. of Los Angeles City, Sheet 14).

Another project segment, Camarillo Street between Cahuenga Boulevard and Strohm Avenue was depicted in a 1955 Sanborn map. This section of the project area was entirely residential. Large single family dwellings with multiple structures were the only architectural type. The homes were one story, though one was two stories and included a swimming pool (Los Angeles, Cal. Vol. 41, 4106). In this same year, the historic map recorded North Hollywood High School at the intersection of Magnolia and Colfax Avenue (LAPL, Los Angeles, Cal. Vol. 41, 4148, North Hollywood District sheet 16).

Van Nuys Sherman Oaks Park Segment

The current streets within the vicinity of the Van Nuys Sherman Oaks Park segment include Burbank Boulevard, Van Nuys Boulevard, Oxnard Street, and Magnolia Boulevard.

In 1923, Sanborn maps indicate that Van Nuys was named Sherman Way and was 110 to 130 feet wide. Fields and orchards were recorded to the east of Oxnard between Van Nuys and Cedros. To the west of Oxnard in this vicinity was one organ factory between Van Nuys and Vesper (LAPL 1923, Van Nuys, Sheet 15). By 1926, one block south had been developed into a City Water Department facility and pipe storage yard (LAPL 1926, Van Nuys, Sheet 15). By 1938, the northern block was developed as Pacific Cabinet and Radio Co. and the Southern block was a San Fernando Valley Water and Power shop and storage yard (LAPL 1948, Van Nuys, Sheet 15). In 1923, the orchard on the southeastern corner extended west two city blocks to Cedros Avenue (Jan. 1923, Van Nuys, Sheet 15). The 1923 Sanborn map revealed an empty northern portion of Oxnard Street at Cedros Avenue, with only three single family dwellings erected in an area delineated by six lots (Jan. 1923, Van Nuys, Sheet 20).

In 1955, maps illustrated Oxnard, just west of Cedros Avenue, as entirely developed with businesses. These trades included electronics, woodworking, refrigeration, and cabinet shops (LAPL, Los Angeles, Vol. 42, Sheet 4244).

A 1955 Sanborn Map shows a mixture of homes and businesses that lined the western and eastern sides of Van Nuys between Hatteras Street and Burbank. For example, the southern half of the western side of Van Nuys was dedicated to used auto sales. The middle portion was characterized by four lots, with three single family dwellings in each lot. Auto-related industries, along with stores, lined the northern half of the western side of Van Nuys. The entire northern half of the eastern side of Van Nuys was occupied by "USED AUTO SALES" in 1955. The southern half was a conglomeration of businesses that included general stores, furniture stores, and offices (LAPL, Los Angeles, Vol. 42, Sheet 4236). The twelve dwellings mentioned above were likely the anomaly on this block of Van Nuys at the time.

Between Hatteras and Oxnard, the constructions on Van Nuys in 1955 were entirely businesses. The trades included funeral homes (a substantial one, Praisewater Funeral Home, was located on the western side), stores, offices, and auto sales (LAPL, Los Angeles, Vol. 42, Sheet 4237). Further south on Van Nuys to Clark Street, businesses also dominated the landscape. A 1955 Sanborn labeled these trades as general stores, furniture stores, and auto services/sales (LAPL, Los Angeles, Vol. 42, Sheet 4239).

SURVEY METHODS AND RESULTS

SURVEY METHODOLOGY

Cultural Resources Survey

While several previous archaeological surveys were conducted within the vicinity of the project area, less than 25 percent of the project area has been previously surveyed. An archaeological field survey of the project area was conducted by Linda Kry and Adela Amaral on June 26, 2012. As the entire project area is known to be paved, windshield survey was conducted within all the proposed segments associated with this project (see Figure 3). When areas of open ground were present for inspection, 10-meter interval transects were completed in order to investigate the project area vicinity for archaeological resources. The survey included identification of archaeological and built environment resources. While the proposed undertaking includes installation of water pipelines below the ground surface, the majority of the survey focused on the archaeological investigation. Built environment was only addressed in areas where the project intersects with structures which could be affected by the project if they were determined to be historic-in-age and possibly requiring evaluation and mitigation.

RESULTS

Project cultural resource specialists performed a windshield survey of the proposed project area on June 26, 2012. The survey area consisted of areas proposed for the expansion of existing recycled water pipeline network within the San Fernando Valley area of the City of Los Angeles. The proposed project area and survey area is broken down into six segments: North Hollywood Park, Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, VA Hospital, and Pierce College (see Figure 3). The goals of the survey were to identify any previously recorded or previously unknown cultural resources within the survey area and to evaluate potential for any buried resources. All visible ground soil was heterogenous and noted in the archival records of previous investigations as disturbed as a result of landscaping and or development.

SURVEY OBSERVATIONS

North Hollywood Park Segment

The easternmost segment of the project area is the North Hollywood Park segment. This segment is comprised of residential, commercial and educational buildings as well as a park. The western terminus of the segment abuts North Hollywood High School to the south. Also encountered along this segment is the North Hollywood Park and according to historic aerials, the park was present as early as 1952 (Plate 15). Within the immediate vicinity of the North Hollywood Park is an overpass for SR 170 that is present along Magnolia Boulevard between Westpark Drive and Tujunga Avenue. Just west of Vineland Avenue along Magnolia Boulevard, is the presence of an arts district and along Camarillo Street between Vineland and Clybourn is a residential area.

Plate 5. North Hollywood Park of North Hollywood Park Segment; View towards East-Northeast.

Valley Plaza Park Segment

The Valley Plaza Park segment is located approximately one mile east of the Burbank-Glendale-Pasadena Airport and the easternmost portion of the segment crosses State Route (SR) 170 twice at two different locations. This segment is comprised of residential and commercial buildings and a park that runs alongside SR 170 to the west. At the westernmost portion of the main segment is the channelized Tujunga Wash that bisects Sherman Way, just east of Sunnyslope Avenue (Plate 12). Along Sherman Way between Whitsett Avenue and Laurel Canyon Boulevard is the presence of a modern bridge that crosses over SR 170 (Plate 13). An overpass for the SR 170 was encountered along Vanowen Street between Whitsett Avenue and Laurel Canyon Boulevard approximately 0.50-mile south of the Sherman Way bridge (Plate 14). No other cultural resources were observed along this segment.

Plate 6. Valley Plaza Segment with Channelized Tujunga Wash along Sherman Way, View towards Northwest.

Plate 7. Valley Plaza Segment Sherman Way Bridge Over Interstate 170 (I-170), View towards the West.

Plate 8. Valley Plaza Segment Vanowen Street Bridge Over I-170, View towards South-Southeast.

Van Nuys Sherman Oaks Park Segment

The Van Nuys Sherman Oaks Park segment is located less than 0.50-mile east of the Sepulveda Dam Recreational Park. The streets along the main segment and the two extensions are lined with residential and commercial buildings as well as recreational space. The Van Nuys Sherman Oaks War Memorial Park is located at the southernmost portion of the segment and is used for recreational purposes. Two more sections of the S.P.R.R. were encountered during the survey. The first section abuts the east side of Van Nuys Boulevard between Chandler Boulevard which, is immediately north of the right-of-way, and Weddington Street. Another section of the S.P.R.R. bisects Burbank Boulevard just east of Fulton Avenue. Once again, the railroad has been abandoned and converted into a bus route for public transportation purposes (Plate 11). No evidence of archaeological sites or built resources was observed during the survey of this segment.

Plate 9. Van Nuys Sherman Oaks Park Segment with Former Southern Pacific Railroad ROW, Current Metroline Busway, View towards Northwest.

Reseda Park Segment

The Reseda Park Segment terminates at the intersection of Victory Boulevard and Reseda Boulevard. The Reseda Park segment continues approximately 15,800 feet on Victory Boulevard and includes three extensions (Plate 7). The portion that runs along Victory Boulevard is bounded by residential, commercial, educational and recreational structures. Sepulveda Dam and Recreational Area is located south of the segment and has been noted in a previous investigation (LA-8194) as being extensively disturbed due to levee construction and over 20 years of sod farm operation (Plate 8). According to historic aerials, Reseda Park, located at 18411 Victory Boulevard, is present as early as 1952. The park is bisected by the channelized Los Angeles River and has largely remained the same in layout since the mid century. Another abandoned portion of the S.P.R.R. right-of-way was encountered during the survey of an extension that travels approximately 1,000 feet south on Balboa Boulevard from Victory Boulevard. Again, the former S.P.R.R. has been converted into a public commuter bus route with no visible remnants of railroad tracks (Plate 9). No evidence of archaeological sites or built resources was observed during the survey of this segment.

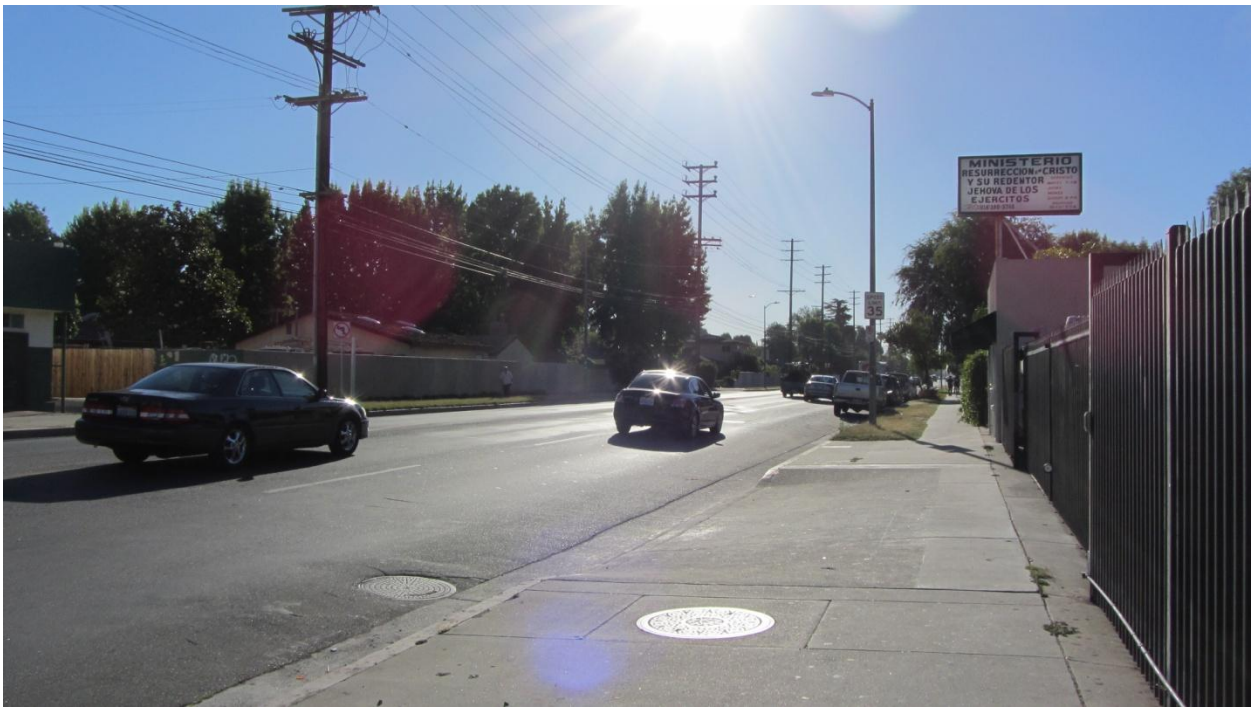

Plate 10. Northern Portion of Reseda Park Segment at the Intersection of Vanowen Street and Louise Avenue, View towards Northeast.

Plate 11. Reseda Park Segment Sepulveda Dam Recreation Area, View towards Northeast.

Plate 12. Reseda Park Segment with Former Southern Pacific Railroad ROW, Current Metroline Busway, View towards Northwest.

VA Hospital WRP

The VA Hospital segment is the northernmost section of the project area and consists of an approximately 7,300 foot alignment along Woodley Avenue with two extensions that would branch off of this main segment. Along the main portion of the segment, an active portion of the S.P.R.R. was encountered and remains in the same configuration as it was historically in the late 19th to early 20th century. This segment runs in a northwest-southeast direction and bisects Woodley Avenue between Roscoe Avenue and Raymer Street (Plate 10). In addition, the Van Nuys Airport, residential, commercial and industrial buildings are present along the main segment and the two associated extensions. No evidence of archaeological sites or built resources was observed during the survey of this segment.

Plate 13. Northern Portion of VA Hospital Segment; Overview of Haskell Avenue, View towards the South.

Pierce College Segment

The Pierce College segment is the westernmost segment of the proposed water recycling pipeline. This segment of the project area was surveyed from its western terminus positioned at the intersection of Victory Boulevard and Mason Avenue of Pierce College, located at 6201 Winnetka Avenue (Plate 5). The survey continued along Victory Boulevard until its termination point at the intersection of Reseda Boulevard and Victory Boulevard. This segment of the project area is developed with paved street surfaces. Along this segment are residential areas, Pierce College and the abandoned Southern Pacific Railroad (S.P.R.R.) right-of-way (ROW) that has been converted into a public commuter bus route or "busway" for the Metroline (Plate 6). No evidence of archaeological sites or built resources was observed during the survey of this segment.

Plate 14. Pierce College Segment at the Intersection of Victory Boulevard and Mason Avenue, View towards Northwest.

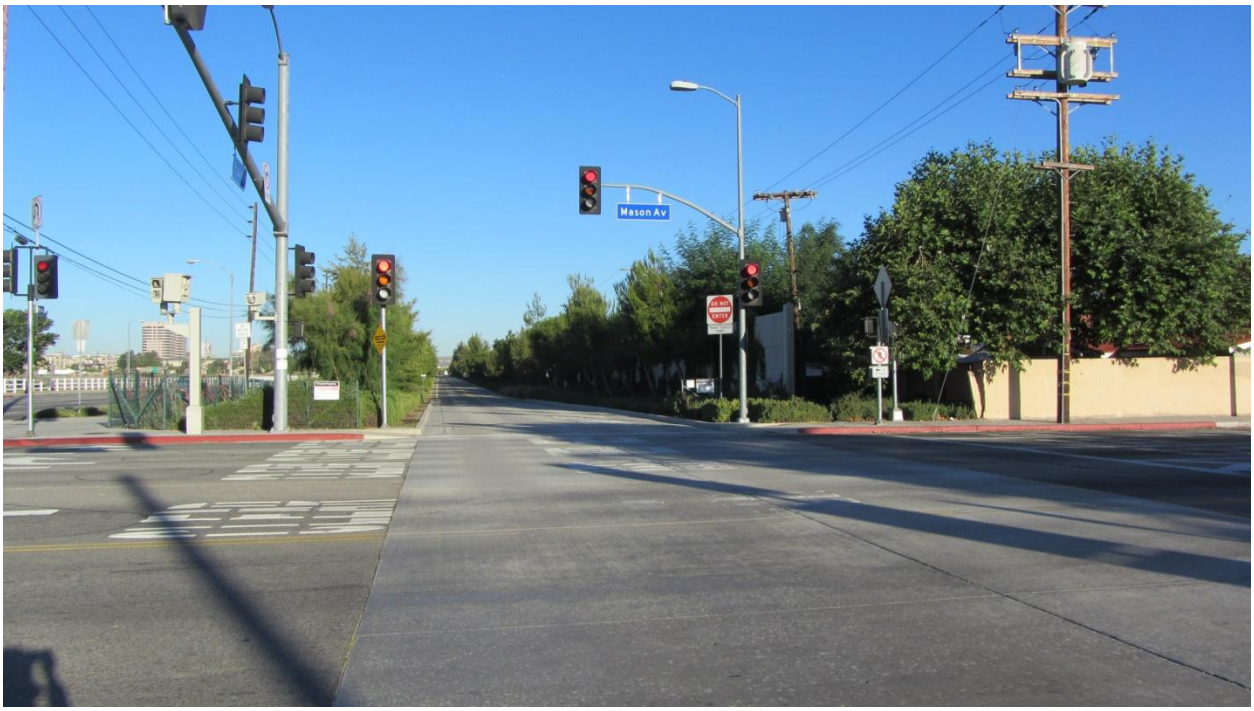

Plate 15. Pierce College Segment, Former Southern Pacific Railroad ROW, Current Metroline Busway, View towards Northwest.

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SUMMARY

The survey of the study area did not result in the identification of any previously unknown archaeological resources. However the project will intersect with two resources which are historic in age, including the Tujunga Wash Channel and the former S.P.R.R. ROW. As the project will not result in direct impacts to these resources they were not evaluated as part of this project, however work in the vicinity of these resources may encounter previously unknown buried resources.

The Reseda Park, Valley Plaza Park, and the North Hollywood Park segments all cross the Tujunga Wash Channel in one location (for a total of three crossings). The channel is associated with the construction of the Hansen Dam in 1940. The Hansen Dam was the world's largest earth fill dam when it was completed. Hansen Dam was crucial in alleviating the effects of the floodwaters of the Tujunga Wash in the neighboring residential areas (Wuellner and Wahoff 2005). The Tujunga Wash Channel is associated with the Hansen Dam, but prior to its construction; its floodplain was not centralized and therefore, encompassed a greater area. The three alignments will also cross through the former Tujunga Wash floodplain and it is possible that during construction-associated ground disturbance activities, cultural resources may be encountered as they may be buried beneath alluvium or re-deposited in unknown locations as a result of deposition or erosion in the wash.

The S.P.R.R. ROW intersects with the project area in three places, two of which are currently in portions of the ROW operating as Metro busways and have undergone what is likely extensive disturbance. However the VA Hospital Segment intersects with an intact portion of the ROW in the location of the Amtrak/Metrolink tracks located on Woodley Avenue approximately 1,000 feet south of Roscoe Boulevard. Trenchless construction would be required for this rail crossing. The former S.P.R.R. ROW has been surveyed for cultural resources (Dames and Moore 1988), and although none have been previously recorded in this specific location, the ROW has a high potential for preserved historic and prehistoric archaeological sites.

Potential for Archaeological Resources

Archaeological Site Potential

Review of previous investigations in the vicinity of the project and of the prehistoric context for the area provides an understanding of the potential for encountering prehistoric 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.

As described in the context section of this report, the location of the project area is in the vicinity of the Mission San Fernando and prehistoric villages of *Tohuunga* and *Muuhonga* have long been rumored or documented as being located near portions of the project area. The project site's location relative to the Los Angeles River would have provided access to important resources during all periods of prehistory. Subsequent land use has included modern and historic development. The segments themselves lie within roadway alignment dating back to at least the 1920s. 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.

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.

RECOMMENDATIONS

Recommendations specific to the portions of the project are detailed below. For each portion of the project area, there are specific mitigation measures pertinent to archaeological resources and paleontological resources.

Although no cultural 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 under the existing roadway. Archaeological deposits exposed during future earth disturbing activities may be evidenced by the occurrence of either prehistoric or historic artifacts. Portions of the project area intersect with the Tujunga Wash. The level of ground disturbance below the road remains unknown. For example, it cannot be determined whether any potential archaeological sites associated with the building the Tujunga Wash, such as construction camps, may exist below the road.

Furthermore, historic development began in the project area almost 100 years ago when the common method of rubbish disposal was burial. Historic period archaeological materials are items over 50 years in age, including but not limited to glass bottles, ceramics, buried infrastructure, military and construction debris, metal, etc. During prehistoric times, the Project area may have been occupied by the *Gabrielino/Fernandeño* Indians. Archaeological materials associated with the prehistoric period may include food remains such as marine and freshwater shells, animal bones, and seeds. The soils surrounding food remains are distinguished from native soils typically by a dark grey or black ashy appearance. Other types of items that may be found are food processing equipment, such as manos and metates, and stone tools, such as projectile points, hammerstones, and scrapers. For these reasons, it is possible that buried or otherwise obscured archaeological resources may be present within the project area.

To address potential impacts of the proposed project to unknown archaeological resources, the following mitigation measure is recommended under the guidance of an archaeologist meeting, at a minimum, the standards of the Secretary of the Interior.

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:

- Archaeological monitoring for the North Hollywood Park segment due to the presence of the Tujunga Wash, historic development and evidence of prehistoric settlement 19-100281;
- Archaeological monitoring for the Van Nuys Sherman Oaks Park segment due to the proximity of the San Fernando Mission, Los Angeles River, and Santa Monica Mountains;
- Archaeological monitoring for the VA Hospital segment pipe jacking entry and exit pits in the location of the former S.P.R.R. crossing.

The on-site archaeological monitor shall work under the direction of a qualified archaeological Principal Investigator. 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 archaeological monitor shall have the authority to redirect construction equipment in the event potential archaeological resources are encountered.

In the event archaeological resources are encountered, 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 and Section 106 of the National Historic Preservation Act.

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 improbably, the Principal Investigator in consultation with the LADWP may recommend that archaeological monitoring be continued intermittently as appropriate or discontinued within the segment or portion thereof.

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

In the event human remains are discovered, work in the immediate vicinity of the discovery will be suspended and additional measures will be implemented as required by federal law (pursuant to 43 CFR 10.4).

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.

Paleontological Recommendations

Archival research, as described in the previous sections of this report, has indicated that excavations that extend into surfical younger Quaternary Alluvium within the proposed project area segments are unlikely to produce significant fossil vertebrate remains. Deeper excavations within the proposed project area segments however, that extend down into the older Quaternary deposits or the marine late Miocene Upper Modelo Formation, may encounter significant vertebrate fossils.

Any substantial excavations below 5 feet, should they be necessary, within the proposed project area segments, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development.

In the event that potential paleontological resources are encountered, a qualified paleontologist should be retained in order to recover and record any fossil remains discovered. Any fossils, should they be recovered shall be prepared, identified and catalogued before curation in an accredited repository such as designated in consultation with LADWP.

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APPENDIX A

RESUMES

Sara Dietler
Project Archaeologist/Paleontologist

Education
BA, Anthropology, San Diego State University, 1998
Minor, American Indian Studies, San Diego State University, 1998

Affiliations
Society for American Archaeology
Society for California Archaeology

Publications and Professional Papers
Dietler, S. 2000. Protohistoric Burial Practices of the Gabrielino as Evidenced by the Comparison of Funerary Objects from Three Southern California Sites. In Proceedings of the Society for California Archaeology, Volume 13. Judyth Reed, Greg Greenway, and Kevin McCormick eds. Society for California Archaeology. Fresno.

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Dietler, S. 2008. Digging Deep: Archival Research into the History of Los Angeles' City Cemetery. Oral Presentation at the Society for American Archaeology (SAA) Meeting, Vancouver, B.C., Canada, March.

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Strauss, M., S. Dietler, and C. Ehringer. 2008. Death Lends a Hand: Archaeological Excavations of Los Angeles's City Cemetery. Oral paper presentation at the Society for Historical Archaeology Annual Meeting, Albuquerque, NM.

Ehringer, C., L. Kry, S. Dietler, and M. Strauss, 2008. After the Bones Have Gone: The Role of Personal Effects in Identifying Unmarked Historic Burials. Poster presentation at the Society for Historical Archaeology Annual Meeting, Albuquerque, NM.

Presentations and Lectures
2005. Guest lecturer at Santa Monica Community College regarding career opportunities in cultural resources management, Santa Monica, CA.

2006. Guest lecturer at Santa Monica Community College regarding early Los Angeles history and cemetery research and excavation, Santa Monica, CA.

Sara Dietler is a project archaeologist and paleontologist with fifteen years of experience in cultural resource management and is also a cross-trained paleontological monitor and supervisor. She has worked for more than ten years in the Los Angeles area and participated in both historic and prehistoric research throughout Southern and Central California. Since joining AECOM's Los Angeles office, she has specialized in the development history of downtown Los Angeles and co-authored technical reports on numerous projects relating to this subject.

As lead cultural resource manager for the Los Angeles office, Sara directs prehistoric and historic archaeological field and research projects, built environment projects, and provides paleontological support for many clients in Southern California, including public agencies and private developers. She manages a staff of cultural resources specialists who conduct various types of cultural resources compliance including Phase I surveys, construction monitoring, Native American consultation, archaeological testing and treatment, historic resource significance evaluations, and large-scale data recovery programs. Sara prepares technical documents in support of CEQA and Section 106 compliance as well as cultural resources components for General and Specific Plans.

City of Los Angeles BOE, Main Street Archaeological/Paleontological Monitoring and Assessment, Los Angeles, CA
Directed the archaeological and paleontological monitoring of a police parking facility in downtown Los Angeles. Coordinated with the client and construction personnel throughout the project. Archaeological monitoring resulted in the identification of nineteen archaeological features. Completed the analysis of artifacts recovered and produced a technical report.

Clark Construction, Long Beach Courthouse Project, Long Beach, CA
Directing the paleontological and archaeological monitoring for the

construction of the New Long Beach Courthouse. Supervising monitors inspecting excavations up to 25 feet in depth. Nine archaeological features have been recovered to date. Will complete an assessment of the artifacts and fossil localities in a technical report at the completion of the project.

South Bay Metro Green Line Extension Project, Los Angeles County, CA
Created survey and evaluation strategy for transportation project through metropolitan Los Angeles County in consultation with SHPO to meet Section 106 requirements. Prepared technical report for the evaluation of historical resources and the cultural resources portion of EIS/EIR, including mitigation measures for the treatment of evaluated historical resources. Assistant Project Archaeologist.

LACDPW, Alcazar Yard Historical Assessment, Los Angeles, CA
AECOM conducted a Phase I historical assessment in anticipation of the redevelopment of the Alcazar Yards. The project area is located on two parcels at 1537 Alcazar Street and at 2275 Alcazar Street in Los Angeles. Managed the project and assisted the architectural historian with background research. Project Archaeologist.

LADPW, First Street Trunkline Project, Los Angeles, CA
AECOM has conducted cultural resource monitoring of the First Street Trunkline installation during excavation. Construction has included excavations up to 25 feet in depth. Supervised cross-trained monitors inspecting for archaeological resources and fossils in marine terrace deposits in the Puente formation that is encountered during the deeper excavations. Will complete an assessment of the artifacts and fossil localities in a technical report at the completion of the project.

LACDPW, Topanga Library Project, Topanga Canyon, CA
AECOM conducted archaeological monitoring during construction of the Topanga Library. Construction included the installation waterlines along the roadway outside of the main project area. Monitoring resulted in the discovery of materials associated with the recorded archaeological site CA-LAN-8. Directed cultural resource specialists in conducting archaeological testing of this site and worked closely with the LADPW to assist them in mitigating the effects of the project as well as coordinating with Caltrans who had oversight on the project. Resources were identified and evaluated for eligibility to the National Register of Historic Places.

LAUSD, Central Los Angeles High School #9, Los Angeles, CA
Conducted on-site monitoring and investigation of archaeological sites exposed as a result of construction activities. During data recovery phase in connection with a 19th century cemetery located on-site, participated in locating of features, feature excavation, mapping and client coordination. Organized background research on cemetery including; genealogical, local libraries, city and county archives, other local cemetery records, internet and local fraternal organizations. Advised in lab methodology and set up, and served as project manager, contributing author and editor for the in-progress technical report.

LADWP, Lakeside Recreational Complex, Sylmar, CA
AECOM conducted a Phase I cultural resources evaluation of the historic-era Lakeside Debris Basin property including a California Register eligibility assessment for the facility itself and archaeological features identified as a result of the survey, and prepared a Cultural Resources Technical Report with findings and recommendations for further work, pursuant to CEQA requirements.

City of Los Angeles BOE, Temple Street Widening Project, Los Angeles, CA
AECOM conducted archaeological monitoring during the widening of Temple Street in downtown Los Angeles. Extensive coordination with general contractors was involved, as well as response to discoveries including and segment of the zanja irrigation ditch and a large historic refuse deposit to determine appropriate treatment and develop recommendations. At the completion of the monitoring phase, AECOM archaeologists analyzed the artifacts and features documented during excavation and prepared and archaeological resource assessment.

Thomas Properties, Metro Universal, North Hollywood, CA
Assisted in compiling a compendium of over seventy years of archaeological excavation and construction monitoring in and around the Campo historic site. Drafted appropriate mitigation for the archaeological resources within the scope of the proposed development. At the request of the client a Vision Plan for the Universal City property to the east of the project area was peer reviewed for consistency and appropriate mitigation to historical resources on that property and affects to the historical resources on the Metro Universal Project location.

LAUSD, Glassell Park Early Education Center and Affordable Housing Project, Los Angeles, CA
Conducted a Phase I study for the Glassell Park Early Education Center (EEC) and Affordable Housing Project adjacent to the existing Glassell Park Elementary School. Prepared a cultural resources study with findings and recommendations for further work, pursuant to CEQA requirements.

LAUSD, Belmont Primary Care #11, Los Angeles, CA
Conducted on-site monitoring and investigation of a historic trash deposit exposed during grading. Assisted in completing and presenting background research on the property in order to contextualize the artifact findings. Conducted historic map research, as well as visiting local libraries, and city and county archives.

LACDPW, Olive View Medical Center Emergency Services Expansion, Los Angeles, CA
Participated in a Phase I cultural resources evaluation of a portion of the Olive View Medical Center campus in Sylmar. Assisted in research to support a California Register eligibility assessment of the MacClay Highline, an underground spur of the Los Angeles Aqueduct.

LACDPW, Olive View Medical Center Building 403 Cultural Evaluation
Los Angeles, CA
Completed the historic architectural survey and assisted the architectural historian in evaluating a historic ward building on the property of the Olive View Medical Center campus in Sylmar that was slated for demolition.

ExxonMobile, Chevron Station 31 Connection Project Fellows, CA
Directed a Phase I cultural resources evaluation of an undeveloped property in Kern County. Conducted an assessment of resources discovered during survey and prepared a Cultural Resources Technical Report with findings and recommendations for further work, pursuant to CEQA requirements.

Conejo Recreation and Park District,
Lang Ranch, El Monte, CA
Participated in the Phase I archaeological survey of the 46-acre project area. Project work involved the archaeological testing at two artifact isolate locations to determine presence of sub-surface deposits. Assisted in the preparation of an Archaeological Resources Technical Report and EIR section with findings and recommendations for further work, pursuant to CEQA requirements.

San Gabriel & Lower Los Angeles
Rivers and Mountains Conservancy, Woodland Duck Farm Project, El Monte, CA
Completed the Phase I investigation, including a historic structure and archaeological survey of the site of the former historic Woodland Duck Farm. Researched the history and background of the farm itself, assisted the Architectural Historian in the analysis of structures related to the duck farm and co-authored the technical report.

LACDPW, Santa Anita Reservoir, Los Angeles County, CA
Completed the Phase I investigation, including a historic structure and archaeological survey of the site of the Santa Anita Dam, Reservoir and Complex. Researched the history and background of the farm itself, assisted the Architectural Historian in the analysis of structures related to the dam complex and co-authored the technical report.

Western Bypass Bridge, Temecula, CA
Oversaw Phase I investigation including a record search and survey of the project area. Completed all documentation required for MND document.

John Laing Homes, Hellman Ranch Monitoring, Orange County, CA
Served as Lab Director for the final monitoring phase of the project, cataloging and analyzing artifacts recovered from salvage monitoring and test units placed in relation to recovered intact burials. Conducted microscopic analysis of small items such as bone tools and shell and stone beads. Directed lab assistants and oversaw special studies including the photo-documentation of the entire collection. Completed a section reporting on the results of the bead and ornament analysis in the final report, which was published as part of the AECOM technical series.

Twining Laboratories, Inc., Home Depot Monitoring – Lake Elsinore, Riverside County, CA
Participated in archaeological monitoring of Caltrans road-widening in vicinity of historic cemetery. Assisted in preparing negative report of findings. Coordinated with Caltrans.

Public Safety Facilities Master Plan, Los Angeles County, CA
Assisted in research and survey of a Phase I archaeological resources evaluation of an approximately five-square block area in downtown Los Angeles. Completed a record search at the South Central Coastal Information Center in addition to research on specific historic attributes present on the properties and general site history within the APE.

The Grove at Farmers Market Monitoring Project, Los Angeles, CA
Served as Lab Director for the analysis of a historic collection recovered from the area surrounding the historic Farmers Market and the nearby Gilmore Adobe. The project included cataloging and analysis of all recovered artifacts, reconstruction of items, photo-documentation and preparation for display and curation of the entire collection. Co-authored the resulting technical report for the project, which detailed the results of monitoring. The report included an analysis of features and artifacts recovered and a detailed history of the property.

San Diego Ballpark Project
Served as archaeological monitor for the construction of underground utility line installation for San Diego, California's downtown ballpark. Recovered historic artifacts and kept detailed records. Handled public relations and dealt with a variety of public officials and construction crews effectively, despite the controversial and complicated nature of this multimillion dollar project.

SANDAG Regional Beach Restoration Project
Acted as lead archaeological monitor in the inspection and analysis of offshore sediments along a large portion of coastal of San Diego County. The monitoring represented an effort to identify inundated archaeological sites in sediments representing former coastline. Collected samples of sediment, shellfish, and marine mammal remains from dredging spoils, and identified and described samples. Served as a vital member of a multidisciplinary team in materials evaluation. Job required familiarity with construction methods, and an ability to deal with a high level of media and public interest.

Barona Cultural Center and Museum, Barona Reservation Cultural Center Project San Diego County, CA
Completed an inventory of the recently purchased core collection for a new archaeological museum. Identified, inventoried, cleaned, and restored the artifacts, including extensive lithic and ceramic assemblages. Transformed the old and poorly packaged collection into one professionally sorted, documented, and labeled, and curated to Federal standards.

All American Pipeline Conversion Survey
Led a field crew as a part of a 170-mile long archaeological survey for the conversion of a high-pressure gas pipeline in the Mojave Desert between the towns of Daggett and Blythe, California. The survey located and updated previously unrecorded resources, including 93 archaeological sites and 22 isolated artifacts.

Level Three,Level Three Long Haul Construction Monitoring.
Coauthored a technical report concerning the salvage excavation of a Chumash multiple human burial exposed during the project, researching and analyzing the unique assemblage of stone beads associated with the human remains. Monitored the directional drilling, trenching, and clean-up relating to the installation of fiber optic cable along the coast of Santa Barbara and Ventura Counties, California. Worked closely with Chumash monitors in the identification, boundary and significance testing, and protection of prehistoric archaeological sites.

Model Marsh Data Recovery.
Excavated and water screened as part of a archaeological data recovery project for a buried Late Prehistoric period shell midden site (CA-SDI-15,598) in southern coastal San Diego, California. Following the excavation of 41 archaeological test units and 23 shovel test pits, sorted, catalogued, and speciated over 77,000 grams of shellfish and other cultural materials. Wrote the Invertebrate Faunal Analysis chapter of the resulting technical report.

MILCON Monitoring and Data Recovery.
Served as field crew for the emergency salvage treatment of eleven flexed human burials on northern MCAS Camp Pendleton, San Diego County, California. Data recovery included the identification of burial features during monitoring, exposing, documenting, and identifying visible remains, and then pedestalling and removing them in blocks.

ARCO, ARCO Burial Ground Salvage Excavation.
Assisted in cataloguing and analyzing artifacts following the salvage excavation of site CA-LAN-2682, a Protohistoric period Gabrielino habitation site and burial ground. Identified, sorted, and catalogued archaeological material including artifacts, large numbers of invertebrate and vertebrate faunal remains, as well as human remains. Conducted extensive research on several similar sites, culminating in an analytical paper presented at the 1999 Society for California Archaeology Meetings and published the following year in the group's proceedings.

Selected Reports

Central Los Angeles High School #9 Archaeological Excavation Report (in progress) (contributing author). Prepared for Los Angeles Unified School District. AECOM. (anticipated 2011).

Piecing Together the Prehistory of Landing Hill: A Place Remembered (contributing author). EDAW Cultural Publications. No. 3. (2007).

Archaeological Resources Assessment for the Alameda Street Improvement Project (in progress). Prepared for City of Los Angeles, Department of Public Works. AECOM. (2010)

Archaeological Resources Assessment for the MTA Universal Project. Prepared for Thomas Properties Group. EDAW, Inc. (2008).

Archaeological Evaluation Proposal (Phase II) of the Admiralty Site (CA-LAN047) for the State Route 90 Connector Road and the Admiralty Way Widening Projects, Marina del Rey, County of Los Angeles, CA. Prepared for Caltrans District 7. EDAW, Inc. (2007).

Cultural Resources Assessment for the Woodland Duck Farm Project, Avocado Heights, Los Angeles County, CA (with A. Tomes). Prepared for San Gabriel River & Lower Los Angeles Rivers and Mountains Conservancy (2007).

AECOM
515 South Flower Street
9th Floor
Los Angeles, CA 90071
www.aecom.com

213.593.7700 tel
213.593.7715 fax

Memorandum

To	Irene Paul, Los Angeles Department of Water and Power	Page	1
CC			
Subject	San Fernando Valley Water Recycling Project (WRP) Project Additions		

From	Heather Gibson and Linda Kry, AECOM
Date	March 15, 2013

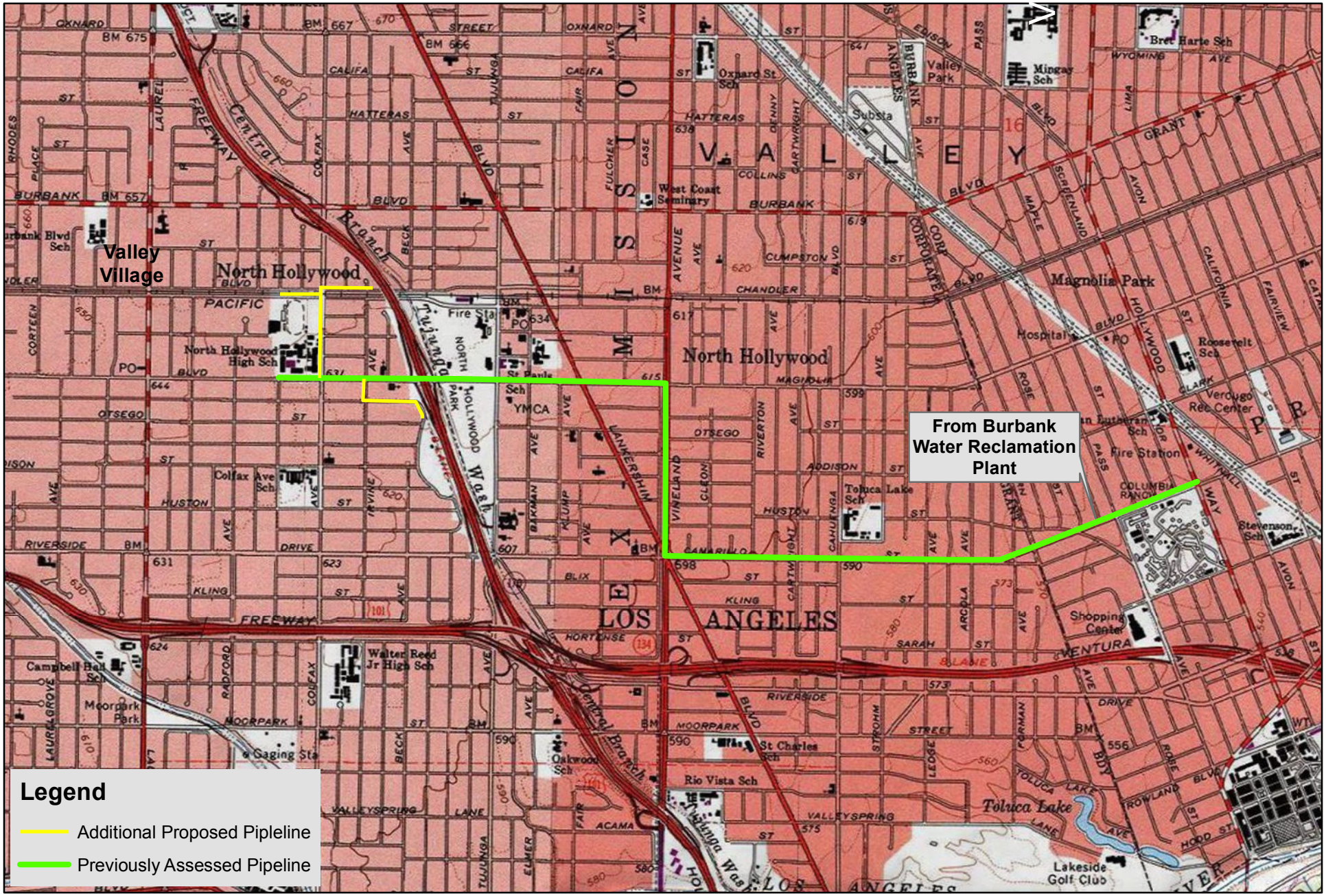
This memorandum describes results of additional analysis conducted to incorporate proposed changes to Los Angeles Department of Water and Power's (LADWP's) San Fernando Valley Water Recycling Project (WRP) (Project). These changes consist of additional pipeline proposed for the North Hollywood Park Segment (Figure 1)

The North Hollywood Park segment would connect to an existing City of Burbank pipeline on the City of Los Angeles border at Verdugo Avenue and Clybourn Avenue. From the Burbank pipeline connection point, this segment would extend approximately 600 feet west on Verdugo Avenue to Camarillo Street, approximately 5,200 feet west on Camarillo Street to Vineland Avenue, approximately 2,600 feet north on Vineland Avenue to Magnolia Boulevard. Under the proposed changes this segment would then extend approximately 5,800 feet (instead of 5,600 feet) west on Magnolia Boulevard terminated in front of the south side of North Hollywood High School, adding approximately 200 feet of pipeline to this segment.

Under the proposed Project modifications, two extensions would be added to the North Hollywood segment of the San Fernando Valley WRP. One extension would travel approximately 1,400 feet north on Colfax Avenue from Magnolia Boulevard to Chandler Boulevard and then would split into two legs. One leg would travel approximately 480 feet west on Chandler Boulevard terminating at North Hollywood High School and the other leg would travel approximately 800 feet east on Chandler Boulevard terminating at the Caltrans 170 freeway. The segment on Colfax Avenue would cross the Metro Orange Line Busway. The second leg would extend approximately 350 feet south on Irvine Avenue from Magnolia Boulevard to Hartsook Street, approximately 800 feet east on Hartsook Street to Westpark Drive, and approximately 250 feet south on Westpark Drive terminating at North Hollywood Park The proposed additions to the Project area encompass a total of 0.8 linear miles (4,280 feet). Figure 2 shows the revised map of the Project components, including the additional pipeline proposed for the North Hollywood Park segment.

Archival Research and Previous Studies

Additional archival research was conducted on February 19, 2013, at the South Central Coastal Information Center (SCCIC) housed at California State University, Fullerton. The research focused on the identification of previously recorded cultural resources within the added portions of the Project area, as well as within a 0.25-mile radius of the Project area. The archival research included review of previously recorded archaeological site records and reports, historic site and property inventories. 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



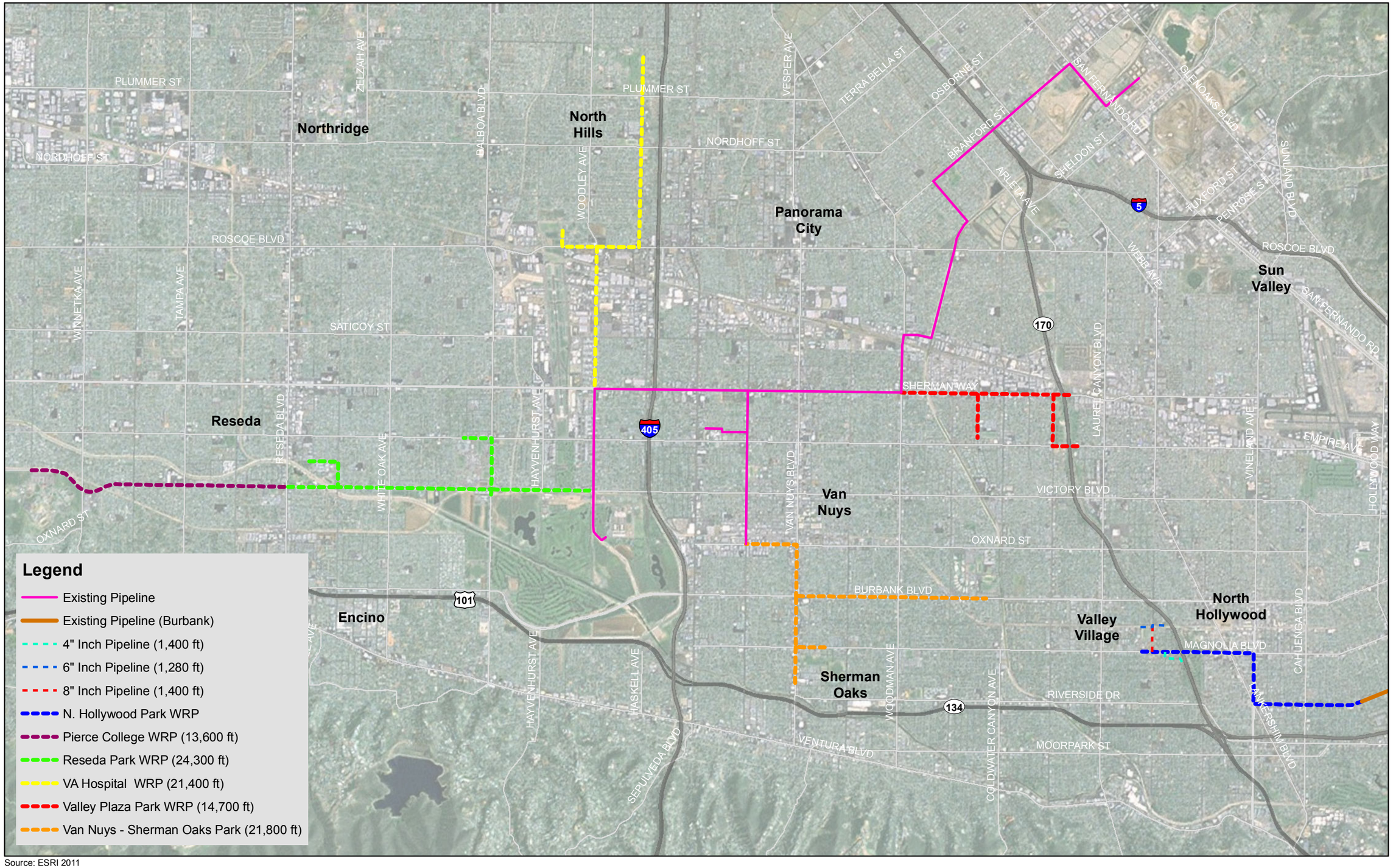
Source: Van Nuys (1972); Burbank (1972)

N

0 0.25 0.5 0.75 1 Miles

Figure 1

North Hollywood Park Segment - Additional Proposed Pipeline



Source: ESRI 2011

Figure 2

Project Components Map

Landmarks and Points of Interest were also reviewed to identify cultural resources within Project area and a 0.25-mile radius.

Previous Cultural Resources Investigation Reports

There are seven previous cultural resources investigations that have been conducted within 0.25-mile of the proposed Project additions (Table 1). Four of these studies were included in the record search results described in the September 2012 cultural resources report (Wallace *et al.*. 2012). The seven investigations include three Phase I reports, one survey, one assessment, one determination of eligibility report, and one monitoring report. No additional cultural resources were documented in these reports. The additional Project area has not been previously surveyed or investigated.

Table 1. Previous Surveys Conducted within 0.25-mile of the Project Area

Author	Report (LA-)	Description	Date
Anonymous	3789	Phase 1 Archaeological Survey/Class III Inventory, San Fernando Valley East-West Transportation Corridor Study Area, Los Angeles, California	1996
Bonner, Wayne H., and James M. Keasling	7930	Cultural Resource Records Search and Site Visit Results for Global Signal Telecommunications Facility Candidate 3019406 (Hollywood Park), 11676 Burbank Boulevard, North Hollywood, Los Angeles County, California	2006
Hatheway, Roger G.	10180	Determination of Eligibility Report, North Hollywood Redevelopment Project	1981
Larocque, Mark	11280	Hollywood Park 878062, 11676 Burbank Blvd., No. Hollywood	2011
McLean, Deborah K.	4022	Archaeological Assessment for Pacific Bell Mobile Services Telecommunications Facility La 694-01, 11605 Magnolia Boulevard, North Hollywood, City and County of Los Angeles, California	1998
Stickel, Gary E.	07819	A Cultural Resources Monitoring Report for the L.A. Cellular Installation of a Monopole and Attendant Facilities at Cell Site #370rl Located at 11674 Burbank Blvd. in North Hollywood, California	1997
Whitley, David S. and Joseph M. Simon	7835	Phase I Archaeological Survey/Class III Inventory, San Fernando Valley East-West Transit Corridor, Brt Alternative, Study Area, Los Angeles, California	2000

*No surveys were found to overlap with the additional Project area

Previously Recorded Cultural Resources Site Records

The records search also indicated that one cultural resource has been previously recorded within 0.25-mile of the Project area (Table 2). North Hollywood High School, located at 5231 Colfax Avenue, is recorded as P-19-175261 The school, built in 1926, was originally named Lankershim High School (Plate 1). P-19-175261 was identified during the record search for the 2012 cultural resources study (Wallace *et al.* 2012)

In addition, the school's main building (P-19-175262), library (P-19-175263), auditorium (P-19-

175264), Frasher Hall (P-19-175265), and Randolph Hall (P-19-175266) are all listed on the California Historic Resources Inventory (HRI), but these do not have individual resource forms (Table 3). The HRI indicates that P-19-175261 (the campus) is NRHP-eligible, and that the individual buildings are eligible as contributors to a district.

Table 2. Previously Recorded Cultural Resources within 0.25-mile of Project Area*

Primary Number (P-19-)	Address	Site Type	Time Period	Eligibility
175261	5231 Colfax Ave.	North Hollywood High School	1926	NRHP Eligible

*No resources were found within the additional Project area

Plate 1. North Hollywood High School, View to West.

Table 3. California State Historic Resources Inventory

Primary Number (P-19-)	Address	Description	Date	Eligibility
175261	5231 Colfax Ave.	North Hollywood High School	1926	NRHP Eligible
175262	5231 Colfax Ave.	North Hollywood High School Main Building	1926	NRHP Eligible as contributor to District
175263	5231 Colfax Ave.	North Hollywood High School Library	1926	NRHP Eligible as contributor to District
175264	5231 Colfax Ave.	North Hollywood High School Auditorium	1926	NRHP Eligible as contributor to District
175265	5231 Colfax Ave.	North Hollywood High School Frasher Hall	1926	NRHP Eligible as contributor to District
175266	5231 Colfax Ave.	North Hollywood High School Randolph Hall	1926	NRHP Eligible as contributor to District

There were no California Historic Landmarks, Los Angeles Cultural Monuments or Los Angeles Historic Cultural Monuments identified within 0.25-mile radius of the Project area additions.

Paleontological Record Search

A paleontological records search was conducted as part of the 2012 cultural resources assessment (Wallace *et al.*. 2012) by Dr. Samuel McLeod, Vertebrate Paleontology Division of the Natural History Museum of Los Angeles County. The records check indicated that there are no known vertebrate fossil localities within the proposed Project area boundaries. However, there are fossil localities nearby from the same sedimentary deposits that occur in the proposed Project areas.

As described in the 2012 assessment (Wallace *et al.*. 2012), the North Hollywood Park segment surface deposits consists of younger Quaternary Alluvium, derived primarily as fluvial deposits from the Central Branch of Tujunga Wash and probably from the Los Angeles River that flows to the south. The closest vertebrate fossil localities from these deposits is LACM 6970, located along Lankershim Boulevard at Highway 134. This locality produced fossil specimens of camel (*Camelops hesternus*), bison (*Bison antiques*), and ground sloth (*Glossotherium harlani*) at approximately 60 to 80 feet below grade. These were excavated during the construction of the Metrorail Redline Universal City Tunnel.

Survey Methods and Results

Cultural Resources Survey

While several previous archaeological surveys have been conducted within the vicinity of the Project area, none of the Project area additions have been previously surveyed. An archaeological field survey of the Project area additions was conducted by Linda Kry on February 27, 2013. As the additions to the Project area are covered by paved street surface, windshield survey was conducted within all the proposed additional segments (see Figure 1). When areas of open ground were present adjacent to the Project area, this ground surface was surveyed for archaeological resources.

The current survey focused on archaeological resources because the proposed undertaking includes installation of water pipelines below the ground surface. Built environment resources were considered

only insofar as previously recorded and known eligible resources were noted in the field to confirm that the proposed Project would not have the potential to affect them.

Results

The survey area consisted of additional areas proposed for the expansion of existing recycled water pipeline network within the San Fernando Valley area of the City of Los Angeles (Plates 2 through 8). The goals of the survey were to identify any previously recorded cultural resources or previously unknown archaeological resources within the survey area and to evaluate potential for any buried resources. All ground surfaces within the Project area were disturbed as a result of landscaping and/or development. No new archaeological resources were identified as part of this survey.

Plate 2. Overview of Colfax Avenue, Between Magnolia Boulevard and Weddington Street, View to Southwest

Plate 3. Intersection of Chandler Boulevard and Colfax Avenue, View to West

Plate 4. Intersection of Chandler Boulevard and Colfax Avenue Metro Orange Line Route, View to East

Plate 5. Overview of Irvine Avenue, Between Magnolia Boulevard and Hartsook Street, View to East

Plate 6. Overview of Irvine Avenue, Between Westpark Drive and Hartsook Street, View to West

Plate 7. Overview of Irvine Avenue, Between Westpark Drive and Otsego Street, View to Northwest

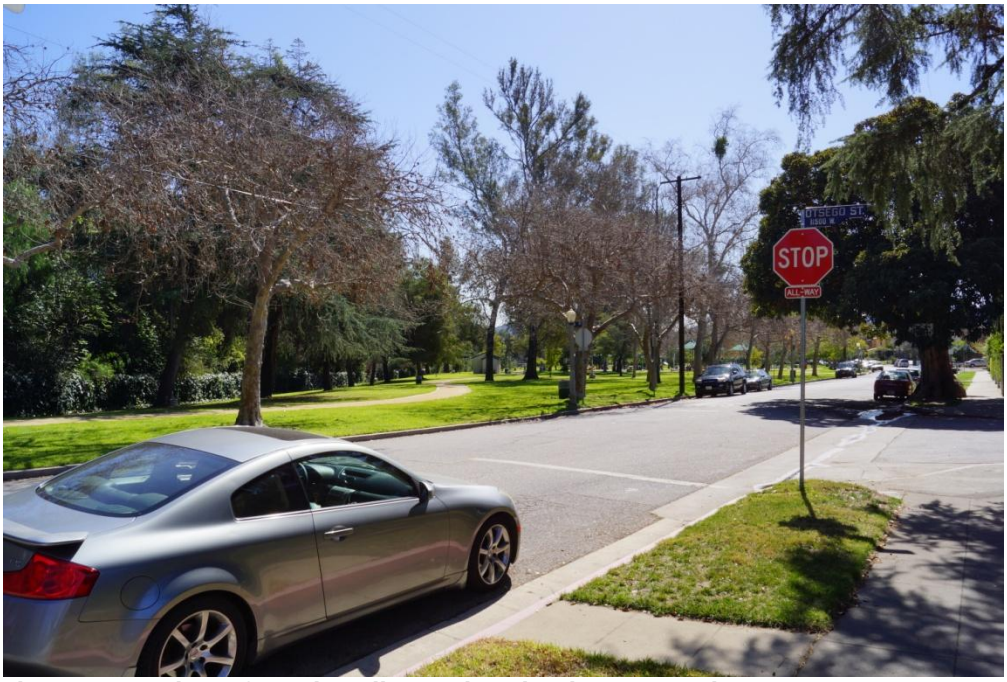


Plate 8. Overview of North Hollywood Park, View to Southeast

Potential for Archaeological Resources

Review of previous investigations in the vicinity of the Project and of the prehistoric context for the area provides an understanding of the potential for encountering prehistoric 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.

As described in the context section of the 2012 report (Wallace *et al.* 2012), the location of the Project area is in the vicinity of the Mission San Fernando and prehistoric villages of *Tohuunga* and *Muuhonga* have long been rumored or documented as being located near portions of the Project area. The Project site's location relative to the Los Angeles River and the Tujunga Wash would have provided access to important resources during all periods of prehistory. Subsequent land use has included modern and historic development. The segments themselves lie within roadway alignment dating back to at least the 1920s. 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.

Management Recommendations

Although no cultural resources were identified within the additions to the Project area during the course of this background research and no archaeological resources were identified during the field survey, potentially eligible archaeological resources may be buried within the additional Project areas. Archaeological deposits exposed during future earth disturbing activities may be evidenced by the occurrence of either prehistoric or historic artifacts.

Historic development began in the Project area almost 100 years ago when the common method of rubbish disposal was burial. Historic period archaeological materials are items over 50 years in age, including but not limited to glass bottles, ceramics, buried infrastructure, military and construction debris, metal, etc. During prehistoric times, the Project area may have been occupied by the *Gabrieliño/Fernandeño* Indians. Archaeological materials associated with the prehistoric period may include food remains such as marine and freshwater shells, animal bones, and seeds. The soils surrounding food remains are distinguished from native soils typically by a dark grey or black ashy appearance. Other types of items that may be found are food processing equipment, such as *manos* and *metates*, and stone tools, such as projectile points, hammerstones, and scrapers. For these reasons, it is possible that buried or otherwise obscured archaeological resources may be present within the additions to the Project area.

To address potential impacts of the proposed Project to unknown archaeological resources, mitigation measures laid out in the September 2012 (Wallace *et al.*. 2012) report should be applied to the additions to the Project area.

The additional Project components involve ground disturbing activities that have the potential to impact buried or otherwise obscured within the additions to the Project area analyzed in this memo include:

- Archaeological monitoring for the North Hollywood Park segment due to the presence of the Tujunga Wash, historic development and evidence of prehistoric settlement 19-100281.
- Any substantial excavations below 5 feet, should they be necessary, should be monitored by a paleontological monitor, in order to quickly and professionally recover any fossil remains discovered.

As detailed in the September 2012 cultural resources assessment (Wallace *et al.*. 2012), the archaeological monitor shall work under the direction of a qualified archaeological Principal Investigator. 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 archaeological monitor shall have the authority to redirect construction equipment in the event potential archaeological resources are encountered.

In the event archaeological resources are encountered, 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 California Environmental Quality Act (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 improbably, the Principal Investigator in consultation with the LADWP may recommend that archaeological monitoring be reduced or discontinued, as appropriate, within the segment or portion thereof.

In the event human remains are discovered, work in the immediate vicinity of the discovery will be suspended and additional measures will be implemented as required by federal law (pursuant to 43 CFR 10.4).

In the event that potential paleontological resources are encountered, a qualified paleontologist should be retained in order to recover and record any fossil remains discovered. Any fossils recovered shall be prepared, identified and catalogued before curation in an accredited repository as determined in consultation with LADWP.

Upon completion of monitoring of ground disturbing activities associated with the identified segments of this Project, a Cultural Resources Monitoring Report shall be prepared documenting construction activities observed, including copies of all daily 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.

References

Wallace, James R., Sara Dietler, and Linda Kry

2012 *Phase I Cultural Reources Assessment, San Fernando Valley Water Recycling Project, City of Los Angeles, California*. Prepared for Los Angeles Department of Water and Power by AECOM, Los Angeles, CA.

APPENDIX D
TRAFFIC STUDY AND SUPPLEMENTAL MEMORANDUM

DRAFT

Traffic Study for the LADWP San Fernando Valley Water Recycling Project EIR

June 15, 2012

Prepared For:

AECOM Technical Services, Inc.
515 South Flower Street, 9th Floor
Los Angeles, California 90071
(213) 593-7700

Prepared by:

KOA CORPORATION
PLANNING & ENGINEERING

1100 Corporate Center Drive, Suite 201
Monterey Park, CA 91754
(323) 260-4703

JB21033

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APPENDIX B – RELATED PROJECT LIST

1. Introduction

This document provides a summary of the traffic impact analysis conducted for the San Fernando Valley Water Recycling Project. The Project has been proposed by the City of Los Angeles Department of Water & Power (LADWP) for implementation within the City of Los Angeles.

This study report assesses the potential traffic impacts of the construction of the proposed Project.

1.1 Project Location

The proposed Project would consist of six segments, which would be located within public street rights-of-way in urbanized and fully developed areas within the San Fernando Valley. The six segments would extend to North Hollywood Park, Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, the Veteran's Administration Hospital (VA Hospital), and Pierce College. All six segments abut residential, commercial, public facilities, and recreational or open space uses. Additionally, the VA Hospital segment would run adjacent to industrial uses.

Figure 1 illustrates the Project corridors.

1.2 Project Description

The City of Los Angeles Department of Water and Power (LADWP) proposes to maximize the use of recycled water to replace potable sources for irrigation and industrial uses by extending the recycled water pipeline network to the San Fernando Valley.

The LADWP recycled water projects are divided into four service areas: Harbor, Metro, Valley, and Westside. Each service area, with the exception of the Harbor service area, is supplied by one water treatment facility and a corresponding pipeline distribution system that is hydraulically independent from the others. A distribution system is made up of individual Water Recycling Projects (WRPs) that are connected together. There are five water treatment facilities that serve the four service areas: Terminal Island Treatment Plant, which serves the Harbor Service area via its Advanced Water Treatment Facility; West Basin Municipal Water District Carson Regional Water Recycling Facility, which also serves the Harbor Service Area; Los Angeles-Glendale Water Reclamation Plant, which serves the Metro Service Area; Donald C. Tillman Water Reclamation Plant, which serves the Valley Service Area; and the West Basin Municipal Water District Edward C. Little Plant, which serves the Westside Service Area.

The proposed San Fernando Valley WRP (project) would be located within the Valley Service Area and supplied with recycled water from the Donald C. Tillman Water Reclamation Plant. Additionally, the proposed Project would include a connection to the City of Burbank recycled water system, which receives recycled water from the Burbank Water Reclamation Plant. The proposed project would consist of six segments: North Hollywood Park, Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, Veterans Administration (VA) Hospital, and Pierce College. The construction of these six segments would expand the supply of recycled water to customers located throughout the San Fernando Valley. These customers have committed to using recycled water for non-potable uses. All segments would connect to existing recycled water pipeline systems in the area using a 16-inch connection and 16-inch diameter distribution lines. The North Hollywood Park segment would connect to the existing City of Burbank recycled water pipeline; four segments would connect to the existing LADWP recycled water pipeline; and the Pierce College segment would connect to the Reseda Park

segment. In total, approximately 109,800 linear feet of new recycled water pipeline would be installed with implementation of the proposed project.

The North Hollywood Park segment would connect to the existing 16-inch City of Burbank pipeline via a 16-inch point connection on the City of Los Angeles border at Verdugo Avenue and Clybourn Avenue. From the pipeline connection point, this segment would extend approximately 14,000 linear feet west on Verdugo Avenue to Camarillo Street, then continue west on Camarillo Street to Vineland Avenue, then north on Vineland Avenue to Magnolia Boulevard, and west on Magnolia Boulevard terminating at North Hollywood High School. This segment would be trenched across the San Fernando Wash on Magnolia Boulevard approximately 900 feet west of Tujunga Avenue. Along its route, the North Hollywood Park segment would serve the following known customers:

- North Hollywood Park, located on Magnolia Boulevard west of Tujunga Avenue
- North Hollywood High School, located at Magnolia Boulevard and Colfax Avenue

The Valley Plaza Park segment would connect to the existing 54-inch LADWP pipeline via a 16-inch connection point at the intersection of Sherman Way and Woodman Avenue. This segment would extend approximately 14,700 linear feet east on Sherman Way from the connection point to SR170, with two segments extending south; one on Ethel Avenue from Sherman Way to James Madison Middle School; and one on Whitsett Avenue from Sherman Way to Vanowen Street, and east on Vanowen Street terminating at Valley Plaza Park. This segment would cross the San Fernando Wash in two places. The first channel crossing would occur on Sherman Way approximately 1,300 feet east of Woodman Avenue, and the second channel crossing would occur on Vanowen Street approximately 1,021 feet east of Whitsett Avenue. For the channel crossing on Sherman Way, the pipe would be hung from the side of the roadway or installed through an existing utility duct. For the channel crossing on Vanowen Street, trenching would be used. Additionally, this route would cross over the SR-170 freeway overpass bridge on Sherman Way, which would require installation through an existing utility duct. The Valley Plaza Park segment would serve the following known customers:

- James Madison Middle School, located on Ethel Avenue south of Hart Street
- Caltrans facility, located on Sherman Way east of SR 170
- Valley Plaza Park, located on Vanowen Street east of SR 170

The Van Nuys Sherman Oaks Park segment would begin on Kester Avenue just south of the Metro Orange Line Busway via an extension of the existing 16-inch LADWP pipeline. This segment would extend approximately 21,800 linear feet south on Kester Avenue from the connection point to Oxnard Street, then east on Oxnard to Van Nuys Boulevard, and south on Van Nuys Boulevard terminating at Sherman Oaks Hospital, with two extensions. One of these extensions would travel east on Burbank Boulevard from Van Nuys Boulevard and terminate at Los Angeles Valley College. The other extension would travel east on Magnolia Boulevard from Van Nuys Boulevard and terminate at Van Nuys Sherman Oaks Park. The Van Nuys Sherman Oaks Park segment would serve the following known customers:

- Sherman Oaks Hospital, located on Van Nuys Boulevard south of Addison Street
- Van Nuys Sherman Oaks Park, located on Magnolia Boulevard east of Van Nuys Boulevard
- Burbank Oaks apartment complex, located on Burbank Boulevard west of Tyrone Avenue
- Los Angeles Valley College, located on Burbank Boulevard east of Fulton Avenue

The Reseda Park segment would connect to the existing 54-inch LADWP pipeline via a 16-inch connection point at the intersection of Victory Boulevard and Woodley Avenue. This segment would extend approximately 24,300 linear feet west on Victory Boulevard from the connection point terminating at the intersection of Victory Boulevard and Reseda Boulevard, with three extensions. One extension would travel south on Balboa Boulevard from Victory Boulevard and terminate at the Sepulveda Basin Sports Complex. Another extension would travel north on Balboa Boulevard from Victory Boulevard to Vanowen Street, then west on Vanowen Street terminating at Mulholland Middle School. A third extension would travel north on Lindley Avenue from Victory Boulevard to Kittridge Street, then west on Kittridge Street and terminate on the north side of Reseda Park just east of the intersection of Kittridge Street and Reseda Boulevard. There would be two channel crossings on Victory Boulevard over Bull Creek, one approximately 1,050 feet east of Balboa Boulevard and the other approximately 600 feet west of Lindley Avenue. For the first channel crossing, the pipeline would be hung from the side or underneath the bridge. The Reseda Park segment would serve the following known customers:

- Sepulveda Basin Sports Complex, located on Balboa Boulevard south of Victory Boulevard
- Birmingham High School, located on Balboa Boulevard and Haynes Street
- Valley Alternative School, located on Balboa Boulevard and Vanowen Street
- Mulholland Middle School, located on Vanowen Street east of Aldea Avenue
- High Tech High School, located on Victory Boulevard east of Aldea Avenue,
- South side of Reseda Park, located on Victory Boulevard at Reseda Boulevard
- North side of Reseda Park, located on Kittridge Street east of Reseda Boulevard

The VA Hospital segment would connect to the existing 54-inch LADWP pipeline via a 16-inch connection point at the intersection of Sherman Way and Woodley Avenue. This segment would extend approximately 21,400 linear feet north on Woodley Avenue from the connection point and terminate at the intersection of Woodley Avenue and Roscoe Boulevard, with two extensions. One extension would travel west on Roscoe Boulevard from Woodley Avenue to Gothic Avenue, then north on Gothic Avenue terminating at Valley Sod Farms. Another extension would travel east on Roscoe Boulevard from Woodley Avenue to Haskell Avenue, then north on Haskell Avenue and terminate at the VA Hospital. This segment would cross the Amtrak/Metrolink tracks located on Woodley Avenue approximately 1,000 feet south of Roscoe Boulevard. Trenchless construction would be required for rail crossings. The VA Hospital segment would serve the following customers:

- Valley Sod Farms, located on Gothic Avenue east of Hayvenhurst Avenue
- Anheuser Busch facility, located on Roscoe Boulevard west of Interstate 405 (I-405)
- VA Hospital, located on Haskell Avenue south of Lassen Street

The Pierce College segment would connect to the western most termination point of the Reseda Park segment via a 16-inch pipeline extension, and then travel approximately 13,600 linear feet west on Victory Boulevard, terminating at the intersection of Victory Boulevard and Mason Avenue. This segment would cross the Metro Orange Line Busway on Victory Boulevard approximately 1,000 feet east of Winnetka Avenue. It would only serve Pierce College at this time.

Installation of the recycled water pipeline would occur within public roads using a cut and cover trenching technique. An approximately 2.5-foot wide by 5-foot deep trench would be excavated within the roadway that could be covered with metal plates during periods of the day when construction is not ongoing. Once the pipeline has been installed within a segment, the trench would be backfilled with imported slurry and repaved. Excess soil that cannot be reused as backfill material would be disposed of at an appropriate regional landfill. Recycled water pipeline installation would necessitate restrictions of

on street parking and closure of up to two lanes of the roadway depending on the location of construction. In general, approximately 90 linear feet of pipeline would be installed per day.

Construction would occur sequentially along the alignment of each segment to minimize long-term disruption within any one area. Construction would generally occur from east to west, beginning with the North Hollywood Park segment. Subsequent segments would be constructed in the following order: Valley Plaza Park, Van Nuys Sherman Oaks Park, Reseda Park, VA Hospital, and Pierce College. Materials and equipment staging and construction worker parking would use City facilities and public parking lots located along or near the proposed alignments.

Railroad crossings would require tunneling instead of trenching. Launching and receiving pits would be located on either end of the tunnel. Hydraulic jacks would drive pipes through the ground. Excess soil that cannot be reused as backfill material would be disposed of at an appropriate regional landfill.

Project construction is anticipated to start in summer 2017 and finish in summer 2022.

The proposed Project would be located entirely within the City of Los Angeles.

This traffic study analyzed potential traffic impacts at study roadway segments for the following scenarios:

- Existing (2012) Conditions
- Future without Project Construction
- Future with Project Construction
- Existing (2012) Plus Project Construction

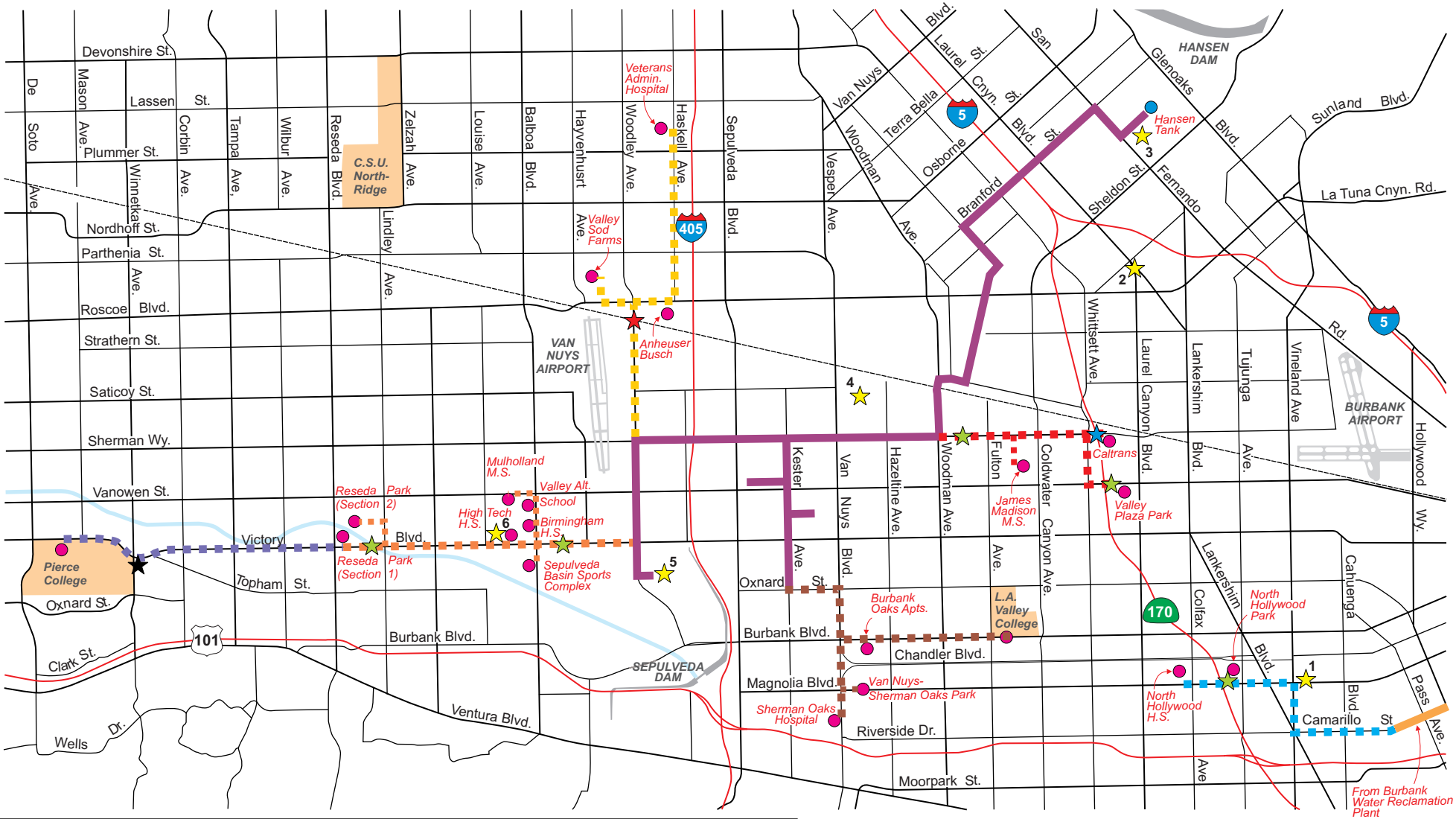
1.3 Traffic Impact Analysis Methodology

The Project was analyzed based on the routes of the recycled water pipeline. The analysis includes the following:

- The use of collected daily volumes to analyze general roadway operations;
- Future roadway operations with and without the Project construction; and
- Analysis of potential impacts on transit service, and bicycle and pedestrian access due to lane closures.

Existing (2012) Conditions

Fieldwork within the Project study area was undertaken to identify the conditions of major roadways, to identify number of travel lanes, speed limits, parking restrictions, and other characteristics of each study roadway segment.



LEGEND

- Existing Pipelines
- Existing Pipelines (Burbank)
- North Hollywood Park WRP (14,000')
- Valley Plaza WRP (14,700')
- Van Nuys - Sherman Oaks Park WRP (21,800')
- Reseda Park WRP (24,200')
- VA Hospital WRP (21,400')
- Pierce College WRP (13,600')
- Customer
- Channel Crossing
- Bridge
- Railroad Crossing
- Potential Staging Area
- MTA Orange Line Busway

N

Not to Scale

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San Fernando Valley WRP

Figure 1

Project Corridors

Daily vehicle volume counts utilized for base volumes at the study roadway segments were conducted on Tuesday, May 15 2012. These counts were conducted before local school districts entered summer sessions, in order to provide a snapshot of normal traffic flows during non-summer months. Traffic count locations were chosen based on the analyzed roadway corridors and their characteristics.

Existing volumes and level of service values for the study roadway segments are discussed within Section 2 of this report.

Future without Project Conditions

In order to acknowledge regional traffic growth that would affect operations at the study roadway segments during Project construction, a traffic growth rate was applied. The growth rate was based on the 2010 Los Angeles County Congestion Management Program (CMP). The study segments are located in two separate regional statistic areas (RSA) within the Los Angeles County -- Area 12 (West San Fernando Valley) and Area 13 (Burbank). The highest growth rate (Area 12 – West San Fernando Valley) was multiplied by a factor of two to provide a conservative estimate of traffic growth in the study area. This provided for estimated volumes that included regional traffic growth plus additional vehicles trips generated by proposed development projects in the area.

A growth factor of 1.108 was applied to all 21 study segment locations, to reflect 10 years of traffic growth.

The future without Project scenario is discussed in Section 3 of this report.

Future with Project Conditions

The future with Project conditions scenario analyzes the future roadway conditions with Project construction trip generation. The Project trips were calculated from the number of construction employees that would be working within the study area.

The future with Project scenario is discussed in more detail in Section 3 of this report.

Existing (2012) Plus Project

The existing plus Project scenario analyzes the existing roadway conditions with Project construction trip generation but without future-period traffic growth. The existing roadway segment counts were conducted within 2012. The Project trips were calculated from the number of work crews and total employees that would be working during construction within the study area.

The existing plus Project scenario is discussed in more detail in Section 4 of this report.

Impact Definition

The installation of the recycled water pipeline using trench construction (i.e., "cut and cover") within the roadway will have the greatest traffic circulation impact. The trench would be covered with metal plates during periods of the day when construction is not ongoing. LADWP construction assumptions indicate that the establishment of typical work areas will necessitate the closure of one to two travel lanes (with a work area of 10 to 12 feet in width) and require restrictions on on-street parking. Construction activity would occur Monday through Friday from 7:00 a.m. to approximately 3:30 p.m. In general, approximately 90 linear feet of pipeline would be installed at one time. Construction would occur sequentially along the alignment to minimize long-term disruption within an area. Materials and equipment staging and construction worker parking would use City facilities and public parking lots located along or near the proposed alignments. Analysis of potential traffic circulation and area access impacts were analyzed based on the typical Project roadway lane closures.

Trips that would be generated by employee vehicles to the construction segments were included in the Project construction analysis. Additional construction-related trips generated along the construction segments during the moving work areas were included in the analysis.

Impact thresholds defined by LADOT and the CMP were not utilized for the Project traffic analysis. These standards define significant impacts to traffic operations of new trip generation and the long-term mitigation of such impacts through the provision of additional traffic signal or roadway capacity. The construction of the Project will constrict roadway capacity in affected segments; therefore, the discussion was concentrated on the capacity that can be provided during construction. In addition, new trip generation by construction employees will have short-term effects on traffic conditions. The impact analysis was based on roadway flow during construction and the generalized application of volume-to-capacity calculations. Of particular concern were study locations that would worsen in operations to or within level of service (LOS) values of E or F. These two values represent poor operating conditions.

2. Project Construction on Public Roadways

This section of the report identifies the construction activity that would occur with the proposed recycled water pipeline routes. LADWP has defined approximate construction timeframes and physical dimensioning for typical work areas. These details are discussed further within this report section.

Due to the extensive surface work that is required, excavations and open trenching methods will have the greatest traffic circulation impacts. It is assumed that construction operations will require a "spread" or total work area/closure width of one or two travel lanes. During this period, temporary lane closures of roadways along the proposed Project alignment would be required, although two-way travel along the affected roadways would be maintained during construction of the Project.

Project construction activities will be accomplished in the following steps:

Step 1 – Survey and Trench Marking – The initial step will consist of surveying and marking the center line of the trench and surveying and marking underground substructures that will need to be potholed.

Step 2 – Sawcutting, Breaking and Removal of Pavement – Following the marking of the center line of the trench, concrete type pavement will be sawcut and then broken while asphalt pavement will be broken. The pavement will then be hauled away for disposal.

Step 3 – Excavations, Trenching, Pipeline Installation, and Backfilling – Each construction crew would trench approximately 90-foot-long segments each day. The trench would be approximately 2.5-foot wide by 5-foot deep. Areas that are trenched or excavated would be covered with steel plates every evening until the road surface is restored; this would allow for continued usage of the affected roadway. When segments of the trench line are restored, more trenching would occur farther down the street.

This report analyzes the effects of typical construction work areas, including work areas for Steps 2, (Sawcutting, Breaking and Removal of Pavement), 3 (Excavations, Trenching, Pipeline installation, backfilling), and the physical effect of the establishment of these areas on typical roadway cross-sections. The worst-case physical extents of related roadway capacity constrictions within each Project segment have been considered.

2.1 Project Construction Details

Most of the construction activities for the Project will occur within public rights-of-way on city streets pursuant to LADWP existing franchise agreements.

Temporary lane closures along streets as required for construction would be coordinated with the other City of Los Angeles entities such as the Bureau of Engineering (LABOE) and the Department of Transportation (LADOT). LADWP is a member of the California Joint Utility Traffic Control Committee, which in 1996 published the *Work Area Protection and Traffic Control Manual.* The traffic control plans and associated text depicted in this manual conform to the guidelines established by the Federal and State Departments of Transportation.

LADWP would follow the recommendations in this manual regarding basic standards for the safe movement of traffic upon highways and streets in accordance with Section 21400 of the California Vehicle Code. These recommendations include provisions for safe access of police, fire, and other

rescue vehicles. In addition, LADWP would obtain roadway encroachment permits and would submit traffic management plans to LABOE and LADOT for review and approval.

Throughout the construction of the trench, asphalt, concrete, and excavated material would be hauled off by truck for disposal at an approved disposal site.

In roadways, trucks would be used to haul material, typically as it is excavated from the trenches. As trucks are filled with spoils, they would leave the work areas and be replaced by empty trucks. Approximately six loads of excavated soils would be required per day.

As part of the final construction activities, roadway pavement would be restored, landscaping or vegetation would also be restored as necessary, and the area would be cleaned up.

Lane closure for construction activities will be shown on the traffic control plans, to be submitted to LADOT on each construction segment. Table 1 summarizes the anticipated lane closures that will be required for work areas.

Table 1 – Anticipated Project Construction Lane Closures

ACTIVITY	NUMBER OF LANES CLOSED
Surveying	1
Sawcutting and Pavement Breaking	1
Excavation	1 or 2
Trenching	1 or 2
Pipeline Install and Backfilling	1 or 2

.

2.2 Project Schedule & Logistics

Construction of the project is anticipated to start in summer 2017 and finish in summer 2022, taking approximately five years to complete. Project construction activity would be performed by approximately 12 field personnel.

Typical construction hours would be Monday through Friday from 7:00 a.m. to 3:30 p.m. The City of Los Angeles Rush Hour Ordinance limits in-street construction on weekdays to the hours of 9:00 a.m. through 3:30 p.m.; however, a variance to the Mayor's Executive Order No. 2 to allow construction outside those times would be requested.

2.3 Existing (2012) Conditions

The existing traffic conditions for daily and a.m. and p.m. peak-hour periods and the associated level of service values were analyzed for the 21 study roadway segments. The following are the 21 study roadway segments analyzed under the proposed Project corridor analysis:

1. Camarillo Street west of Cahuenga Boulevard
2. Vineland Avenue south of Magnolia Boulevard
3. Magnolia Boulevard east of Colfax Avenue
4. Sherman Way east of Woodman Avenue
5. Sherman Way east of Coldwater Canyon Avenue
6. Whitsett Avenue south of Sherman Way
7. Vanowen Street east of Whitsett Avenue
8. Oxnard Street east of Kester Avenue
9. Van Nuys Boulevard south of Clark Street (between Burbank and Magnolia)
10. Burbank Boulevard west of Woodman Avenue
11. Magnolia Boulevard east of Van Nuys Boulevard
12. Victory Boulevard west of Hayvenhurst Avenue
13. Victory Boulevard east of Reseda Boulevard
14. Balboa Boulevard north of Victory Boulevard
15. Woodley Avenue north of Sherman Way
16. Roscoe Boulevard west of Woodley Avenue
17. Roscoe Boulevard west of Haskell Avenue
18. Haskell Avenue south of Parthenia Street
19. Haskell Avenue north of Nordhoff Street
20. Victory Boulevard west of Reseda Boulevard
21. Victory Boulevard east of Mason Avenue/Stadium Way

Figure 2 illustrates the locations of study roadway segments.

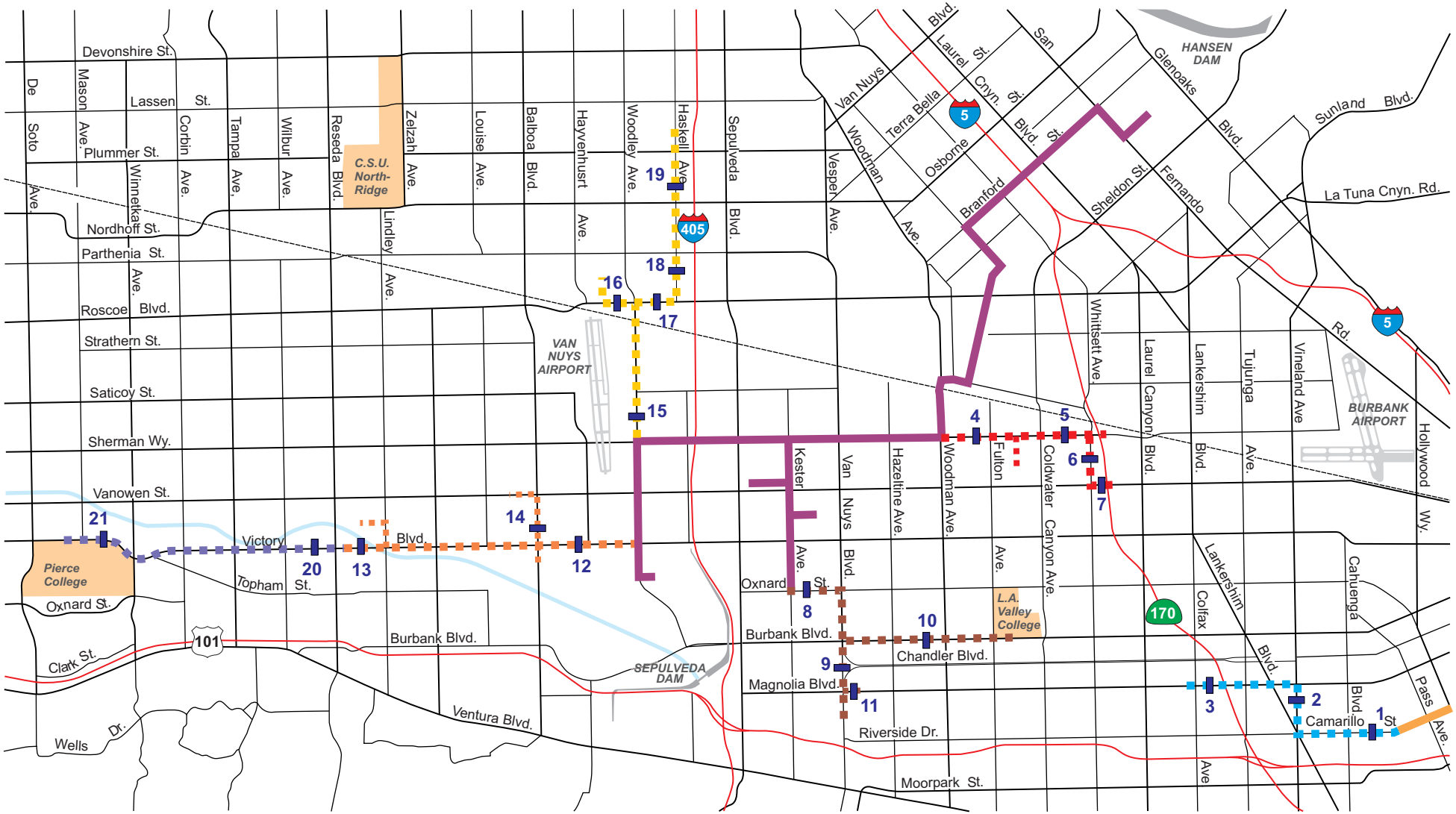
Methodology

Field surveys and traffic counts were conducted within the study area, to determine the existing study roadway segment characteristics, for further analysis of Project-related construction activities. This data was utilized for analysis of Project construction within the study area, specifically the effects of potential lane closures during construction on traffic operations.

Average Daily Traffic (ADT) volumes were collected at the study roadway segments locations on Tuesday, May 15, 2012. The volumes were collected over a 24-hour period at each location (midnight to midnight), by automatic volume counting equipment.

Study Roadway Segment Characteristics

The proposed Project alignment is generally located along major roadways with two to six travel lanes in each direction. Curbside parking is generally permitted along most of the alignment; however, parking tends to be more restrictive near commercial areas. Table 2 summarizes the study segments by number of lanes, median type, parking restrictions, adjacent land uses, speed limits, and curb to curb right-of-way.



LEGEND

- Existing Pipelines
- Existing Pipelines (Burbank)
- North Hollywood Park WRP (14,000')
- Valley Plaza WRP (14,700')
- Van Nuys - Sherman Oaks Park WRP (21,800')
- Reseda Park WRP (24,200')
- VA Hospital WRP (21,400')
- Pierce College WRP (13,600')
- X — Study Segment and Reference Number

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Figure 2

Study Roadway Segments

Table 2 – Project Corridor Roadway Characteristics

Study Seg #	Segment	From	To	Funtional Classification	Lane		Median Type	Parking Restrictions		Land Use	Speed Limit	Streeet ROW(FT)
					NB/EB	SB/WB		NB/EB	SB/WB			
NORTH HOLLYWOOD PARK WRP												
1	Camarillo St	Cahuenga Bl	Vineland Av/ Lankershim Bl	Secondary	1	1	2LT	2 Hr 8 a.m. to 6 p.m. NP (Thursday) 8a.m. to 10a.m.	2 Hr 8 a.m. to 6 p.m. NP (Thursday) 8a.m. to 10a.m.	Residential	35	44' to 58'
2	Vineland Ave	Camarillo St	Magnolia Bl	Major Hwy Class II	3	3	RM	2 Hr 8 a.m. to 6 p.m.	NSAT	Commercial Residential	40	96' to 106'
3	Magnolia Blvd	SR-170 Freeway	Colfax Av	Secondary	2	2	DY	2 Hr 8 a.m. to 6 p.m.	2 Hr 8 a.m. to 6 p.m.	Commercial Residential	35	66'
VALLEY PLAZA PARK WRP												
4	Sherman Way	Woodman Av	Fulton Av	Major Hwy Class II	3/2	3/2	DY	NS 7a.m. to 9 a.m., 2Hr. 9a.m to 6p.m. NP(Friday) 8 a.m. to 10 a.m.	NS 4p.m. to 7 p.m., 2Hr. 9a.m to 4p.m. NP(Friday) 8 a.m. to 10 a.m.	Commercial Residential	35	80'
5	Sherman Way	Coldwater Canyon Av	Whitsett Av	Major Hwy Class II	3/2	3/2	DY	NS 7a.m. to 9 a.m., 2Hr. 9a.m to 6p.m. NP(Friday) 8 a.m. to 10 a.m.	NS 4p.m. to 7 p.m., 2Hr. 9a.m to 4p.m. NP(Friday) 8 a.m. to 10 a.m.	Residential	35	80'
6	Whitsett Ave	Sherman Way	Vanowen St	Secondary	2	2	DY	NP(Wednesday) 12noon to 2 p.m.	NP(Thursday) 12 noon to 2 p.m.	Residential Other	35	64' to 70'
7	Vanowen St.	Whitsett Av	SR-170 Freeway	Secondary	2	2	DY	NP(Wednesday) 12noon to 2 p.m.	NP(Wednesday) 12noon to 2 p.m.	Residential	35	66'
VAN NUYS-SHERMAN OAKS PARK WRP												
8	Oxnard St	Kester Av	Van Nuys Bl	Secondary	2	2	DY	2Hr. 8a.m to 6p.m. NP(Monday) 12 noon to 2 p.m.	2Hr. 8a.m to 6p.m. NP(Monday) 12 noon to 2 p.m.	Commercial Residential Industrial	35	66'
9	Van Nuys Blvd	Clark St	Weddington St	Major Hwy Class II	2	2	DY	2Hr. 8a.m to 6p.m. NP(Monday) 12 noon to 2 p.m.	2Hr. 8a.m to 6p.m. NP(Monday) 12 noon to 2 p.m.	Commercial Residential Industrial	35	76'
10	Burbank Blvd	Hazeltine Av	Woodman Av	Major Hwy Class II	2	2	DY	2Hr. 8a.m to 6p.m. NP(Monday) 12 noon to 2 p.m.	2Hr. 8a.m to 6p.m. NP(Monday) 12 noon to 2 p.m.	Commercial Residential Industrial	35	80'
11	Magnolia Blvd	Van Nuys Bl	Hazeltine Av	Secondary	2	2	2LT	2Hr. 8a.m to 6p.m. NP(Thurday) 12 noon to 2 p.m.	2Hr. 8a.m to 6p.m. NP(Monday) 12 noon to 2 p.m.	Commercial Residential Industrial	35	64' to 66'
RESEDA PARK WRP												
12	Victory Blvd	Hayvenhurst Av	Balboa Bl	Major Hwy Class II	3	3/2	DY	NSAT	NS 4p.m. to 7 p.m. NP(Friday) 8 a.m. to 10 a.m.	Residential	45	74' to 80'
13	Victory Blvd	Lindley Av	Reseda Bl	Major Hwy Class II	3	3	DY	NSAT	NSAT	Commercial Residential	45	80'
14	Balboa Blvd	Victory Bl	Vanowen St	Major Hwy Class II	3/2	3/2	DY	NP(Friday) 8 a.m. to 11 a.m. NS 3p.m. to 7 p.m.	NP(Friday) 8 a.m. to 11 a.m. NS 7a.m. to 9a.m., NSAT	Residential Other	35	78'
VA HOSPITALWRP												
15	Woodley Ave	Sherman Way	Saticoy St	Major Hwy Class II	2	2	DY	NP(Monday) 8 a.m.~11 a.m.	NP(Friday) 8 a.m.~11a.m.	Commercial Residential	40	78'
16	Roscoe Blvd	Woodley Av	Hayvenhurst Av	Major Hwy Class II	3	3	DY	NSAT	NSAT	Commercial Residential	40	80'
17	Roscoe Blvd	Woodley Av	Haskell Av	Major Hwy Class II	3	3	DY	NSAT	NSAT	Commercial Residential	40	80'
18	Haskell Ave	Roscoe Bl	Chase St	Secondary	1	1	2LT/DY	NSAT	Parking Allowed/NSAT	Residential	40	30' to 40'
		Chase St	Parthenia St	Secondary	2	2	2LT	Parking Allowed	Parking Allowed	Residential	40	64'
19	Haskell Ave	Nordhoff St	Plummer St	Secondary	2	2	DY	NP 8a.m.-6p.m.	15 min 7a.m. to 5 p.m., Loading 6:30a.m. to 9a.m. and 1:30p.m. to 4p.m., 2Hr 9a.m. to 1:30p.m.	Residential Other	40/25	64'
PIERCE COLLEGE WRP												
20	Victory Blvd	Reseda Bl	Wilbur Av	Major Hwy Class II	3	2	2LT	NSAT	NP(Friday) 8 a.m. to 10 a.m.	Residential	45	74'
21	Victory Blvd	Winnetka Av	Mason St/ Stadium Way	Major Hwy Class II	3	3	2LT	NP(Friday) 8 a.m. to10 a.m./NPAT	NSAT	Residential	45	80'

Lanes - Peak/Off-Peak NM - No Median Striping RM - Raised Median NS - No Stopping NSAT - No Stopping Anytime

DY - Doublle Yellow 2LT - Dual Left Turn LRT - Light Rail Transit NP - No Parking M - Metered Parking

Existing (2012) Traffic Volumes

The average daily traffic volumes at the study roadway segments range from 6,818 vehicles to 47,814 vehicles. On average, the east-west study route segments along Sherman Way, Victory Boulevard, and Roscoe Boulevard have the highest amount of daily vehicles.

Existing Daily Vehicle Volumes

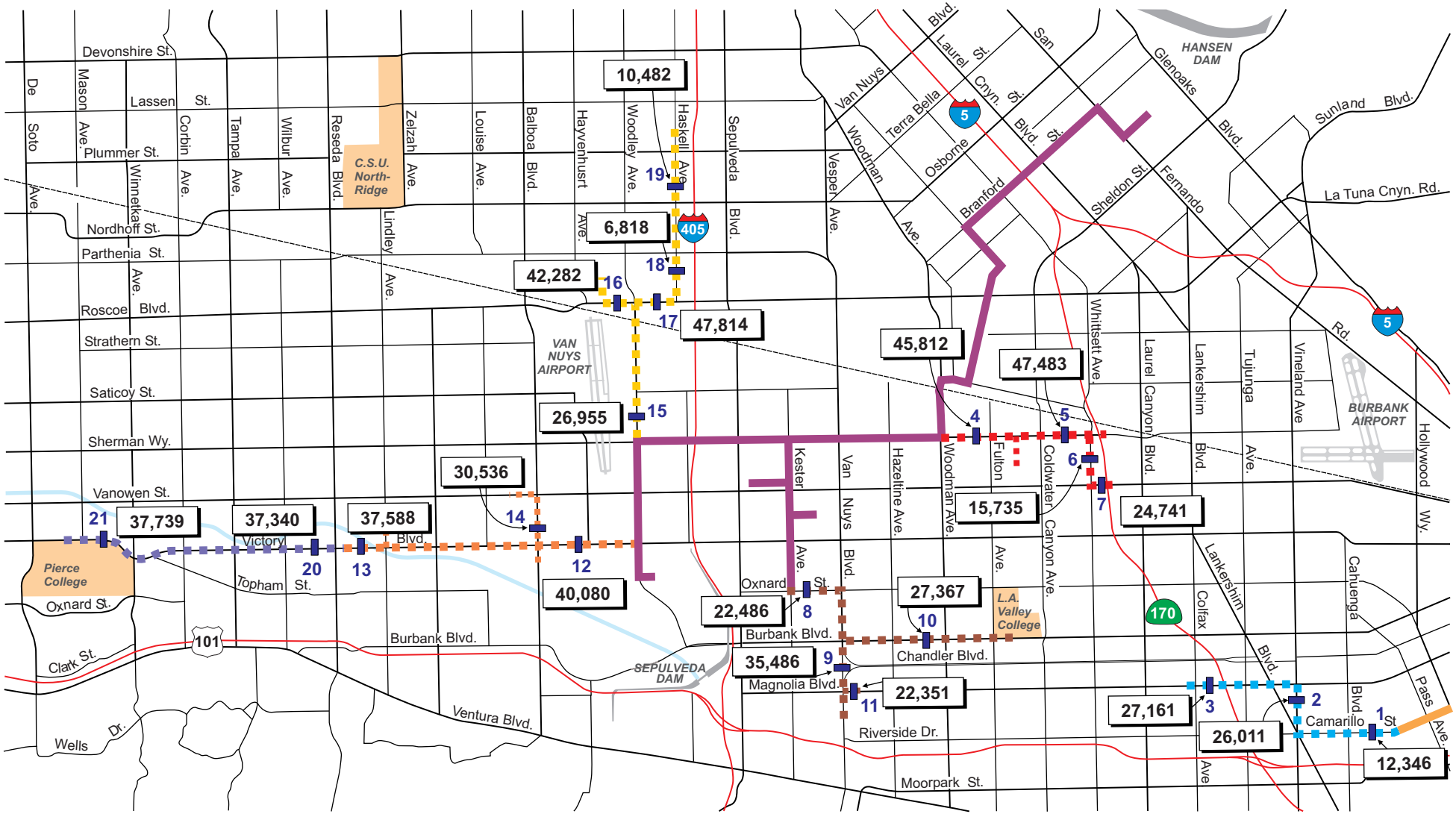
The daily volumes and calculated level of service values are provided in Table 3. Of the 21 roadway segments analyzed, one segment currently operates with poor level of service (LOS E) on a daily basis:

- Segment 3 - Magnolia Boulevard east of Colfax Avenue

The remaining 20 study roadway segments currently operate at good level of service values of D or better. The roadway segment volumes for the study areas are illustrated on Figure 3. The compiled counts at the Project study roadway segments are provided within Appendix A to this report.

Table 3 – Existing (2012) Daily Vehicle Volumes and Level of Service

	Segment	From	To	Capacity	# of Lanes	Existing		
						Volume	V/C	LOS
NORTH HOLLYWOOD PARK WRP								
1	Camarillo St	Cahuenga Bl	Vineland Av/Lankershim Bl	15,000	2	12,346	0.823	D
2	Vineland Av	Camarillo St	Magnolia Bl	60,000	6	26,011	0.434	A
3	Magnolia Bl	SR-170 Freeway	Colfax Av	30,000	4	27,161	0.905	**E**
VALLEY PLAZA PARK WRP								
4	Sherman Way	Woodman Av	Fulton Av	60,000	6	45,812	0.764	C
5	Sherman Way	Coldwater Canyon Av	Whitsett Av	60,000	6	47,483	0.791	C
6	Whitsett Av	Sherman Way	Vanowen St	30,000	4	15,735	0.525	A
7	Vanowen St	Whitsett Av	SR-170 Freeway	30,000	4	24,741	0.825	D
VAN NUYS-SHERMAN OAKS PARK WRP								
8	Oxnard St	Kester Av	Van Nuys Bl	30,000	4	22,486	0.750	C
9	Van Nuys Bl	Clark St	Weddington St	40,000	4	35,486	0.887	D
10	Burbank Bl	Hazeltine Av	Woodman Av	40,000	4	27,367	0.684	B
11	Magnolia Bl	Van Nuys Bl	Hazeltine Av	30,000	4	22,351	0.745	C
RESEDA PARK WRP								
12	Victory Bl	Hayvenhurst Av	Balboa Bl	60,000	6	40,080	0.668	B
13	Victory Bl	Lindley Av	Reseda Bl	60,000	6	37,588	0.626	B
14	Balboa Bl	Victory Bl	Vanowen St	60,000	6	30,536	0.509	A
VA HOSPITAL WRP								
15	Woodley Av	Sherman Way	Saticoy St	60,000	4	26,955	0.449	A
16	Roscoe Bl	Woodley Av	Hayvenhurst Av	60,000	6	42,282	0.705	C
17	Roscoe Bl	Woodley Av	Haskell Av	60,000	6	47,814	0.797	C
18	Haskell Av	Roscoe Bl	Parthenia St	30,000	4	6,818	0.227	A
19	Haskell Av	Nordhoff St	Plummer St	30,000	4	10,482	0.349	A
PIERCE COLLEGE WRP								
20	Victory Bl	Reseda Bl	Wilbur Av	50,000	5	37,340	0.747	C
21	Victory Bl	Winnetka Av	Mason St/Stadium Way	60,000	6	37,739	0.629	B



LEGEND

- Existing Pipelines
- Existing Pipelines (Burbank)
- North Hollywood Park WRP (14,000')
- Valley Plaza WRP (14,700')
- Van Nuys - Sherman Oaks Park WRP (21,800')
- Reseda Park WRP (24,200')
- VA Hospital WRP (21,400')
- Pierce College WRP (13,600')
- X — Study Segment and Reference Number
- X,XXX — Segment Average Daily Traffic Volume

N

Not to Scale

KOA CORPORATION
PLANNING & ENGINEERING

San Fernando Valley WRP

Figure 3

Existing Average Daily Traffic Volumes

Existing Peak-Hour Vehicle Volumes

The peak hour volumes for the a.m. peak (between the hours of 7:00 a.m. to 9:00 a.m.) and the p.m. peak (between the hours of 4:00 p.m. to 6:00 p.m.) for the study roadway segments create similar traffic operations characteristics to that of daily conditions. On average, route segments along Sherman Way, Victory Boulevard, and Roscoe Boulevard have the highest volumes. The a.m. and p.m. peak hour volumes and the associated level of service values are provided in Table 4.

Table 4 – Existing (2012) Peak-Hour Vehicle Volumes and Level of Service

	Segment	From	To	AM Peak Hour					PM Peak Hour				
				# of Lanes	Capacity	Volumes	V/C	LOS	# of Lanes	Capacity	Volumes	V/C	LOS
NORTH HOLLYWOOD WRP													
1	Camarillo St	Cahuenga Bl	Vineland Av/Lankershim Bl	2	900	990	1.100	**F**	2	900	1,029	1.143	**F**
2	Vineland Av	Camarillo St	Magnolia Bl	6	4,500	1,683	0.374	A	6	4,500	1,833	0.407	A
3	Magnolia Bl	SR-170 Freeway	Colfax Av	4	2,500	1,841	0.736	C	4	2,500	2,045	0.818	D
VALLEY PLAZA PARK WRP													
4	Sherman Way	Woodman Av	Fulton Av	5	3,125	3,057	0.978	**E**	5	3,125	3,234	1.035	**F**
5	Sherman Way	Coldwater Canyon Av	Whitsett Av	5	3,125	2,927	0.937	**E**	5	3,125	3,253	1.041	**F**
6	Whitsett Av	Sherman Way	Vanowen St	4	2,500	1,410	0.564	A	4	2,500	1,355	0.542	A
7	Vanowen St	Whitsett Av	SR-170 Freeway	4	2,500	1,832	0.733	C	4	2,500	2,135	0.854	D
VAN NUYS-SHERMAN OAKS PARK WRP													
8	Oxnard St	Kester Av	Van Nuys Bl	4	2,500	1,599	0.640	B	4	2,500	1,774	0.710	C
9	Van Nuys Bl	Clark St	Weddington St	4	2,500	2,328	0.931	**E**	4	2,500	2,534	1.014	**F**
10	Burbank Bl	Hazeltine Av	Woodman Av	4	2,500	2,212	0.885	D	4	2,500	2,175	0.870	D
11	Magnolia Bl	Van Nuys Bl	Hazeltine Av	4	2,500	2,202	0.881	D	4	2,500	2,029	0.812	D
RESEDA PARK WRP													
12	Victory Bl	Hayvenhurst Av	Balboa Bl	5	3,125	3,468	1.110	**F**	6	4,500	3,252	0.723	C
13	Victory Bl	Lindley Av	Reseda Bl	6	4,500	3,268	0.726	C	6	4,500	3,128	0.695	B
14	Balboa Bl	Victory Bl	Vanowen St	5	3,125	2,406	0.770	C	5	3,125	2,420	0.774	C
VA HOSPITAL WRP													
15	Woodley Av	Sherman Way	Saticoy St	4	2,500	2,296	0.918	**E**	4	2,500	2,091	0.836	D
16	Roscoe Bl	Woodley Av	Hayvenhurst Av	6	4,500	3,436	0.764	C	6	4,500	3,126	0.695	B
17	Roscoe Bl	Woodley Av	Haskell Av	6	4,500	3,585	0.797	C	6	4,500	3,361	0.747	C
18	Haskell Av	Roscoe Bl	Parthenia St	4	2,500	765	0.306	A	4	2,500	579	0.232	A
19	Haskell Av	Nordhoff St	Plummer St	4	2,500	1,416	0.566	A	4	2,500	878	0.351	A
PIERCE COLLEGE WRP													
20	Victory Bl	Reseda Bl	Wilbur Av	5	3,125	3,099	0.992	**E**	5	3,125	3,152	1.009	**F**
21	Victory Bl	Winnetka Av	Mason St/Stadium Way	6	4,500	2,982	0.663	B	6	4,500	3,198	0.711	C

As indicated by the LOS values in the right-most column of Table 4, during the a.m. peak hour seven of the 21 roadway segments operate at poor levels of service (LOS E or F):

- Segments 1, 4, 5, 9, 12, 15, and 20 operate at LOS E or F
- Segments 3, 7, 10, 11, 13, 14, 16, and 17 operate at LOS C or D
- Segments 2, 6, 8, 18, 19, and 21 operate at LOS A or B.

During the p.m. peak hour, five of the 21 roadway segments operate at LOS E or F:

- Segments 1, 4, 5, 9, and 20 operate at LOS E or F
- Segments 3, 7, 8, 10, 11, 12, 14, 15, 17, and 21 operate at LOS C or D
- Segments 2, 6, 13, 16, 18, and 19 operate at LOS A or B.

Segment 12 has the highest v/c ratio of 1.110 during the a.m. peak hour. Segment 1 has the highest v/c ratio of 1.143 during the p.m. peak hour.

3. Proposed Project Corridor Construction Impact Analysis

This report section provides information on future conditions without and with Project construction activities and significant traffic impacts along the proposed Project routes. A discussion is provided on the impacts that could occur under typical Project construction-related lane closures along the proposed corridor.

3.1 Future Baseline Conditions

The analysis of future baseline conditions included the addition of traffic growth, based on projections within the Metro 2010 Congestion Management Program (as defined by the methodology discussion in Section 1 of this report). The highest CMP traffic growth rates in the study area were multiplied by a factor of two to provide a conservative estimate of regional traffic growth plus trips expected to be generated by proposed area projects. A list of the area projects compiled from information maintained by Development Review staff at the City of Los Angeles Department of Transportation is provided in Appendix B.

Project construction activity would be completed by year 2022. Therefore, that year was used for future baseline conditions.

Based on the application of traffic growth rates, baseline conditions for the study roadway segments were computed. The resulting volumes and associated level of service values are provided in Table 5.

Table 5 – Future (2022) without Project Conditions - Peak-Hour Vehicle Volumes and Levels of Service

	Segment	From	To	AM Peak Hour					PM Peak Hour				
				# of Lanes	Capacity	Volumes	V/C	LOS	# of Lanes	Capacity	Volumes	V/C	LOS
NORTH HOLLYWOOD WRP													
1	Camarillo St	Cahuenga Bl	Vineland Av/Lankershim Bl	2	900	1,097	1.219	**F**	2	900	1,140	1.267	**F**
2	Vineland Av	Camarillo St	Magnolia Bl	6	4,500	1,865	0.414	A	6	4,500	2,031	0.451	A
3	Magnolia Bl	SR-170 Freeway	Colfax Av	4	2,500	2,040	0.816	D	4	2,500	2,266	0.906	**E**
VALLEY PLAZA PARK WRP													
4	Sherman Way	Woodman Av	Fulton Av	5	3,125	3,387	1.084	**F**	5	3,125	3,583	1.147	**F**
5	Sherman Way	Coldwater Canyon Av	Whitsett Av	5	3,125	3,243	1.038	**F**	5	3,125	3,604	1.153	**F**
6	Whitsett Av	Sherman Way	Vanowen St	4	2,500	1,562	0.625	B	4	2,500	1,501	0.601	B
7	Vanowen St	Whitsett Av	SR-170 Freeway	4	2,500	2,030	0.812	D	4	2,500	2,366	0.946	**E**
VAN NUYS-SHERMAN OAKS PARK WRP													
8	Oxnard St	Kester Av	Van Nuys Bl	4	2,500	1,772	0.709	C	4	2,500	1,966	0.786	C
9	Van Nuys Bl	Clark St	Weddington St	4	2,500	2,579	1.032	**F**	4	2,500	2,808	1.123	**F**
10	Burbank Bl	Hazeltine Av	Woodman Av	4	2,500	2,451	0.980	**E**	4	2,500	2,410	0.964	**E**
11	Magnolia Bl	Van Nuys Bl	Hazeltine Av	4	2,500	2,440	0.976	**E**	4	2,500	2,248	0.899	D
RESEDA PARK WRP													
12	Victory Bl	Hayvenhurst Av	Balboa Bl	5	3,125	3,843	1.230	**F**	6	4,500	3,603	0.801	D
13	Victory Bl	Lindley Av	Reseda Bl	6	4,500	3,621	0.805	D	6	4,500	3,466	0.770	C
14	Balboa Bl	Victory Bl	Vanowen St	5	3,125	2,666	0.853	D	5	3,125	2,681	0.858	D
VA HOSPITAL WRP													
15	Woodley Av	Sherman Way	Saticoy St	4	2,500	2,544	1.018	**F**	4	2,500	2,317	0.927	**E**
16	Roscoe Bl	Woodley Av	Hayvenhurst Av	6	4,500	3,807	0.846	D	6	4,500	3,464	0.770	C
17	Roscoe Bl	Woodley Av	Haskell Av	6	4,500	3,972	0.883	D	6	4,500	3,724	0.828	D
18	Haskell Av	Roscoe Bl	Parthenia St	4	2,500	848	0.339	A	4	2,500	642	0.257	A
19	Haskell Av	Nordhoff St	Plummer St	4	2,500	1,569	0.628	B	4	2,500	973	0.389	A
PIERCE COLLEGE WRP													
20	Victory Bl	Reseda Bl	Wilbur Av	5	3,125	3,434	1.099	**F**	5	3,125	3,492	1.118	**F**
21	Victory Bl	Winnetka Av	Mason St/Stadium Way	6	4,500	3,304	0.734	C	6	4,500	3,543	0.787	C

For future (2022) without Project conditions, nine roadway segments would operate at a LOS value of LOS E or F during the a.m. peak hour (two more than under existing conditions). During the p.m. peak hour, nine roadway segments would operate at LOS E or F (four more than under existing conditions) under future (2022) without Project conditions.

The added locations that would operate at LOS E or F in the future without Project conditions are as follows:

- Segment 3 (Magnolia Boulevard) operations would worsen from LOS D to E during the p.m. peak hour.
- Segment 7 (Vanowen Street) operations would worsen from LOS D to E during the p.m. peak hour.
- Segment 10 (Burbank Boulevard) operations would worsen from LOS D to E during the a.m. peak hour and from LOS D to E during the p.m. peak hour.
- Segment 11 (Magnolia Boulevard) operations would worsen from LOS D to E during the a.m. peak hour.
- Segment 15 (Woodley Avenue) operations would worsen from LOS D to LOS E in the p.m. peak hour.

3.2 Project Trip Generation Methodology

Project trip generation calculations included construction employee vehicle trips and construction truck trip estimates. The trip generation totals were determined based on the most intense period of construction activity for the project. Truck volumes were multiplied by a factor of 2.5 to estimate the number of passenger car equivalent trips, consistent with the SCAG *Heavy Duty Truck Model* analysis and other truck studies in the region.

For construction, the maximum number of employees on project roadways segment sites would be 12 and the maximum truck trip activity would be 50 round trips per day. Seven of the field personnel will arrive to the site by either construction truck or dump truck.

3.3 Project Trip Generation Calculations

In calculating peak-hour trips for the project, it is assumed that a majority of the construction employees will arrive and depart the sites or roadway segment via personal vehicles. The morning arrival by employees is assumed to overlap the a.m. peak hour by 50 percent, with the remaining 50 percent of employees assumed to be at the sites before 7:00 a.m. The same would occur during the p.m. peak hour, with 50 percent of employees assumed to depart the site before 4:00 p.m. Therefore, the same reduction was taken for both peak periods.

During project construction activity, daily truck haul activities will occur over an eight-hour period that begins during the a.m. peak period, and is complete during the p.m. peak period. Trucks with construction equipment will travel to the site prior to the a.m. peak period and 50 percent would depart during the p.m. peak period.

As shown in Table 6, project construction would generate a daily total of 60 passenger car equivalent trips, with seven trips occurring during the a.m. peak hour and 17 trips occurring during the p.m. peak hour.

Table 6 – Project Trip Generation

TRIP GENERATION	AVERAGE DAILY TRIPS			AM PEAK HOUR						PM PEAK HOUR					
				Truck Trips*		Employee Trips		Total Trips		Truck Trips*		Employee Trips		Total Trips	
	Trucks*	Employee	Total	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Field Personnel	0	10	10	0	0	3	0	3	0	0	0	0	3	0	3
Haul Trucks	30	0	30	2	2	0	0	2	2	2	2	0	0	2	2
Construction Trucks	20	0	20	0	0	0	0	0	0	0	10	0	0	0	10
TOTAL TRIPS	**50**	**10**	**60**	**2**	**2**	**3**	**0**	**5**	**2**	**2**	**12**	**0**	**3**	**2**	**15**

** Truck trips include a Passenger Car Equivalency (PCE) factor of 2.5.*

Field Personnel - Inputs were 12 field personnel for the average day of construction. Four personnel arrive in the four construction trucks and three personnel arrive in the three dump trucks. The remaining five personnel arrive in two construction pick-up trucks and three personal vehicles.

3.4 Proposed Construction Methods

The work areas necessary to install the water pipelines along the proposed Project routes are planned to be 10 to 12 feet in width. This total width would require the closure of one or two travel lanes, based on existing width of the travel lanes and adjacent on-street parking within each segment. In order to provide a conservative analysis, the width of work areas was assumed to be the equivalent of two travel lanes or one travel lane and the adjacent on-street parking areas. Construction activity would occur Monday through Friday from approximately 7:00 a.m. to 3:30 p.m. Thus, the closure of one or two travel lanes would occur during the a.m. peak hour but not during the p.m. peak hour.

3.5 Future with Project Conditions

The assumed lane capacity reductions caused by Project construction during the a.m. peak hour were used to modify the capacity values within the volume-to-capacity (v/c) calculations for each of the study roadway segments. The trip generation of construction employee commute vehicles and construction trucks were also added to the study area. Table 7 provides the results of this analysis.

Table 7 – Future (2022) with Project Conditions – Peak-Hour Vehicle Volumes and Levels of Service

Segment		From	To	AM Peak Hour					PM Peak Hour				
				# of Lanes	Capacity	Volumes	V/C	LOS	# of Lanes	Capacity	Volumes	V/C	LOS
NORTH HOLLYWOOD WRP													
1	Camarillo St	Cahuenga Bl	Vineland Av/Lankershim Bl	2	900	1,104	1.227	**F**	2	900	1,157	1.286	**F**
2	Vineland Av	Camarillo St	Magnolia Bl	4	2,500	1,872	0.749	C	6	4,500	2,048	0.455	A
3	Magnolia Bl	SR-170 Freeway	Colfax Av	3	1,350	2,047	1.516	**F**	4	2,500	2,283	0.913	**E**
VALLEY PLAZA PARK WRP													
4	Sherman Way	Woodman Av	Fulton Av	4	2,500	3,394	1.358	**F**	5	3,125	3,600	1.152	**F**
5	Sherman Way	Coldwater Canyon Av	Whitsett Av	4	2,500	3,250	1.300	**F**	5	3,125	3,621	1.159	**F**
6	Whitsett Av	Sherman Way	Vanowen St	3	1,350	1,569	1.162	**F**	4	2,500	1,518	0.607	B
7	Vanowen St	Whitsett Av	SR-170 Freeway	3	1,350	2,037	1.509	**F**	4	2,500	2,383	0.953	**E**
VAN NUYS-SHERMAN OAKS PARK WRP													
8	Oxnard St	Kester Av	Van Nuys Bl	3	1,350	1,779	1.318	**F**	4	2,500	1,983	0.793	C
9	Van Nuys Bl	Clark St	Weddington St	3	1,350	2,586	1.916	**F**	4	2,500	2,825	1.130	**F**
10	Burbank Bl	Hazeltine Av	Woodman Av	3	1,350	2,458	1.821	**F**	4	2,500	2,427	0.971	**E**
11	Magnolia Bl	Van Nuys Bl	Hazeltine Av	3	1,350	2,447	1.812	**F**	4	2,500	2,265	0.906	**E**
RESEDA PARK WRP													
12	Victory Bl	Hayvenhurst Av	Balboa Bl	4	2,500	3,850	1.540	**F**	6	4,500	3,620	0.804	D
13	Victory Bl	Lindley Av	Reseda Bl	4	2,500	3,628	1.451	**F**	6	4,500	3,483	0.774	C
14	Balboa Bl	Victory Bl	Vanowen St	4	2,500	2,673	1.069	**F**	5	3,125	2,698	0.863	D
VA HOSPITAL WRP													
15	Woodley Av	Sherman Way	Saticoy St	3	1,350	2,551	1.890	**F**	4	2,500	2,334	0.934	**E**
16	Roscoe Bl	Woodley Av	Hayvenhurst Av	4	2,500	3,814	1.526	**F**	6	4,500	3,481	0.773	C
17	Roscoe Bl	Woodley Av	Haskell Av	4	2,500	3,979	1.592	**F**	6	4,500	3,741	0.831	D
18	Haskell Av	Roscoe Bl	Parthenia St	3	1,350	855	0.633	B	4	2,500	659	0.263	A
19	Haskell Av	Nordhoff St	Plummer St	3	1,350	1,576	1.167	**F**	4	2,500	990	0.396	A
PIERCE COLLEGE WRP													
20	Victory Bl	Reseda Bl	Wilbur Av	3	1,350	3,441	2.549	**F**	5	3,125	3,509	1.123	**F**
21	Victory Bl	Winnetka Av	Mason St/Stadium Way	4	2,500	3,311	1.324	**F**	6	4,500	3,560	0.791	C

For future (2022) with Project conditions, 19 of the 21 roadway segments would operate at poor levels of service of F during the a.m. peak hour with Project construction. Although the lane closure would not occur during the p.m. peak hour, 10 of the 21 roadway segments would continue to operate at LOS E or F (one more than under future without Project conditions, due to construction traffic).

When comparing the future (2022) without Project construction to future (2022) with Project construction scenarios, the reduced roadway capacity during the a.m. peak hour would impact the Project corridor roadways as described below.

- Segment 1 (Camarillo Street) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 3 (Magnolia Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 4 (Sherman Way) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 5 (Sherman Way) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 6 (Whitsett Avenue) operations would worsen from LOS B to F during the a.m. peak hour.
- Segment 7 (Vanowen Street) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 8 (Oxnard Street) operations would worsen from LOS C to F during the a.m. peak hour.
- Segment 9 (Van Nuys Boulevard) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 10 (Burbank Boulevard) operations would worsen from LOS E to F during the a.m. peak hour.
- Segment 11 (Magnolia Boulevard) operations would worsen from LOS E to F during the a.m. peak hour.
- Segment 12 (Victory Boulevard) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 13 (Victory Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 14 (Burbank Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 15 (Woodley Avenue) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 16 (Roscoe Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 17 (Roscoe Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 19 (Haskell Avenue) operations would worsen from LOS B to LOS F during the a.m. peak hour.
- Segment 20 (Victory Boulevard) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 21 (Victory Boulevard) operations would worsen from LOS C to F during the a.m. peak hour.

During the p.m. peak hour, the addition of construction traffic would worsen Project corridor roadways LOS at one location:

- Segment 11 (Magnolia Boulevard) operations would worsen from LOS D to E during the p.m. peak hour.

Figure 4 provides an illustration of the future with Project daily roadway volumes at the study roadway segments.

3.6 Traffic Flow and Analysis of Lane Closures

Key Access Issues

The proposed routes would be adjacent to schools and commercial, residential, industrial, and recreational/open space land uses. Access to these land uses would be partially restricted during the construction period. Left-turn movements at intersection approaches and at mid-block driveway locations would likely be impacted, depending on the location of the planned trenching. These details will be defined further with the future development construction plans.

Typical Lane Closures

Project construction is anticipated to result in the closing of one to two lanes along the water pipeline routes. No complete street closures are currently anticipated. All construction closures will be coordinated with and approved by the City of Los Angeles and Caltrans (for State Route facilities or routes that affect freeway ramp intersections).

Roadway Impacts

Several arterials, which provide both local access and sub-regional travel, will be temporarily impacted with the proposed Project construction. The reduced roadway capacity and addition of construction traffic will temporarily impact the following analyzed Project corridor roadways:

- Segment 1 (Camarillo Street) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 3 (Magnolia Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 4 (Sherman Way) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 5 (Sherman Way) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 6 (Whitsett Avenue) operations would worsen from LOS B to F during the a.m. peak hour.
- Segment 7 (Vanowen Street) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 8 (Oxnard Street) operations would worsen from LOS C to F during the a.m. peak hour.

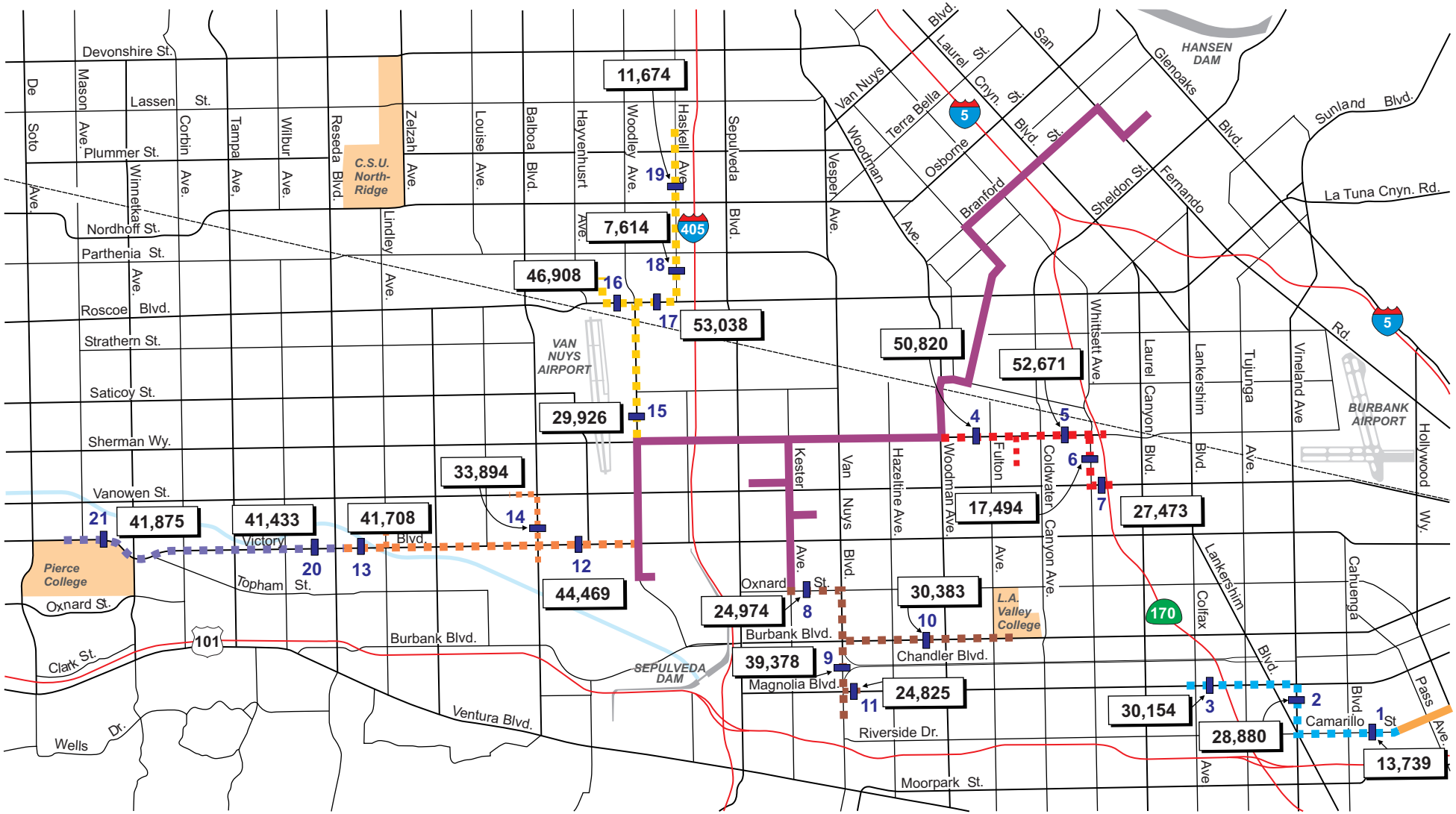


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Figure 4

Future with Project Average Daily Traffic Volumes

- Segment 9 (Van Nuys Boulevard) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 10 (Burbank Boulevard) operations would worsen from LOS E to F during the a.m. peak hour.
- Segment 11 (Magnolia Boulevard) operations would worsen from LOS E to F during the a.m. peak hour and from LOS D to E during the p.m. peak hour.
- Segment 12 (Victory Boulevard) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 13 (Victory Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 14 (Burbank Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 15 (Woodley Avenue) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 16 (Roscoe Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 17 (Roscoe Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 19 (Haskell Avenue) operations would worsen from LOS B to LOS F in the a.m. peak hour.
- Segment 20 (Victory Boulevard) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 21 (Victory Boulevard) operations would worsen from LOS C to F during the a.m. peak hour.

Recommended Actions

The following actions would mitigate any potential significant Project impacts on the analyzed study segments, where LOS values would be reduced to or within LOS E or F during construction:

- Directional capacity (generally southbound/westbound in the a.m. peak and northbound/eastbound in the p.m. peak) should be considered in roadway closure planning where work area placement is flexible. The provision of the original one-way capacity of the affected roadway (in number of travel lanes) in the peak direction, while providing a reduced number of travel lanes for the opposite direction of traffic flow (non-peak direction), would help to alleviate any potential poor LOS conditions.
- Left-turn lanes and other approach lanes (as feasible) should be maintained in close vicinity to major intersections along the proposed Project routes.
- Considerations for maintained access to adjacent residential driveways, as feasible, should be incorporated into the construction planning process.
- Where physical mitigation measures cannot be provided on roadway segments that would operate at LOS E or F during construction, peak-hour restrictions on construction activity would be necessary where feasible based on construction details. Otherwise, construction closure plans would need to minimize the effects on roadway capacity to the satisfaction of the local jurisdiction, and traffic diversions plans to other parallel roadways may also be necessary.

Construction activities could potentially interfere with emergency response by ambulance, fire, paramedic, and police vehicles. The loss of travel lanes and the resulting increase in congestion could lengthen the response time required for emergency vehicles passing through the construction zone. Moreover, there is a possibility that emergency services may be needed at a location where the related access route is temporarily blocked by the construction zone. Providing directional capacity will also help to mitigate any significant impacts to emergency vehicle access.

3.7 Potential Impacts to Pedestrian and Bicycle Access

Project construction could potentially impact pedestrian movements at closed sidewalks and crosswalk locations. It is important that marked pedestrian crosswalks be maintained throughout Project construction, especially where a school or transit stop is located nearby. They should be replaced temporarily, immediately beyond the construction work area, unless a new mid-block crosswalk would be created by this replacement.

Woodley Avenue currently has bicycle lanes on the VA Hospital project route. The City of Los Angeles 2010 Bike Plan proposes 200 miles of bikeways every five years for the next 35 years. The Bike Plan proposes bicycle lanes on the following locations:

- Camarillo Street on the North Hollywood Park project route;
- Sherman Way on the Valley Plaza project route;
- Van Nuys Boulevard on the Van Nuys-Sherman Oaks Park project route;
- Roscoe Boulevard on the VA Hospital project route;
- Balboa Boulevard and Lindley Avenue on the Reseda Park project route.

If bikeways are provided prior to the project construction, it is likely that the Project will include the closure of these lanes. If these lanes are closed, bicycle lane closure signs and detour signs should be provided.

3.8 Potential Transit Service Impacts

The study area is served by several public transit agencies which include Metro, LADOT Dash, and the City of Burbank.

Potential Turning Movement Restrictions

Project construction would potentially disrupt transit service along the study roadway segments. All of the transit lines listed on Table 8 may be affected by the potential lane closures and potential left-turn restrictions.

Potential Bus Stop Disruptions

Where bus stops become affected by Project construction activities (blocked bus stops, diverted traffic is sent into bus stop curb lane areas), temporary bus stop closures should be accommodated with replacement bus stops outside of the immediate work area. The temporary stops, however, would need to be located along wide portions of the roadway where the maximum number of travel lanes can be accommodated during construction. Unsafe mid-block pedestrian crossing patterns should not be created by the temporary stops.

Table 8 – Existing Study Area Transit Service

Line	From / To	To / From	Via	Approximate Peak Frequency
Metro				
152	Woodland Hills	North Hollywood	Roscoe Blvd / Vineland Ave	8 to 18 minutes
154	Tarzana	Burbank	Burbank Blvd / Oxnard St	60 minutes
155	Sherman Oaks	Burbank	Riverside Dr / Olive Ave	30 to 60 minutes
156	Hollywood	Van Nuys	Burbank Blvd / Chandler Blvd / Vineland Ave	23 to 41 minutes
158	Sherman Oaks	Chatsworth	Devonshire St / Woodman Ave	30 to 35 minutes
163/363	West Hills	Sun Valley	Sherman Way	12 to 20 minutes
164	West Hills	Burbank	Victory Blvd	10 to 22 minutes
165	West Hills	Burbank	Vanowen St	10 to 18 minutes
166/364	Chatsworth	Sun Valley	Nordhoff St / Osborne St	12 to 20 minutes
167	Studio City	Chatsworth	Plummer St / Woodman Ave / Roscoe Ave / Coldwater Canyon Ave	40 to 50 minutes
169	West Hills	Sunland	Saticoy Ave / Van Nuys Blvd / Chase St	60 minutes
183	Sherman Oaks	Glendale	Magnolia Blvd / San Fernando Rd	26 to 60 minutes
233	Sherman Oaks	Lake View Terrace	Van Nuys Blvd	12 to 14 minutes
236	Encino	Sylmar Station	Balboa Blvd	30 to 60 minutes
237	Encino	Granada Hills/Sherman Oaks	Van Nuys Blvd / Victory Blvd / Woodley Ave	60 minutes
239	Encino	Sylmar Station	White Oak Ave	60 minutes
240	Northridge	Universal City	Reseda Blvd	15 to 24 minutes
242	Woodland Hills	Porter Ranch	Tampa Ave	25 to 60 minutes
243	Woodland Hills	Porter Ranch	Winnetka Ave	25 to 60 minutes
353	Woodland Hills	North Hollywood	Roscoe Blvd / Lankershim Blvd	11 to 50 minutes
656 *	Panorama City	Hollywood	Van Nuys Blvd / Burbank Blvd	**
Metro Rapid Service				
741	Tarzana	Northridge	Reseda Blvd	16 to 18 minutes
761	Westwood	Pacoima	Van Nuys Blvd	10 to 18 minutes
Metro Line Service				
Orange Line	North Hollywood Transit Station	Warner Center	crosses WRP at Camarillo St, Magnolia Blvd, Burbank Blvd, Balboa Blvd, Victory Blvd	4 to 5 minutes
LADOT				
DASH	Panorama City/Van Nuys (Circular Loop)		Van Nuys Blvd / Parthenia St / Sherman Way / Hazeltine Ave / Victory Blvd	20 minutes
DASH	Van Nuys/Studio City (Circular Loop)		Van Nuys Blvd / Hazeltine Ave / Oxnard St	30 minutes
CE 549 **	San Fernando Valley	Pasadena	Burbank Blvd / Lankershim Blvd / Riverside Dr	30 minutes
CE 573 **	Encino/Mission Hills	Westwood/Century City	Balboa Blvd / I-405 / Sepulveda Blvd	15 to 45 minutes
CE 574 **	Sylmar	LAX/El Segundo	Chatsworth St / Sepulveda Blvd / Brand Blvd / Truman St/ Hubbard St	30 to 50 minutes
Burbank Bus				
NOHo-Media District	North Hollywood Transit Station	Burbank Media District	Magnolia Blvd	12 minutes

Source: Metro - Los Angeles County Metropolitan Transportation Authority, Los Angeles Department of Transportation, and Burbank Bus.

The 300-series Metro lines (limited service) operate during peak periods only.

** This route operates during the late-night service hours only. Therefore, peak period frequency is negligible.*

*** Commuter Express routes temporary revisions due to Encino Park and Ride parking temporary closed for construction effective November 21, 2011.*

4. Existing (2012) Plus Project Conditions

A supplemental analysis was included in this document to comply with court rulings in the recent *Sunnyvale* case regarding California Environmental Quality Act (CEQA) baseline analysis that requires that the existing conditions period matches the date (year) of public notification.

For the existing plus Project analysis, KOA used the existing roadway segment volumes and added the trip generation of construction employee commute vehicles and contruction trucks.

The assumed lane capacity reductions caused by Project construction during the a.m. peak hour were used to modify the capacity values within the volume-to-capacity (v/c) calculations for each of the study roadway segments. The trip generation of construction employee commute vehicles was also added to the study area.

4.1 Existing (2012) Plus Project Conditions

Table 9 provides the analysis of Project construction effects on LOS values for the existing plus Project analysis.

Table 9 – Existing (2012) Plus Project Conditions – Peak-Hour LOS

Segment		From	To	AM Peak Hour					PM Peak Hour				
				# of Lanes	Capacity	Volumes	V/C	LOS	# of Lanes	Capacity	Volumes	V/C	LOS
NORTH HOLLYWOOD WRP													
1	Camarillo St	Cahuenga Bl	Vineland Av/Lankershim Bl	2	900	997	1.108	**F**	2	900	1,046	1.162	**F**
2	Vineland Av	Camarillo St	Magnolia Bl	4	2500	1,690	0.676	B	6	4500	1,850	0.411	A
3	Magnolia Bl	SR-170 Freeway	Colfax Av	3	1350	1,848	1.369	**F**	4	2500	2,062	0.825	D
VALLEY PLAZA PARK WRP													
4	Sherman Way	Woodman Av	Fulton Av	4	2500	3,064	1.226	**F**	5	3125	3,251	1.040	**F**
5	Sherman Way	Coldwater Canyon Av	Whitsett Av	4	2500	2,934	1.174	**F**	5	3125	3,270	1.046	**F**
6	Whitsett Av	Sherman Way	Vanowen St	3	1350	1,417	1.050	**F**	4	2500	1,372	0.549	A
7	Vanowen St	Whitsett Av	SR-170 Freeway	3	1350	1,839	1.362	**F**	4	2500	2,152	0.861	D
VAN NUYS-SHERMAN OAKS PARK WRP													
8	Oxnard St	Kester Av	Van Nuys Bl	3	1350	1,606	1.190	**F**	4	2500	1,791	0.716	C
9	Van Nuys Bl	Clark St	Weddington St	3	1350	2,335	1.730	**F**	4	2500	2,551	1.020	**F**
10	Burbank Bl	Hazeltine Av	Woodman Av	3	1350	2,219	1.644	**F**	4	2500	2,192	0.877	D
11	Magnolia Bl	Van Nuys Bl	Hazeltine Av	3	1350	2,209	1.636	**F**	4	2500	2,046	0.818	D
RESEDA PARK WRP													
12	Victory Bl	Hayvenhurst Av	Balboa Bl	4	2500	3,475	1.390	**F**	6	4500	3,269	0.726	C
13	Victory Bl	Lindley Av	Reseda Bl	4	2500	3,275	1.310	**F**	6	4500	3,145	0.699	B
14	Balboa Bl	Victory Bl	Vanowen St	4	2500	2,413	0.965	**E**	5	3125	2,437	0.780	C
VA HOSPITAL WRP													
15	Woodley Av	Sherman Way	Saticoy St	3	1350	2,303	1.706	**F**	4	2500	2,108	0.843	D
16	Roscoe Bl	Woodley Av	Hayvenhurst Av	4	2500	3,443	1.377	**F**	6	4500	3,143	0.698	B
17	Roscoe Bl	Woodley Av	Haskell Av	4	2500	3,592	1.437	**F**	6	4500	3,378	0.751	C
18	Haskell Av	Roscoe Bl	Parthenia St	3	1350	772	0.572	A	4	2500	596	0.238	A
19	Haskell Av	Nordhoff St	Plummer St	3	1350	1,423	1.054	**F**	4	2500	895	0.358	A
PIERCE COLLEGE WRP													
20	Victory Bl	Reseda Bl	Wilbur Av	3	1350	3,106	2.301	**F**	5	3125	3,169	1.014	**F**
21	Victory Bl	Winnetka Av	Mason St/Stadium Way	4	2500	2,989	1.196	**F**	6	4500	3,215	0.714	C

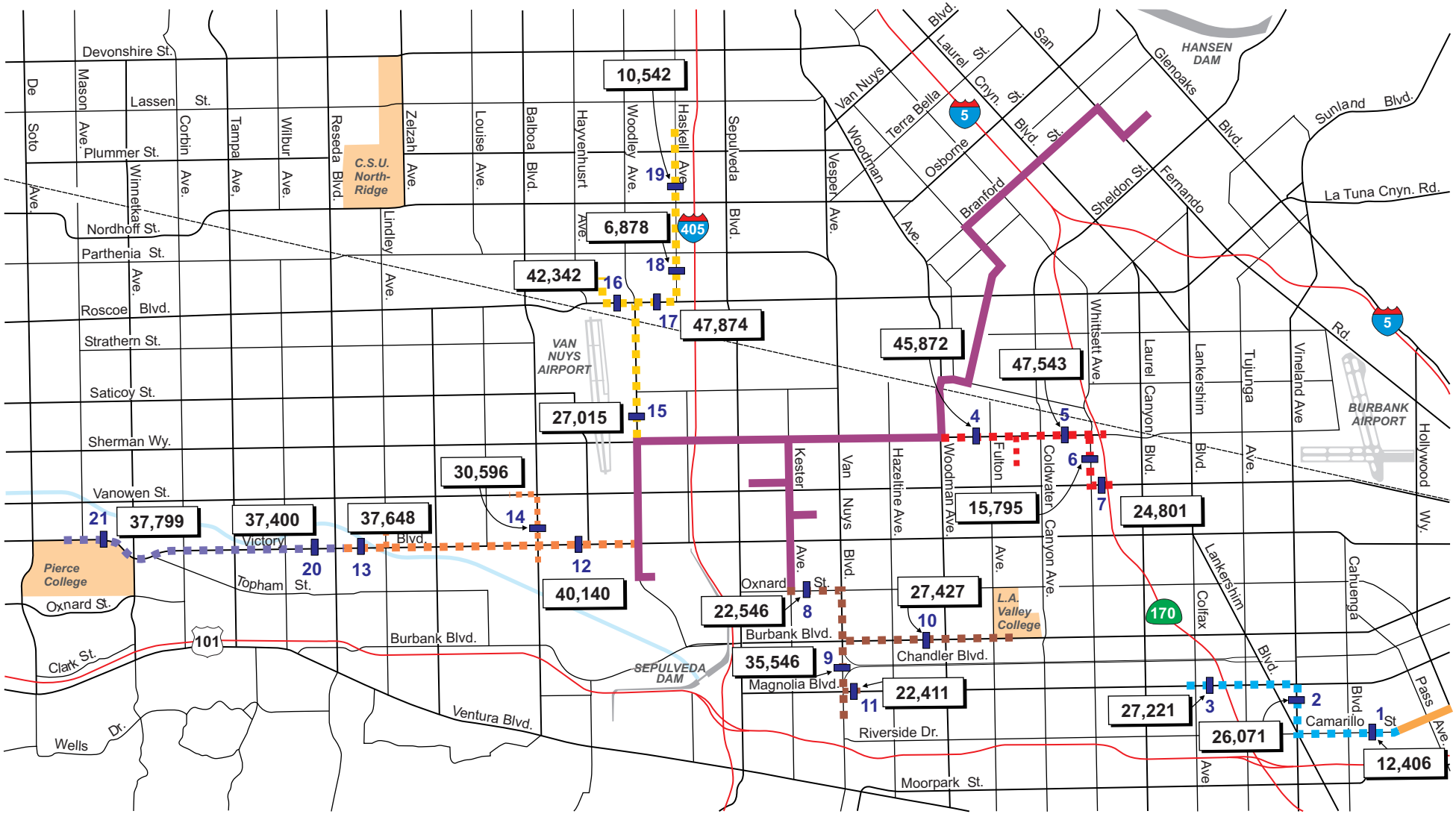
During the a.m. peak hour, 19 roadway segments would operate at poor levels of service of E or F (12 more than under existing conditions). During the p.m. hour, five roadway segments would operate at poor LOS E or F (the same number as under existing conditions).

The following analyzed roadway segments are significantly impacted under the existing plus Project analysis:

- Segment 1 (Camarillo Street) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 3 (Magnolia Boulevard) operations would worsen from LOS C to F during the a.m. peak hour.
- Segment 4 (Sherman Way) operations would worsen from LOS E to F during the a.m. peak hour.

- Segment 5 (Sherman Way) operations would worsen from LOS E to F during the a.m. peak hour.
- Segment 6 (Whitsett Avenue) operations would worsen from LOS A to F during the a.m. peak hour.
- Segment 7 (Vanowen Street) operations would worsen from LOS C to F during the a.m. peak hour.
- Segment 8 (Oxnard Street) operations would worsen from LOS B to F during the a.m. peak hour.
- Segment 9 (Van Nuys Boulevard) operations would worsen from LOS E to F during the a.m. peak hour.
- Segment 10 (Burbank Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 11 (Magnolia Boulevard) operations would worsen from LOS D to F during the a.m. peak hour.
- Segment 12 (Victory Boulevard) would continue to operate at LOS F during the a.m. peak hour with worsening operations.
- Segment 13 (Victory Boulevard) operations would worsen from LOS C to F during the a.m. peak hour.
- Segment 14 (Burbank Boulevard) operations would worsen from LOS C to E during the a.m. peak hour.
- Segment 15 (Woodley Avenue) operations would worsen from LOS E to F during the a.m. peak hour.
- Segment 16 (Roscoe Boulevard) operations would worsen from LOS C to F during the a.m. peak hour.
- Segment 17 (Roscoe Boulevard) operations would worsen from LOS C to F during the a.m. peak hour.
- Segment 19 (Haskell Avenue) operations would worsen from LOS A to LOS F in the a.m. peak hour.
- Segment 20 (Victory Boulevard) operations would worsen from LOS E to F during the a.m. peak hour.
- Segment 21 (Victory Boulevard) operations would worsen from LOS B to F during the a.m. peak hour.

Figure 5 provides the daily volumes for the study roadway segments for the existing plus Project analysis.



LEGEND

- Existing Pipelines
- Existing Pipelines (Burbank)
- North Hollywood Park WRP (14,000')
- Valley Plaza WRP (14,700')
- Van Nuys - Sherman Oaks Park WRP (21,800')
- Reseda Park WRP (24,200')
- VA Hospital WRP (21,400')
- Pierce College WRP (13,600')
- X — Study Segment and Reference Number
- X,XXX — Segment Average Daily Traffic Volume

Not to Scale

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Figure 5

Existing + Project Average Daily Traffic Volumes

5. Conclusions and Recommendations

5.1 Major Impact Conclusions

The proposed Project will not result in any permanent traffic impacts to area roadway facilities. As such, permanent physical or operations improvements to either study intersections or roadway segments are not recommended. However, the Project will potentially create significant impacts in some areas during construction, as much of the Project construction efforts will consist of excavation, open trenching, and pipeline installation that will occur on roadways that are heavily traveled. This work will reduce capacities on the roadways along the Project construction routes.

There are no measures that can be implemented to make all Project impacts less than significant. These impacts will be temporary in nature and will not have a lasting impact on the study roadways or the adjacent roadway systems, including monitoring stations of the Los Angeles County Congestion Management roadways on area arterials and freeways. Daily roadway and peak-hour volumes have been analyzed to achieve an understanding of the magnitude of potential roadway lane closures during construction.

The following sub-sections summarize the potential traffic impacts within each project roadway corridor along the overall Project routes.

5.2 Pedestrian and Transit Impacts

Construction of the Project could potentially impact pedestrian movements on sidewalks and at crosswalk locations. It is important that marked pedestrian crosswalks be maintained throughout Project construction, especially when a school or transit stop is located nearby. They should be replaced temporarily, immediately beyond the construction work area, unless a new mid-block crosswalk would be created by this replacement.

The Woodley Avenue currently has bicycle lanes on the VA Hospital project route. The City of Los Angeles 2010 Bike Plan proposes 200 miles of bikeways every five years for the next 35 years. The Bike Plan proposes bicycle lanes on the following locations:

- Camarillo Street on the North Hollywood Park project route;
- Sherman Way on the Valley Plaza project route;
- Van Nuys Boulevard on the Van Nuys-Sherman Oaks Park project route;
- Roscoe Boulevard on the VA Hospital project route;
- Balboa Boulevard and Lindley Avenue on the Reseda Park project route.

If bikeways are provided prior to the project construction, it is likely that the Project will include the closure of these lanes. If these lanes are closed and direct alternatives are not provided during construction (with proper detour signage), bicycle lane closure signs should be posted.

The construction activities are also likely to affect public bus transit stops for services provided by Metro, LADOT Dash, and the City of Burbank. These stops would need to be replaced temporarily outside of travel lane closure areas.

5.3 General Impacts to Roadway Facilities

As detailed construction and closure plans for the Project are not yet available, analysis was not conducted of specific intersections, and Project roadway segment analysis was based on anticipated capacity provided during constuction. Capacity will be constricted, in some form, along each Project segment during construction. To help mitigate potentially significant traffic impacts along the Project routes, the following actions are recommended:

- Directional capacity (generally southbound/westbound in the a.m. peak and northbound/eastbound in the p.m. peak) should be considered in roadway closure planning where work area placement is flexible. The provision of the original one-way capacity of the affected roadway (in number of travel lanes) in the peak direction, while providing a reduced number of travel lane for the opposite direction of traffic flow, would help to alleviate any potential poor LOS conditions.

- The Woodley Avenue currently has bicycle lanes on the VA Hospital project route. The City of Los Angeles 2010 Bike Plan proposes 200 miles of bikeways every five years for the next 35 years. The Bike Plan proposes bicycle lanes on the following locations:
  - Camarillo Street on the North Hollywood Park project route;
  - Sherman Way on the Valley Plaza project route;
  - Van Nuys Boulevard on the Van Nuys-Sherman Oaks Park project route;
  - Roscoe Boulevard on the VA Hospital project route;
  - Balboa Boulevard and Lindley Avenue on the Reseda Park project route.

  If future bikeways are provided on project routes, the potential closure of these lanes in addition to adjacent on-street parking areas could be necessary during Project construction. If these lanes are closed and direct alternates via detour signage are not provided during construction, bicycle lane closure signs should be posted at the next major intersections to the north and south of the construction area.

- Left-turn lanes and other approach lanes (as feasible) should be maintained in close vicinity to major intersections along the proposed Project routes.

- Considerations for maintained access to adjacent residential driveways, as feasible, should be incorporated into the construction planning process.

- Where physical mitigation measures cannot be provided on roadway segments that would operate at LOS E or F during construction, peak-hour restrictions on construction activity would be necessary where feasible based on construction details. Otherwise, construction closure plans would minimize the effects on roadway capacity to the satisfaction of the local jurisdiction, and traffic diversions plans to other parallel roadways may also be necessary,

Typical traffic impact mitigation measures would not be available for impacts caused by Project construction. The need for manual traffic control, detours, and roadway/approach closures would be defined through traffic plans developed for each construction segment. These plans would be reviewed by the applicable local jurisdiction prior to implementation along the Project corridor. True mitigations would not be achieved along the Project construction areas, as capacity cannot be restored until construction is completed.

Impacts to transit service would be likely along Project segments during construction. Temporary stop relocations/closures could be necessary based on the roadway width needed for Project construction.

5.4 Recommended Traffic Control Design Considerations

To mitigate Project impacts, the final design plans for the Project should minimize the locations of complete roadways closures and to minimize the number and duration of lane closures. The Project is anticipated to use one or two travel lanes for construction work areas. Closure of entire roadways is not anticipated to be necessary for typical construction activities.

LADWP will be required to prepare worksite traffic control plans and detour plans to provide the travel lanes specified to remain open during construction. The plans must be prepared by a registered traffic or civil engineer, as appropriate based on City of Los Angeles permit guidelines, for review and approval. It is anticipated that LADWP will refine the traffic control lane requirements presented in the memorandum prior to preparation of final traffic control plans.

Caltrans should be contacted to obtain permits for the transport of over-sized loads, to obtain encroachment permits (if necessary), and to coordinate construction work on any State Route facilities or within interchange areas.

Detailed construction traffic control and detour (traffic deviations via alternative routes) plans should be prepared for each phase of construction and a public outreach program should be implemented to inform the public on the need for the Project and the Project's roadway closure characteristics. A Construction Traffic Management Plan will need to be prepared and approved for each construction segment prior to the start of work.

Traffic control plans should be developed in consultation with local transit agencies to minimize impacts to passenger loading areas and to minimize travel times on scheduled transit routes. All affected transit agencies must be contacted to provide for any required modifications or temporary relocation of transit facilities.

5.5 CEQA Checklist Question Responses

This report section responds to environmental review checklist questions defined for potential traffic impacts of a project by the California Environmental Quality Act (CEQA) guidelines.

Would the proposed Project:

A. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Response: The proposed Project would conflict with the City of Los Angeles Mayor's Directive #2 that prohibits construction on major roads during rush hour periods (6:00 a.m. to 9:00 a.m. and 3:30 p.m. to 7:00 p.m.), if construction takes place during these times. As part of the variance to the Directive, and as part of construction during times outside rush hour periods of traffic, detailed traffic

handling plans would be prepared, and subject to the approval of the City of Los Angeles, to minimize traffic-related impacts during construction.

No complete street closures are anticipated during project construction. Several arterials, which provide both local access and sub-regional travel, will be temporarily impacted with the proposed Project construction. The reduced roadway capacity will temporarily impact the 19 analyzed Project corridor roadways, as detailed within this report.

Existing on-street parking areas along the proposed Project routes would be utilized as travel lanes to minimize traffic lane closures during construction, as necessary. Directional capacity (generally southbound/westbound in the a.m. peak and northbound/eastbound in the p.m. peak) would also be considered in roadway closure planning where work area placement is flexible. The provision of the original one-way capacity of the affected roadway (in number of travel lanes) in the peak direction, while providing a reduced number of travel lanes for the opposite direction of traffic flow, would help to alleviate any potential poor LOS conditions. Left-turn lanes and other approach lanes (as feasible) would be maintained in close vicinity to major intersections along the proposed Project routes.

Localized traffic impacts due to lane closures during construction would require detailed traffic handling plans to provide continued through access via detours for vehicles, and to provide for adequate pedestrian and transit circulation. Signed detour routes and other potential routes that drivers would utilize during the construction period would become alternate routes for a proportion of the vehicles that would otherwise travel along the corridor where construction would be taking place.

For the Project detour routes, wayfinding signs and other relevant traffic control devices would be placed on all major roadways into the larger area around each construction closure location, and would be repositioned for each construction phase (as the construction zones progress along the Project corridor). Wayfinding signs would be placed at major detour decision points, to keep vehicles on-track through the detour route, and would also be placed at the next major intersection location in advance of the first detour decision point. The final location of all wayfinding signs and traffic control devices would be proposed during the design process, which would include all traffic control plans.

The preparation of a Traffic Management Plan (TMP) that details construction traffic control and detour (traffic deviations via alternative routes) methods for each phase of construction would be prepared by a registered traffic or civil engineer, as appropriate, based on City of Los Angeles permit guidelines. The design of traffic management plans would be performed in consultation with local transit agencies to minimize impacts to passenger loading areas and to minimize travel times on scheduled transit routes. All affected transit agencies would be contacted to provide for any required modifications or temporary relocation of transit facilities. The plan would be approved by the applicable local jurisdiction(s) for each construction segment prior to the start of work within public roadways along the Project corridor. Methods to inform the public regarding Project construction and roadway detours and closures would be implemented.

Caltrans would be contacted to obtain permits for the transport of oversized loads, and to obtain encroachment permits for work along State Route facilities.

Impacts to traffic would be considered a significant but temporary impact. After completion of construction, the recycled water pipeline would not generate additional traffic; therefore, the Project would not result in permanent impacts to traffic.

B. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Response: The Project traffic impacts will occur during construction activities only. No traffic impacts are anticipated upon Project completion. The County of Los Angeles Congestion Management Program (CMP) level of service impact thresholds are not intended to be applied to construction activities. As such, the Project is not forecast to exceed the significant impact thresholds defined by the CMP. The Project will not generate any new measurable and regular vehicle trips during the operations period.

C. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Response: The proposed Project is an underground water pipeline that would be constructed within the existing roadways; therefore, no changes or impacts would occur to the existing air traffic patterns.

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

Response: The Project is proposing to construct the underground water pipeline within the existing roadways; no design changes to the existing roadways or use of roadways would occur. Therefore, no impacts to design features or incompatible uses would occur.

E. Result in inadequate emergency access?

Response: Construction activities could potentially interfere with emergency response by ambulance, fire, paramedic, and police vehicles. The loss of travel lanes and the resulting increase in congestion could lengthen the response time required for emergency vehicles passing through the construction zone. Moreover, there is a possibility that emergency services may be needed at a location where access is temporarily blocked by the construction zone.

F. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Response: Project construction would require the closure of one or two travel lanes and may result in left-turn restrictions. Construction of the proposed Project is also anticipated to temporarily affect public transit, bicycle, or pedestrian facilities during construction activities.

Public transportation may be affected as a result of Project construction. Project construction activities may require the use of existing bus stop curb lane areas. To the extent practicable, temporary bus stop closures would be accommodated with replacement bus stops outside of the immediate work area. These temporary closures, however, would need to be located along wide portions of the roadway where the maximum number of travel lanes can be accommodated during construction.

The Woodley Avenue currently has bicycle lanes on the VA Hospital project route. The City of Los Angeles 2010 Bike Plan proposes 200 miles of bikeways every five years for the next 35 years. The Bike Plan proposes bicycle lanes on multiple roadways with the study area.

If bikeways are provided prior to the project construction, it is likely that the Project will include the closure of these lanes. As a result, construction-related activities would potentially create unsafe conditions for bicyclists under restricted capacity conditions; therefore, these particular bicycle routes would be closed temporarily. To notify the public, signs would be posted at the next major intersections to the north and south of the construction area.

No impacts to public transit, bicycle, or pedestrian facilities are anticipated upon Project completion. The City of Los Angeles would require that worksite traffic control and detour plans be developed.

5.6 Conclusions

Once completed, the proposed Project will not create any significant impacts on the area traffic circulation system. Traffic impacts, though temporary in nature, are anticipated during construction as roadway trenching will be required to install the new water pipeline. The construction "footprint" will reduce roadway widths, thereby, in some cases, reduce the number of travel lanes and eliminate on-street parking.

LADWP has divided construction activities into short 150 to 300-foot work areas. Reviewing agencies will require Project schedules and construction worksite traffic control and detour plans to reduce the temporary Project construction impacts. These activities would mitigate potential impacts at the identified study roadway segments. The Project will not generate any new measurable and regular vehicle trips during the operations period, and long-term mitigation measures are therefore not required.

APPENDIX A –
DAILY TRAFFIC COUNTS

Prepared by NDS/ATD

VOLUME

Camarillo St W/o Cahuenga Blvd

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,126	6,220	12,346

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			13		10		23		12:00			79		84		163	
00:15			7		19		26		12:15			86		83		169	
00:30			11		14		25		12:30			88		80		168	
00:45			4	35	4	47	8	82	12:45			105	358	97	344	202	702
01:00			6		8		14		13:00			85		79		164	
01:15			2		4		6		13:15			91		101		192	
01:30			6		12		18		13:30			107		77		184	
01:45			8	22	6	30	14	52	13:45			97	380	80	337	177	717
02:00			1		6		7		14:00			105		95		200	
02:15			3		5		8		14:15			100		112		212	
02:30			7		5		12		14:30			90		92		182	
02:45			0	11	3	19	3	30	14:45			101	396	106	405	207	801
03:00			3		5		8		15:00			78		93		171	
03:15			3		1		4		15:15			86		101		187	
03:30			0		1		1		15:30			97		110		207	
03:45			0	6	5	12	5	18	15:45			123	384	111	415	234	799
04:00			1		3		4		16:00			94		117		211	
04:15			5		3		8		16:15			101		132		233	
04:30			2		2		4		16:30			108		109		217	
04:45			2	10	1	9	3	19	16:45			121	424	97	455	218	879
05:00			6		8		14		17:00			109		131		240	
05:15			7		5		12		17:15			101		151		252	
05:30			9		14		23		17:30			126		156		282	
05:45			13	35	12	39	25	74	17:45			108	444	147	585	255	1029
06:00			15		16		31		18:00			102		145		247	
06:15			25		23		48		18:15			99		167		266	
06:30			34		33		67		18:30			103		159		262	
06:45			40	114	29	101	69	215	18:45			90	394	156	627	246	1021
07:00			58		57		115		19:00			95		159		254	
07:15			77		67		144		19:15			80		134		214	
07:30			137		90		227		19:30			77		106		183	
07:45			150	422	103	317	253	739	19:45			79	331	95	494	174	825
08:00			133		90		223		20:00			57		84		141	
08:15			153		93		246		20:15			55		69		124	
08:30			149		96		245		20:30			48		66		114	
08:45			186	621	90	369	276	990	20:45			57	217	58	277	115	494
09:00			177		74		251		21:00			55		67		122	
09:15			112		68		180		21:15			57		48		105	
09:30			127		69		196		21:30			62		45		107	
09:45			87	503	85	296	172	799	21:45			34	208	58	218	92	426
10:00			89		54		143		22:00			42		52		94	
10:15			72		70		142		22:15			22		42		64	
10:30			84		58		142		22:30			20		30		50	
10:45			93	338	83	265	176	603	22:45			22	106	40	164	62	270
11:00			65		68		133		23:00			23		29		52	
11:15			83		69		152		23:15			11		32		43	
11:30			73		70		143		23:30			15		23		38	
11:45			85	306	83	290	168	596	23:45			12	61	21	105	33	166
TOTALS				2423		1794		**4217**	**TOTALS**				3703		4426		**8129**
SPLIT %				57.5%		42.5%		**34.2%**	**SPLIT %**				45.6%		54.4%		**65.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,126	6,220	12,346

AM Peak Hour			08:15	07:45	**08:15**	**PM Peak Hour**			16:45	18:15	**17:30**
AM Pk Volume			665	382	**1018**	**PM Pk Volume**			457	641	**1050**
Pk Hr Factor			0.894	0.927	**0.922**	**Pk Hr Factor**			0.907	0.960	**0.931**
7 - 9 Volume	0	0	1043	686	**1729**	**4 - 6 Volume**	0	0	868	1040	**1908**
7 - 9 Peak Hour			08:00	07:45	**08:00**	**4 - 6 Peak Hour**			16:45	17:00	**17:00**
7 - 9 Pk Volume	0	0	621	382	**990**	**4 - 6 Pk Volume**	0	0	457	585	**1029**
Pk Hr Factor	0.000	0.000	0.835	0.927	**0.897**	**Pk Hr Factor**	0.000	0.000	0.907	0.938	**0.912**

Prepared by NDS/ATD

VOLUME

Vineland Ave S/o Magnolia Blvd

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_002

DAILY TOTALS	NB	SB	EB	WB	Total
	13,542	12,469	0	0	26,011

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	54		48						102		12:00	188		163						351	
00:15	40		36						76		12:15	202		181						383	
00:30	36		36						72		12:30	214		178						392	
00:45	41	171	21	141					62	312	12:45	234	838	186	708					420	1546
01:00	32		19						51		13:00	199		147						346	
01:15	26		10						36		13:15	218		200						418	
01:30	13		14						27		13:30	242		172						414	
01:45	22	93	15	58					37	151	13:45	241	900	191	710					432	1610
02:00	26		9						35		14:00	257		154						411	
02:15	16		8						24		14:15	213		190						403	
02:30	17		5						22		14:30	195		174						369	
02:45	11	70	9	31					20	101	14:45	221	886	188	706					409	1592
03:00	10		9						19		15:00	252		176						428	
03:15	17		13						30		15:15	217		164						381	
03:30	17		11						28		15:30	237		168						405	
03:45	11	55	8	41					19	96	15:45	232	938	158	666					390	1604
04:00	12		11						23		16:00	265		160						425	
04:15	13		24						37		16:15	251		156						407	
04:30	19		18						37		16:30	232		179						411	
04:45	16	60	27	80					43	140	16:45	227	975	178	673					405	1648
05:00	30		34						64		17:00	284		185						469	
05:15	31		37						68		17:15	263		192						455	
05:30	35		64						99		17:30	288		199						487	
05:45	39	135	88	223					127	358	17:45	244	1079	178	754					422	1833
06:00	38		97						135		18:00	278		184						462	
06:15	73		158						231		18:15	272		188						460	
06:30	86		173						259		18:30	241		188						429	
06:45	97	294	190	618					287	912	18:45	278	1069	168	728					446	1797
07:00	95		210						305		19:00	212		172						384	
07:15	127		213						340		19:15	233		168						401	
07:30	135		317						452		19:30	216		151						367	
07:45	177	534	304	1044					481	1578	19:45	195	856	152	643					347	1499
08:00	142		237						379		20:00	206		132						338	
08:15	131		240						371		20:15	146		139						285	
08:30	150		248						398		20:30	140		129						269	
08:45	155	578	259	984					414	1562	20:45	160	652	130	530					290	1182
09:00	166		194						360		21:00	151		133						284	
09:15	169		187						356		21:15	149		127						276	
09:30	147		179						326		21:30	128		119						247	
09:45	181	663	208	768					389	1431	21:45	136	564	112	491					248	1055
10:00	173		146						319		22:00	147		122						269	
10:15	160		156						316		22:15	116		101						217	
10:30	179		138						317		22:30	93		95						188	
10:45	171	683	173	613					344	1296	22:45	91	447	66	384					157	831
11:00	135		161						296		23:00	83		62						145	
11:15	203		160						363		23:15	72		45						117	
11:30	193		167						360		23:30	63		54						117	
11:45	197	728	183	671					380	1399	23:45	56	274	43	204					99	478
TOTALS		4064		5272						9336	TOTALS		9478		7197						16675
SPLIT %		43.5%		56.5%						35.9%	SPLIT %		56.8%		43.2%						64.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	13,542	12,469	0	0	26,011

AM Peak Hour	11:45	07:30			07:30	PM Peak Hour	17:30	16:45			17:00
AM Pk Volume	801	1098			1683	PM Pk Volume	1082	754			1833
Pk Hr Factor	0.936	0.866			0.875	Pk Hr Factor	0.939	0.947			0.941
7 - 9 Volume	1112	2028	0	0	3140	4 - 6 Volume	2054	1427	0	0	3481
7 - 9 Peak Hour	07:45	07:30			07:30	4 - 6 Peak Hour	17:00	16:45			17:00
7 - 9 Pk Volume	600	1098	0	0	1683	4 - 6 Pk Volume	1079	754	0	0	1833
Pk Hr Factor	0.847	0.866	0.000	0.000	0.875	Pk Hr Factor	0.937	0.947	0.000	0.000	0.941

Prepared by NDS/ATD

VOLUME

Magnolia Blvd E/o Colfax Ave

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,898	14,263	27,161

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			28	36	64	12:00			209	227	436
00:15			35	45	80	12:15			198	229	427
00:30			15	24	39	12:30			206	233	439
00:45			19	97	23	128	42	225	12:45			199	812	217	906	416	1718
01:00			17	32	49	13:00			190	242	432
01:15			13	20	33	13:15			197	208	405
01:30			17	21	38	13:30			201	254	455
01:45			10	57	13	86	23	143	13:45			210	798	225	929	435	1727
02:00			12	20	32	14:00			209	236	445
02:15			13	13	26	14:15			217	268	485
02:30			10	13	23	14:30			217	261	478
02:45			9	44	9	55	18	99	14:45			189	832	220	985	409	1817
03:00			6	3	9	15:00			204	196	400
03:15			5	8	13	15:15			223	207	430
03:30			6	5	11	15:30			204	244	448
03:45			5	22	7	23	12	45	15:45			201	832	197	844	398	1676
04:00			9	6	15	16:00			197	222	419
04:15			4	8	12	16:15			208	220	428
04:30			15	5	20	16:30			222	244	466
04:45			16	44	6	25	22	69	16:45			197	824	263	949	460	1773
05:00			13	17	30	17:00			231	287	518
05:15			19	17	36	17:15			214	276	490
05:30			34	21	55	17:30			213	300	513
05:45			51	117	36	91	87	208	17:45			232	890	292	1155	524	2045
06:00			56	60	116	18:00			235	309	544
06:15			77	67	144	18:15			229	279	508
06:30			113	96	209	18:30			204	268	472
06:45			130	376	122	345	252	721	18:45			197	865	282	1138	479	2003
07:00			145	147	292	19:00			174	270	444
07:15			210	167	377	19:15			183	216	399
07:30			247	228	475	19:30			154	190	344
07:45			226	828	249	791	475	1619	19:45			145	656	184	860	329	1516
08:00			260	185	445	20:00			132	165	297
08:15			271	175	446	20:15			110	163	273
08:30			245	187	432	20:30			106	148	254
08:45			259	1035	183	730	442	1765	20:45			97	445	140	616	237	1061
09:00			261	201	462	21:00			104	146	250
09:15			234	207	441	21:15			97	111	208
09:30			220	220	440	21:30			103	115	218
09:45			218	933	213	841	431	1774	21:45			72	376	121	493	193	869
10:00			216	212	428	22:00			87	116	203
10:15			196	221	417	22:15			64	111	175
10:30			189	205	394	22:30			47	91	138
10:45			202	803	198	836	400	1639	22:45			62	260	67	385	129	645
11:00			206	194	400	23:00			39	81	120
11:15			193	201	394	23:15			48	60	108
11:30			184	195	379	23:30			33	61	94
11:45			213	796	203	793	416	1589	23:45			36	156	57	259	93	415
TOTALS				5152	4744	**9896**	**TOTALS**				7746	9519	**17265**
SPLIT %				52.1%	47.9%	**36.4%**	**SPLIT %**				44.9%	55.1%	**63.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,898	14,263	27,161

AM Peak Hour			08:15	11:45	**07:30**	**PM Peak Hour**			17:30	17:30	**17:30**
AM Pk Volume			1036	892	**1841**	**PM Pk Volume**			909	1180	**2089**
Pk Hr Factor			0.956	0.957	**0.969**	**Pk Hr Factor**			0.967	0.955	**0.960**
7 - 9 Volume	0	0	1863	1521	**3384**	**4 - 6 Volume**	0	0	1714	2104	**3818**
7 - 9 Peak Hour			08:00	07:30	**07:30**	**4 - 6 Peak Hour**			17:00	17:00	**17:00**
7 - 9 Pk Volume	0	0	1035	837	**1841**	**4 - 6 Pk Volume**	0	0	890	1155	**2045**
Pk Hr Factor	0.000	0.000	0.955	0.840	**0.969**	**Pk Hr Factor**	0.000	0.000	0.959	0.963	**0.976**

Prepared by NDS/ATD

VOLUME

Sherman Way E/o Woodman Ave

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,134	23,678	45,812

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			55		78		133		12:00			338		335		673	
00:15			51		77		128		12:15			296		389		685	
00:30			44		66		110		12:30			288		358		646	
00:45			40	190	60	281	100	471	12:45			319	1241	380	1462	699	2703
01:00			31		50		81		13:00			324		325		649	
01:15			36		35		71		13:15			318		291		609	
01:30			36		39		75		13:30			357		315		672	
01:45			35	138	40	164	75	302	13:45			322	1321	337	1268	659	2589
02:00			28		29		57		14:00			330		379		709	
02:15			27		23		50		14:15			340		334		674	
02:30			15		25		40		14:30			296		357		653	
02:45			16	86	30	107	46	193	14:45			355	1321	333	1403	688	2724
03:00			16		30		46		15:00			336		423		759	
03:15			22		31		53		15:15			327		384		711	
03:30			25		29		54		15:30			366		387		753	
03:45			26	89	29	119	55	208	15:45			343	1372	375	1569	718	2941
04:00			22		36		58		16:00			372		448		820	
04:15			32		35		67		16:15			360		395		755	
04:30			59		44		103		16:30			334		448		782	
04:45			72	185	47	162	119	347	16:45			379	1445	438	1729	817	3174
05:00			72		54		126		17:00			380		476		856	
05:15			96		78		174		17:15			353		426		779	
05:30			149		114		263		17:30			347		404		751	
05:45			191	508	162	408	353	916	17:45			334	1414	411	1717	745	3131
06:00			200		149		349		18:00			381		408		789	
06:15			223		196		419		18:15			317		425		742	
06:30			285		194		479		18:30			327		448		775	
06:45			348	1056	255	794	603	1850	18:45			287	1312	384	1665	671	2977
07:00			321		267		588		19:00			261		356		617	
07:15			351		340		691		19:15			276		360		636	
07:30			404		377		781		19:30			268		356		624	
07:45			429	1505	362	1346	791	2851	19:45			254	1059	287	1359	541	2418
08:00			409		375		784		20:00			244		303		547	
08:15			348		353		701		20:15			217		282		499	
08:30			335		300		635		20:30			218		287		505	
08:45			385	1477	325	1353	710	2830	20:45			232	911	274	1146	506	2057
09:00			347		287		634		21:00			205		297		502	
09:15			355		276		631		21:15			192		245		437	
09:30			300		254		554		21:30			199		230		429	
09:45			336	1338	297	1114	633	2452	21:45			187	783	224	996	411	1779
10:00			293		277		570		22:00			150		178		328	
10:15			324		305		629		22:15			138		176		314	
10:30			336		260		596		22:30			153		167		320	
10:45			333	1286	279	1121	612	2407	22:45			112	553	114	635	226	1188
11:00			302		328		630		23:00			98		130		228	
11:15			296		304		600		23:15			92		119		211	
11:30			293		345		638		23:30			82		110		192	
11:45			316	1207	351	1328	667	2535	23:45			65	337	73	432	138	769
TOTALS				9065		8297		**17362**	**TOTALS**				13069		15381		**28450**
SPLIT %				52.2%		47.8%		**37.9%**	**SPLIT %**				45.9%		54.1%		**62.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,134	23,678	45,812

AM Peak Hour			07:15	07:30	**07:30**	**PM Peak Hour**			16:45	16:30	**16:30**
AM Pk Volume			1593	1467	**3057**	**PM Pk Volume**			1459	1788	**3234**
Pk Hr Factor			0.928	0.973	**0.966**	**Pk Hr Factor**			0.960	0.939	**0.945**
7 - 9 Volume	0	0	2982	2699	**5681**	**4 - 6 Volume**	0	0	2859	3446	**6305**
7 - 9 Peak Hour			07:15	07:30	**07:30**	**4 - 6 Peak Hour**			16:45	16:30	**16:30**
7 - 9 Pk Volume	0	0	1593	1467	**3057**	**4 - 6 Pk Volume**	0	0	1459	1788	**3234**
Pk Hr Factor	0.000	0.000	0.928	0.973	**0.966**	**Pk Hr Factor**	0.000	0.000	0.960	0.939	**0.945**

Prepared by NDS/ATD

VOLUME

Sherman Way E/o Coldwater Canyon Ave

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,842	23,641	47,483

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			66		85		151		12:00			381		322		703	
00:15			52		89		141		12:15			367		366		733	
00:30			54		67		121		12:30			349		347		696	
00:45			43	215	57	298	100	513	12:45			348	1445	359	1394	707	2839
01:00			42		49		91		13:00			367		333		700	
01:15			37		37		74		13:15			374		307		681	
01:30			55		40		95		13:30			369		329		698	
01:45			34	168	40	166	74	334	13:45			417	1527	316	1285	733	2812
02:00			35		29		64		14:00			397		340		737	
02:15			25		33		58		14:15			404		355		759	
02:30			28		26		54		14:30			360		369		729	
02:45			19	107	22	110	41	217	14:45			364	1525	381	1445	745	2970
03:00			16		24		40		15:00			358		404		762	
03:15			20		23		43		15:15			390		377		767	
03:30			38		34		72		15:30			428		396		824	
03:45			38	112	37	118	75	230	15:45			375	1551	387	1564	762	3115
04:00			27		44		71		16:00			361		422		783	
04:15			41		35		76		16:15			337		381		718	
04:30			51		59		110		16:30			360		430		790	
04:45			78	197	70	208	148	405	16:45			374	1432	418	1651	792	3083
05:00			72		58		130		17:00			394		456		850	
05:15			101		74		175		17:15			367		439		806	
05:30			164		134		298		17:30			389		416		805	
05:45			179	516	188	454	367	970	17:45			333	1483	406	1717	739	3200
06:00			197		153		350		18:00			363		428		791	
06:15			237		199		436		18:15			365		414		779	
06:30			276		216		492		18:30			357		430		787	
06:45			317	1027	254	822	571	1849	18:45			305	1390	375	1647	680	3037
07:00			327		256		583		19:00			321		346		667	
07:15			341		321		662		19:15			305		351		656	
07:30			404		360		764		19:30			277		344		621	
07:45			387	1459	340	1277	727	2736	19:45			268	1171	320	1361	588	2532
08:00			379		347		726		20:00			271		313		584	
08:15			378		332		710		20:15			249		293		542	
08:30			335		304		639		20:30			246		277		523	
08:45			375	1467	312	1295	687	2762	20:45			222	988	267	1150	489	2138
09:00			342		290		632		21:00			230		280		510	
09:15			349		272		621		21:15			202		237		439	
09:30			341		281		622		21:30			194		221		415	
09:45			369	1401	288	1131	657	2532	21:45			184	810	216	954	400	1764
10:00			359		281		640		22:00			165		169		334	
10:15			363		316		679		22:15			125		156		281	
10:30			341		308		649		22:30			156		177		333	
10:45			351	1414	304	1209	655	2623	22:45			110	556	130	632	240	1188
11:00			408		333		741		23:00			113		131		244	
11:15			354		324		678		23:15			98		103		201	
11:30			360		339		699		23:30			87		110		197	
11:45			380	1502	337	1333	717	2835	23:45			81	379	76	420	157	799
TOTALS				9585		8421		18006	TOTALS				14257		15220		29477
SPLIT %				53.2%		46.8%		37.9%	SPLIT %				48.4%		51.6%		62.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,842	23,641	47,483

AM Peak Hour			07:30	07:30	07:30	PM Peak Hour			13:30	16:30	16:45
AM Pk Volume			1548	1379	2927	PM Pk Volume			1587	1743	3253
Pk Hr Factor			0.958	0.958	0.958	Pk Hr Factor			0.951	0.956	0.957
7 - 9 Volume	0	0	2926	2572	5498	4 - 6 Volume	0	0	2915	3368	6283
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:45	16:30	16:45
7 - 9 Pk Volume	0	0	1548	1379	2927	4 - 6 Pk Volume	0	0	1524	1743	3253
Pk Hr Factor	0.000	0.000	0.958	0.958	0.958	Pk Hr Factor	0.000	0.000	0.967	0.956	0.957

Prepared by NDS/ATD

VOLUME

Whitsett Ave S/o Sherman Way

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_006

DAILY TOTALS	NB	SB	EB	WB	Total
	7,783	7,952	0	0	15,735

AM Period	NB		SB		EB		WB		TOTAL	
00:00	19		16						35	
00:15	23		18						41	
00:30	12		8						20	
00:45	11	65	12	54					23	119
01:00	12		11						23	
01:15	13		6						19	
01:30	10		5						15	
01:45	9	44	7	29					16	73
02:00	6		3						9	
02:15	10		2						12	
02:30	4		7						11	
02:45	6	26	3	15					9	41
03:00	7		7						14	
03:15	9		8						17	
03:30	5		6						11	
03:45	1	22	3	24					4	46
04:00	11		6						17	
04:15	6		3						9	
04:30	18		9						27	
04:45	7	42	7	25					14	67
05:00	12		10						22	
05:15	22		12						34	
05:30	38		27						65	
05:45	30	102	37	86					67	188
06:00	32		50						82	
06:15	49		65						114	
06:30	62		88						150	
06:45	69	212	131	334					200	546
07:00	83		154						237	
07:15	101		206						307	
07:30	97		273						370	
07:45	122	403	308	941					430	1344
08:00	117		186						303	
08:15	110		171						281	
08:30	82		154						236	
08:45	75	384	145	656					220	1040
09:00	83		123						206	
09:15	75		110						185	
09:30	83		118						201	
09:45	76	317	103	454					179	771
10:00	64		89						153	
10:15	74		82						156	
10:30	79		91						170	
10:45	83	300	98	360					181	660
11:00	86		103						189	
11:15	92		82						174	
11:30	100		100						200	
11:45	78	356	91	376					169	732
TOTALS		2273		3354						5627
SPLIT %		40.4%		59.6%						35.8%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	83		89						172	
12:15	94		88						182	
12:30	97		129						226	
12:45	88	362	111	417					199	779
13:00	102		98						200	
13:15	97		99						196	
13:30	102		94						196	
13:45	119	420	124	415					243	835
14:00	127		129						256	
14:15	116		113						229	
14:30	141		138						279	
14:45	136	520	112	492					248	1012
15:00	120		121						241	
15:15	145		133						278	
15:30	161		130						291	
15:45	159	585	121	505					280	1090
16:00	167		150						317	
16:15	178		104						282	
16:30	161		158						319	
16:45	164	670	134	546					298	1216
17:00	211		135						346	
17:15	223		125						348	
17:30	185		153						338	
17:45	187	806	136	549					323	1355
18:00	188		110						298	
18:15	170		108						278	
18:30	141		122						263	
18:45	151	650	100	440					251	1090
19:00	123		105						228	
19:15	139		102						241	
19:30	123		94						217	
19:45	125	510	89	390					214	900
20:00	103		100						203	
20:15	118		75						193	
20:30	102		72						174	
20:45	61	384	82	329					143	713
21:00	95		78						173	
21:15	75		64						139	
21:30	69		60						129	
21:45	59	298	36	238					95	536
22:00	53		50						103	
22:15	53		39						92	
22:30	35		43						78	
22:45	41	182	40	172					81	354
23:00	32		25						57	
23:15	34		34						68	
23:30	29		26						55	
23:45	28	123	20	105					48	228
TOTALS		5510		4598						10108
SPLIT %		54.5%		45.5%						64.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	7,783	7,952	0	0	15,735

AM Peak Hour	07:30	07:15			07:15	PM Peak Hour	17:00	16:30			17:00
AM Pk Volume	446	973			1410	PM Pk Volume	806	552			1355
Pk Hr Factor	0.914	0.790			0.820	Pk Hr Factor	0.904	0.873			0.973
7 - 9 Volume	787	1597	0	0	2384	4 - 6 Volume	1476	1095	0	0	2571
7 - 9 Peak Hour	07:30	07:15			07:15	4 - 6 Peak Hour	17:00	16:30			17:00
7 - 9 Pk Volume	446	973	0	0	1410	4 - 6 Pk Volume	806	552	0	0	1355
Pk Hr Factor	0.914	0.790	0.000	0.000	0.820	Pk Hr Factor	0.904	0.873	0.000	0.000	0.973

Prepared by NDS/ATD

VOLUME

Vanowen St E/o Whitsett Ave

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,055	12,686	24,741

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			22		34		56		12:00			168		197		365	
00:15			19		28		47		12:15			196		182		378	
00:30			24		16		40		12:30			167		174		341	
00:45			17	82	14	92	31	174	12:45			162	693	179	732	341	1425
01:00			11		16		27		13:00			180		175		355	
01:15			19		11		30		13:15			179		181		360	
01:30			11		16		27		13:30			181		185		366	
01:45			13	54	12	55	25	109	13:45			200	740	168	709	368	1449
02:00			12		8		20		14:00			181		190		371	
02:15			10		6		16		14:15			183		220		403	
02:30			14		11		25		14:30			192		210		402	
02:45			7	43	4	29	11	72	14:45			223	779	222	842	445	1621
03:00			8		6		14		15:00			179		197		376	
03:15			11		11		22		15:15			186		239		425	
03:30			11		14		25		15:30			211		234		445	
03:45			7	37	10	41	17	78	15:45			225	801	265	935	490	1736
04:00			15		13		28		16:00			203		254		457	
04:15			15		8		23		16:15			235		249		484	
04:30			13		17		30		16:30			228		226		454	
04:45			21	64	25	63	46	127	16:45			231	897	253	982	484	1879
05:00			20		31		51		17:00			237		327		564	
05:15			35		35		70		17:15			231		304		535	
05:30			63		58		121		17:30			254		298		552	
05:45			62	180	49	173	111	353	17:45			187	909	282	1211	469	2120
06:00			71		78		149		18:00			209		312		521	
06:15			76		110		186		18:15			182		262		444	
06:30			130		113		243		18:30			200		234		434	
06:45			151	428	151	452	302	880	18:45			217	808	212	1020	429	1828
07:00			142		149		291		19:00			186		219		405	
07:15			189		193		382		19:15			176		194		370	
07:30			235		232		467		19:30			128		182		310	
07:45			300	866	206	780	506	1646	19:45			138	628	168	763	306	1391
08:00			277		200		477		20:00			141		146		287	
08:15			217		157		374		20:15			124		146		270	
08:30			193		126		319		20:30			110		122		232	
08:45			216	903	142	625	358	1528	20:45			101	476	129	543	230	1019
09:00			165		153		318		21:00			94		129		223	
09:15			154		159		313		21:15			99		131		230	
09:30			181		135		316		21:30			84		89		173	
09:45			175	675	140	587	315	1262	21:45			85	362	80	429	165	791
10:00			148		139		287		22:00			71		79		150	
10:15			157		141		298		22:15			58		85		143	
10:30			139		133		272		22:30			47		71		118	
10:45			147	591	138	551	285	1142	22:45			51	227	50	285	101	512
11:00			168		154		322		23:00			49		48		97	
11:15			165		172		337		23:15			43		31		74	
11:30			163		171		334		23:30			38		23		61	
11:45			161	657	159	656	320	1313	23:45			25	155	29	131	54	286
TOTALS				4580		4104		**8684**	**TOTALS**				7475		8582		**16057**
SPLIT %				52.7%		47.3%		**35.1%**	**SPLIT %**				46.6%		53.4%		**64.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,055	12,686	24,741

AM Peak Hour			07:30	07:15	**07:15**	**PM Peak Hour**			16:45	17:00	**16:45**
AM Pk Volume			1029	831	**1832**	**PM Pk Volume**			953	1211	**2135**
Pk Hr Factor			0.858	0.895	**0.905**	**Pk Hr Factor**			0.938	0.926	**0.946**
7 - 9 Volume	0	0	1769	1405	**3174**	**4 - 6 Volume**	0	0	1806	2193	**3999**
7 - 9 Peak Hour			07:30	07:15	**07:15**	**4 - 6 Peak Hour**			16:45	17:00	**16:45**
7 - 9 Pk Volume	0	0	1029	831	**1832**	**4 - 6 Pk Volume**	0	0	953	1211	**2135**
Pk Hr Factor	0.000	0.000	0.858	0.895	**0.905**	**Pk Hr Factor**	0.000	0.000	0.938	0.926	**0.946**

Prepared by NDS/ATD

VOLUME

Oxnard St E/o Kester Ave

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,661	11,825	22,486

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			21		23		44		12:00			153		155		308	
00:15			16		21		37		12:15			172		170		342	
00:30			19		16		35		12:30			157		182		339	
00:45			17	73	15	75	32	148	12:45			186	668	165	672	351	1340
01:00			16		22		38		13:00			175		190		365	
01:15			10		9		19		13:15			161		202		363	
01:30			7		7		14		13:30			162		156		318	
01:45			7	40	8	46	15	86	13:45			153	651	174	722	327	1373
02:00			15		7		22		14:00			176		209		385	
02:15			6		9		15		14:15			159		161		320	
02:30			10		5		15		14:30			177		171		348	
02:45			5	36	8	29	13	65	14:45			178	690	187	728	365	1418
03:00			2		5		7		15:00			180		175		355	
03:15			1		4		5		15:15			164		189		353	
03:30			6		1		7		15:30			182		192		374	
03:45			6	15	3	13	9	28	15:45			190	716	214	770	404	1486
04:00			5		2		7		16:00			171		211		382	
04:15			1		4		5		16:15			200		219		419	
04:30			2		2		4		16:30			182		231		413	
04:45			3	11	2	10	5	21	16:45			183	736	205	866	388	1602
05:00			0		5		5		17:00			204		217		421	
05:15			4		10		14		17:15			197		240		437	
05:30			7		13		20		17:30			225		245		470	
05:45			5	16	5	33	10	49	17:45			209	835	237	939	446	1774
06:00			7		14		21		18:00			226		256		482	
06:15			10		18		28		18:15			234		256		490	
06:30			17		36		53		18:30			214		230		444	
06:45			26	60	49	117	75	177	18:45			223	897	235	977	458	1874
07:00			46		63		109		19:00			216		219		435	
07:15			62		91		153		19:15			201		231		432	
07:30			82		117		199		19:30			190		212		402	
07:45			117	307	153	424	270	731	19:45			158	765	167	829	325	1594
08:00			134		168		302		20:00			161		175		336	
08:15			178		201		379		20:15			117		132		249	
08:30			218		223		441		20:30			109		126		235	
08:45			229	759	248	840	477	1599	20:45			117	504	103	536	220	1040
09:00			205		245		450		21:00			87		99		186	
09:15			215		246		461		21:15			99		105		204	
09:30			229		236		465		21:30			86		90		176	
09:45			220	869	224	951	444	1820	21:45			65	337	73	367	138	704
10:00			173		223		396		22:00			71		77		148	
10:15			194		196		390		22:15			70		72		142	
10:30			174		204		378		22:30			42		66		108	
10:45			148	689	183	806	331	1495	22:45			49	232	53	268	102	500
11:00			147		143		290		23:00			40		33		73	
11:15			162		172		334		23:15			36		37		73	
11:30			157		190		347		23:30			43		30		73	
11:45			139	605	172	677	311	1282	23:45			31	150	30	130	61	280
TOTALS				3480		4021		**7501**	**TOTALS**				7181		7804		**14985**
SPLIT %				46.4%		53.6%		**33.4%**	**SPLIT %**				47.9%		52.1%		**66.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,661	11,825	22,486

AM Peak Hour			08:45	08:45	**08:45**	**PM Peak Hour**			18:00	17:30	**17:30**
AM Pk Volume			878	975	**1853**	**PM Pk Volume**			897	994	**1888**
Pk Hr Factor			0.959	0.983	**0.971**	**Pk Hr Factor**			0.958	0.971	**0.963**
7 - 9 Volume	0	0	1066	1264	**2330**	**4 - 6 Volume**	0	0	1571	1805	**3376**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			17:00	17:00	**17:00**
7 - 9 Pk Volume	0	0	759	840	**1599**	**4 - 6 Pk Volume**	0	0	835	939	**1774**
Pk Hr Factor	0.000	0.000	0.829	0.847	**0.838**	**Pk Hr Factor**	0.000	0.000	0.928	0.958	**0.944**

Prepared by NDS/ATD

VOLUME

Van Nuys Blvd S/o Clark St

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_009

DAILY TOTALS	NB	SB	EB	WB	Total
	17,828	17,658	0	0	35,486

AM Period	NB		SB		EB		WB		TOTAL	
00:00	44		36						80	
00:15	36		21						57	
00:30	32		24						56	
00:45	36	148	24	105					60	253
01:00	20		19						39	
01:15	22		14						36	
01:30	23		9						32	
01:45	13	78	6	48					19	126
02:00	16		13						29	
02:15	10		11						21	
02:30	9		9						18	
02:45	13	48	9	42					22	90
03:00	15		6						21	
03:15	7		4						11	
03:30	9		6						15	
03:45	5	36	8	24					13	60
04:00	11		7						18	
04:15	15		6						21	
04:30	15		18						33	
04:45	18	59	19	50					37	109
05:00	26		32						58	
05:15	35		45						80	
05:30	38		45						83	
05:45	64	163	92	214					156	377
06:00	67		152						219	
06:15	75		182						257	
06:30	84		277						361	
06:45	135	361	303	914					438	1275
07:00	141		317						458	
07:15	170		326						496	
07:30	164		348						512	
07:45	263	738	366	1357					629	2095
08:00	278		368						646	
08:15	236		281						517	
08:30	254		282						536	
08:45	225	993	322	1253					547	2246
09:00	235		301						536	
09:15	213		305						518	
09:30	244		307						551	
09:45	260	952	311	1224					571	2176
10:00	230		316						546	
10:15	262		270						532	
10:30	295		269						564	
10:45	250	1037	282	1137					532	2174
11:00	292		321						613	
11:15	274		285						559	
11:30	301		313						614	
11:45	317	1184	310	1229					627	2413
TOTALS		5797		7597						**13394**
SPLIT %		43.3%		56.7%						**37.7%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	282		342						624	
12:15	310		298						608	
12:30	294		280						574	
12:45	321	1207	285	1205					606	2412
13:00	316		294						610	
13:15	323		267						590	
13:30	338		283						621	
13:45	328	1305	280	1124					608	2429
14:00	349		322						671	
14:15	350		311						661	
14:30	323		318						641	
14:45	318	1340	272	1223					590	2563
15:00	365		326						691	
15:15	354		283						637	
15:30	341		242						583	
15:45	339	1399	294	1145					633	2544
16:00	316		255						571	
16:15	327		293						620	
16:30	380		298						678	
16:45	332	1355	264	1110					596	2465
17:00	346		294						640	
17:15	357		245						602	
17:30	323		252						575	
17:45	318	1344	274	1065					592	2409
18:00	314		230						544	
18:15	291		226						517	
18:30	254		201						455	
18:45	266	1125	219	876					485	2001
19:00	300		229						529	
19:15	250		180						430	
19:30	202		174						376	
19:45	199	951	151	734					350	1685
20:00	203		166						369	
20:15	185		160						345	
20:30	172		134						306	
20:45	166	726	142	602					308	1328
21:00	167		144						311	
21:15	151		144						295	
21:30	137		106						243	
21:45	129	584	101	495					230	1079
22:00	105		83						188	
22:15	107		73						180	
22:30	122		86						208	
22:45	97	431	56	298					153	729
23:00	79		47						126	
23:15	70		52						122	
23:30	67		44						111	
23:45	48	264	41	184					89	448
TOTALS		12031		10061						**22092**
SPLIT %		54.5%		45.5%						**62.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	17,828	17,658	0	0	35,486

AM Peak Hour	11:30	07:15			**11:30**
AM Pk Volume	1210	1408			**2473**
Pk Hr Factor	0.954	0.957			**0.986**
7 - 9 Volume	1731	2610	0	0	**4341**
7 - 9 Peak Hour	07:45	07:15			**07:45**
7 - 9 Pk Volume	1031	1408	0	0	**2328**
Pk Hr Factor	0.927	0.957	0.000	0.000	**0.901**

PM Peak Hour	16:30	13:45			**14:15**
PM Pk Volume	1415	1231			**2583**
Pk Hr Factor	0.931	0.956			**0.935**
4 - 6 Volume	2699	2175	0	0	**4874**
4 - 6 Peak Hour	16:30	16:15			**16:15**
4 - 6 Pk Volume	1415	1149	0	0	**2534**
Pk Hr Factor	0.931	0.964	0.000	0.000	**0.934**

Prepared by NDS/ATD

VOLUME

Burbank Blvd W/o Woodman Ave

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,732	13,635	27,367

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			23		44		67		12:00			182		192		374	
00:15			24		24		48		12:15			174		178		352	
00:30			13		24		37		12:30			185		200		385	
00:45			14	74	24	116	38	190	12:45			214	755	191	761	405	1516
01:00			20		15		35		13:00			188		216		404	
01:15			9		13		22		13:15			181		200		381	
01:30			11		16		27		13:30			170		193		363	
01:45			6	46	13	57	19	103	13:45			173	712	195	804	368	1516
02:00			3		12		15		14:00			194		209		403	
02:15			11		13		24		14:15			189		208		397	
02:30			5		11		16		14:30			235		212		447	
02:45			7	26	10	46	17	72	14:45			225	843	200	829	425	1672
03:00			4		11		15		15:00			251		213		464	
03:15			6		11		17		15:15			246		212		458	
03:30			5		10		15		15:30			228		212		440	
03:45			5	20	15	47	20	67	15:45			245	970	242	879	487	1849
04:00			7		10		17		16:00			244		240		484	
04:15			8		14		22		16:15			275		240		515	
04:30			7		17		24		16:30			260		257		517	
04:45			7	29	13	54	20	83	16:45			272	1051	250	987	522	2038
05:00			13		17		30		17:00			282		253		535	
05:15			27		25		52		17:15			308		259		567	
05:30			28		53		81		17:30			268		250		518	
05:45			37	105	68	163	105	268	17:45			291	1149	264	1026	555	2175
06:00			42		72		114		18:00			280		263		543	
06:15			63		95		158		18:15			295		248		543	
06:30			110		126		236		18:30			270		249		519	
06:45			126	341	137	430	263	771	18:45			247	1092	231	991	478	2083
07:00			156		176		332		19:00			210		208		418	
07:15			229		226		455		19:15			176		183		359	
07:30			271		253		524		19:30			158		178		336	
07:45			319	975	275	930	594	1905	19:45			116	660	170	739	286	1399
08:00			284		272		556		20:00			138		148		286	
08:15			280		258		538		20:15			130		137		267	
08:30			270		225		495		20:30			100		131		231	
08:45			253	1087	236	991	489	2078	20:45			114	482	127	543	241	1025
09:00			278		189		467		21:00			99		102		201	
09:15			268		196		464		21:15			98		126		224	
09:30			231		212		443		21:30			99		105		204	
09:45			223	1000	209	806	432	1806	21:45			82	378	121	454	203	832
10:00			186		209		395		22:00			68		94		162	
10:15			180		174		354		22:15			61		90		151	
10:30			226		184		410		22:30			66		75		141	
10:45			193	785	184	751	377	1536	22:45			51	246	70	329	121	575
11:00			208		172		380		23:00			50		68		118	
11:15			172		156		328		23:15			39		53		92	
11:30			178		179		357		23:30			29		45		74	
11:45			195	753	191	698	386	1451	23:45			35	153	38	204	73	357
TOTALS				5241		5089		10330	TOTALS				8491		8546		17037
SPLIT %				50.7%		49.3%		37.7%	SPLIT %				49.8%		50.2%		62.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,732	13,635	27,367

AM Peak Hour			07:30	07:30	07:30	PM Peak Hour			17:00	17:15	17:15
AM Pk Volume			1154	1058	2212	PM Pk Volume			1149	1036	2183
Pk Hr Factor			0.904	0.962	0.931	Pk Hr Factor			0.933	0.981	0.963
7 - 9 Volume	0	0	2062	1921	3983	4 - 6 Volume	0	0	2200	2013	4213
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	1154	1058	2212	4 - 6 Pk Volume	0	0	1149	1026	2175
Pk Hr Factor	0.000	0.000	0.904	0.962	0.931	Pk Hr Factor	0.000	0.000	0.933	0.972	0.959

Prepared by NDS/ATD

VOLUME

Magnolia Blvd E/o Van Nuys Blvd

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,951	11,400	22,351

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			17		12		29		12:00			145		149		294	
00:15			14		8		22		12:15			149		154		303	
00:30			8		9		17		12:30			124		127		251	
00:45			8	47	9	38	17	85	12:45			129	547	145	575	274	1122
01:00			3		4		7		13:00			138		160		298	
01:15			6		5		11		13:15			149		148		297	
01:30			5		9		14		13:30			119		183		302	
01:45			5	19	7	25	12	44	13:45			163	569	242	733	405	1302
02:00			5		5		10		14:00			141		189		330	
02:15			1		3		4		14:15			173		182		355	
02:30			2		3		5		14:30			174		181		355	
02:45			4	12	2	13	6	25	14:45			226	714	190	742	416	1456
03:00			3		1		4		15:00			217		212		429	
03:15			1		2		3		15:15			194		228		422	
03:30			3		2		5		15:30			195		233		428	
03:45			2	9	1	6	3	15	15:45			200	806	190	863	390	1669
04:00			1		3		4		16:00			229		149		378	
04:15			4		6		10		16:15			227		230		457	
04:30			2		7		9		16:30			247		208		455	
04:45			7	14	5	21	12	35	16:45			258	961	189	776	447	1737
05:00			9		12		21		17:00			274		215		489	
05:15			9		12		21		17:15			268		223		491	
05:30			15		20		35		17:30			286		246		532	
05:45			7	40	21	65	28	105	17:45			297	1125	220	904	517	2029
06:00			23		50		73		18:00			238		220		458	
06:15			32		73		105		18:15			205		216		421	
06:30			49		97		146		18:30			190		224		414	
06:45			86	190	131	351	217	541	18:45			154	787	200	860	354	1647
07:00			111		169		280		19:00			164		189		353	
07:15			174		215		389		19:15			153		174		327	
07:30			272		267		539		19:30			124		149		273	
07:45			316	873	332	983	648	1856	19:45			109	550	138	650	247	1200
08:00			269		285		554		20:00			116		103		219	
08:15			227		234		461		20:15			104		87		191	
08:30			224		240		464		20:30			101		89		190	
08:45			207	927	258	1017	465	1944	20:45			57	378	97	376	154	754
09:00			194		213		407		21:00			77		77		154	
09:15			201		195		396		21:15			69		76		145	
09:30			181		151		332		21:30			54		59		113	
09:45			148	724	151	710	299	1434	21:45			61	261	60	272	121	533
10:00			129		146		275		22:00			59		53		112	
10:15			130		158		288		22:15			38		44		82	
10:30			144		153		297		22:30			57		40		97	
10:45			148	551	157	614	305	1165	22:45			25	179	25	162	50	341
11:00			139		148		287		23:00			42		30		72	
11:15			133		146		279		23:15			25		23		48	
11:30			127		134		261		23:30			23		20		43	
11:45			150	549	126	554	276	1103	23:45			29	119	17	90	46	209
TOTALS				3955		4397		8352	TOTALS				6996		7003		13999
SPLIT %				47.4%		52.6%		37.4%	SPLIT %				50.0%		50.0%		62.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,951	11,400	22,351

AM Peak Hour			07:30	07:30	07:30	PM Peak Hour			17:00	17:15	17:00
AM Pk Volume			1084	1118	2202	PM Pk Volume			1125	909	2029
Pk Hr Factor			0.858	0.842	0.850	Pk Hr Factor			0.947	0.924	0.953
7 - 9 Volume	0	0	1800	2000	3800	4 - 6 Volume	0	0	2086	1680	3766
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	1084	1118	2202	4 - 6 Pk Volume	0	0	1125	904	2029
Pk Hr Factor	0.000	0.000	0.858	0.842	0.850	Pk Hr Factor	0.000	0.000	0.947	0.919	0.953

Prepared by NDS/ATD

VOLUME

Victory Blvd W/o Hayvenhurst Ave

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,277	19,803	40,080

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			27		33		60		12:00			245		222		467	
00:15			22		30		52		12:15			234		236		470	
00:30			19		21		40		12:30			242		219		461	
00:45			17	85	20	104	37	189	12:45			274	995	238	915	512	1910
01:00			19		17		36		13:00			230		235		465	
01:15			15		27		42		13:15			265		232		497	
01:30			8		16		24		13:30			244		261		505	
01:45			12	54	15	75	27	129	13:45			276	1015	230	958	506	1973
02:00			12		11		23		14:00			302		258		560	
02:15			11		7		18		14:15			266		265		531	
02:30			8		9		17		14:30			329		300		629	
02:45			14	45	19	46	33	91	14:45			294	1191	305	1128	599	2319
03:00			8		9		17		15:00			327		296		623	
03:15			4		6		10		15:15			352		343		695	
03:30			10		14		24		15:30			399		327		726	
03:45			6	28	11	40	17	68	15:45			316	1394	360	1326	676	2720
04:00			9		14		23		16:00			400		322		722	
04:15			17		16		33		16:15			334		339		673	
04:30			19		21		40		16:30			384		367		751	
04:45			27	72	29	80	56	152	16:45			373	1491	362	1390	735	2881
05:00			40		24		64		17:00			396		374		770	
05:15			57		60		117		17:15			426		422		848	
05:30			65		114		179		17:30			436		422		858	
05:45			94	256	103	301	197	557	17:45			422	1680	354	1572	776	3252
06:00			150		114		264		18:00			401		392		793	
06:15			156		206		362		18:15			403		396		799	
06:30			209		298		507		18:30			349		345		694	
06:45			291	806	302	920	593	1726	18:45			331	1484	317	1450	648	2934
07:00			344		383		727		19:00			284		263		547	
07:15			384		467		851		19:15			277		277		554	
07:30			457		497		954		19:30			248		216		464	
07:45			382	1567	437	1784	819	3351	19:45			197	1006	204	960	401	1966
08:00			398		446		844		20:00			202		196		398	
08:15			396		440		836		20:15			190		212		402	
08:30			416		461		877		20:30			153		164		317	
08:45			376	1586	444	1791	820	3377	20:45			166	711	125	697	291	1408
09:00			351		387		738		21:00			136		157		293	
09:15			355		373		728		21:15			180		173		353	
09:30			346		341		687		21:30			151		139		290	
09:45			370	1422	340	1441	710	2863	21:45			126	593	122	591	248	1184
10:00			315		235		550		22:00			109		103		212	
10:15			274		218		492		22:15			126		101		227	
10:30			308		210		518		22:30			75		105		180	
10:45			265	1162	225	888	490	2050	22:45			70	380	77	386	147	766
11:00			275		185		460		23:00			77		67		144	
11:15			268		202		470		23:15			57		48		105	
11:30			241		195		436		23:30			55		38		93	
11:45			245	1029	190	772	435	1801	23:45			36	225	35	188	71	413
TOTALS				8112		8242		16354	TOTALS				12165		11561		23726
SPLIT %				49.6%		50.4%		40.8%	SPLIT %				51.3%		48.7%		59.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,277	19,803	40,080

AM Peak Hour			07:30	07:15	07:15	PM Peak Hour			17:15	17:15	17:15
AM Pk Volume			1633	1847	3468	PM Pk Volume			1685	1590	3275
Pk Hr Factor			0.893	0.929	0.909	Pk Hr Factor			0.966	0.942	0.954
7 - 9 Volume	0	0	3153	3575	6728	4 - 6 Volume	0	0	3171	2962	6133
7 - 9 Peak Hour			07:30	07:15	07:15	4 - 6 Peak Hour			17:00	16:45	17:00
7 - 9 Pk Volume	0	0	1633	1847	3468	4 - 6 Pk Volume	0	0	1680	1580	3252
Pk Hr Factor	0.000	0.000	0.893	0.929	0.909	Pk Hr Factor	0.000	0.000	0.963	0.936	0.948

Prepared by NDS/ATD

VOLUME

Victory Blvd E/o Reseda Blvd

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_013

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,385	18,203	37,588

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			42		27		69		12:00			218		226		444	
00:15			26		20		46		12:15			216		242		458	
00:30			17		23		40		12:30			286		254		540	
00:45			14	99	19	89	33	188	12:45			282	1002	272	994	554	1996
01:00			11		9		20		13:00			215		232		447	
01:15			10		7		17		13:15			251		265		516	
01:30			15		7		22		13:30			253		261		514	
01:45			12	48	8	31	20	79	13:45			277	996	280	1038	557	2034
02:00			12		8		20		14:00			275		223		498	
02:15			8		12		20		14:15			312		258		570	
02:30			11		7		18		14:30			296		277		573	
02:45			6	37	7	34	13	71	14:45			282	1165	281	1039	563	2204
03:00			4		6		10		15:00			323		308		631	
03:15			5		7		12		15:15			384		353		737	
03:30			7		5		12		15:30			327		340		667	
03:45			5	21	7	25	12	46	15:45			322	1356	303	1304	625	2660
04:00			10		18		28		16:00			341		299		640	
04:15			8		15		23		16:15			362		313		675	
04:30			10		21		31		16:30			348		343		691	
04:45			16	44	21	75	37	119	16:45			371	1422	357	1312	728	2734
05:00			29		23		52		17:00			379		334		713	
05:15			33		30		63		17:15			428		379		807	
05:30			52		89		141		17:30			421		383		804	
05:45			83	197	84	226	167	423	17:45			420	1648	384	1480	804	3128
06:00			98		87		185		18:00			408		377		785	
06:15			136		142		278		18:15			413		358		771	
06:30			201		200		401		18:30			367		310		677	
06:45			287	722	236	665	523	1387	18:45			367	1555	294	1339	661	2894
07:00			312		245		557		19:00			315		254		569	
07:15			386		374		760		19:15			220		226		446	
07:30			402		419		821		19:30			193		173		366	
07:45			450	1550	420	1458	870	3008	19:45			186	914	185	838	371	1752
08:00			376		426		802		20:00			216		168		384	
08:15			383		392		775		20:15			199		174		373	
08:30			312		358		670		20:30			177		131		308	
08:45			320	1391	389	1565	709	2956	20:45			153	745	123	596	276	1341
09:00			317		338		655		21:00			145		101		246	
09:15			288		327		615		21:15			188		123		311	
09:30			338		287		625		21:30			139		95		234	
09:45			303	1246	272	1224	575	2470	21:45			156	628	105	424	261	1052
10:00			266		255		521		22:00			110		80		190	
10:15			265		274		539		22:15			111		74		185	
10:30			261		260		521		22:30			78		83		161	
10:45			268	1060	277	1066	545	2126	22:45			80	379	58	295	138	674
11:00			262		230		492		23:00			73		47		120	
11:15			259		226		485		23:15			58		44		102	
11:30			215		232		447		23:30			42		38		80	
11:45			213	949	240	928	453	1877	23:45			38	211	29	158	67	369
TOTALS				7364		7386		**14750**	**TOTALS**				12021		10817		**22838**
SPLIT %				49.9%		50.1%		**39.2%**	**SPLIT %**				52.6%		47.4%		**60.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,385	18,203	37,588

AM Peak Hour			07:15	07:30	**07:30**	**PM Peak Hour**			17:15	17:15	**17:15**
AM Pk Volume			1614	1657	**3268**	**PM Pk Volume**			1677	1523	**3200**
Pk Hr Factor			0.897	0.972	**0.939**	**Pk Hr Factor**			0.980	0.992	**0.991**
7 - 9 Volume	0	0	2941	3023	**5964**	**4 - 6 Volume**	0	0	3070	2792	**5862**
7 - 9 Peak Hour			07:15	07:30	**07:30**	**4 - 6 Peak Hour**			17:00	17:00	**17:00**
7 - 9 Pk Volume	0	0	1614	1657	**3268**	**4 - 6 Pk Volume**	0	0	1648	1480	**3128**
Pk Hr Factor	0.000	0.000	0.897	0.972	**0.939**	**Pk Hr Factor**	0.000	0.000	0.963	0.964	**0.969**

Prepared by NDS/ATD

VOLUME

Balboa Blvd N/o Victory Blvd

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_014

DAILY TOTALS	NB	SB	EB	WB	Total
	15,078	15,458	0	0	30,536

AM Period	NB		SB		EB		WB		TOTAL	
00:00	41		21						62	
00:15	30		11						41	
00:30	27		9						36	
00:45	24	122	10	51					34	173
01:00	11		4						15	
01:15	10		8						18	
01:30	21		8						29	
01:45	13	55	6	26					19	81
02:00	13		5						18	
02:15	10		7						17	
02:30	8		6						14	
02:45	5	36	6	24					11	60
03:00	8		3						11	
03:15	4		8						12	
03:30	9		5						14	
03:45	9	30	8	24					17	54
04:00	5		8						13	
04:15	7		12						19	
04:30	16		15						31	
04:45	13	41	17	52					30	93
05:00	9		34						43	
05:15	21		55						76	
05:30	38		83						121	
05:45	47	115	123	295					170	410
06:00	58		190						248	
06:15	50		276						326	
06:30	76		358						434	
06:45	99	283	374	1198					473	1481
07:00	133		415						548	
07:15	120		383						503	
07:30	181		407						588	
07:45	201	635	420	1625					621	2260
08:00	186		407						593	
08:15	165		404						569	
08:30	184		439						623	
08:45	176	711	404	1654					580	2365
09:00	184		341						525	
09:15	172		296						468	
09:30	178		278						456	
09:45	185	719	268	1183					453	1902
10:00	200		231						431	
10:15	182		256						438	
10:30	177		210						387	
10:45	181	740	211	908					392	1648
11:00	189		174						363	
11:15	199		188						387	
11:30	211		206						417	
11:45	233	832	184	752					417	1584
TOTALS		4319		7792						12111
SPLIT %		35.7%		64.3%						39.7%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	214		184						398	
12:15	216		219						435	
12:30	222		207						429	
12:45	234	886	228	838					462	1724
13:00	248		193						441	
13:15	229		208						437	
13:30	252		215						467	
13:45	242	971	233	849					475	1820
14:00	249		203						452	
14:15	271		185						456	
14:30	270		248						518	
14:45	271	1061	226	862					497	1923
15:00	268		229						497	
15:15	282		279						561	
15:30	291		260						551	
15:45	283	1124	203	971					486	2095
16:00	321		232						553	
16:15	280		226						506	
16:30	364		233						597	
16:45	339	1304	207	898					546	2202
17:00	378		202						580	
17:15	390		236						626	
17:30	406		247						653	
17:45	353	1527	208	893					561	2420
18:00	364		210						574	
18:15	297		199						496	
18:30	348		236						584	
18:45	266	1275	172	817					438	2092
19:00	245		174						419	
19:15	252		153						405	
19:30	213		130						343	
19:45	177	887	20	477					197	1364
20:00	185		127						312	
20:15	186		135						321	
20:30	147		92						239	
20:45	136	654	106	460					242	1114
21:00	134		109						243	
21:15	121		79						200	
21:30	103		76						179	
21:45	100	458	54	318					154	776
22:00	104		66						170	
22:15	101		50						151	
22:30	97		48						145	
22:45	86	388	27	191					113	579
23:00	79		36						115	
23:15	48		21						69	
23:30	56		18						74	
23:45	41	224	17	92					58	316
TOTALS		10759		7666						18425
SPLIT %		58.4%		41.6%						60.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	15,078	15,458	0	0	30,536

AM Peak Hour	11:45	07:45			07:45
AM Pk Volume	885	1670			2406
Pk Hr Factor	0.950	0.951			0.965
7 - 9 Volume	1346	3279	0	0	4625
7 - 9 Peak Hour	07:45	07:45			07:45
7 - 9 Pk Volume	736	1670	0	0	2406
Pk Hr Factor	0.915	0.951	0.000	0.000	0.965

PM Peak Hour	17:00	14:45			17:00
PM Pk Volume	1527	994			2420
Pk Hr Factor	0.940	0.891			0.926
4 - 6 Volume	2831	1791	0	0	4622
4 - 6 Peak Hour	17:00	16:00			17:00
4 - 6 Pk Volume	1527	898	0	0	2420
Pk Hr Factor	0.940	0.964	0.000	0.000	0.926

Prepared by NDS/ATD

VOLUME

Woodley Ave N/o Sherman Way

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_015

DAILY TOTALS	NB	SB	EB	WB	Total
	13,699	13,256	0	0	26,955

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	13		21				34		12:00	175		178				353	
00:15	17		21				38		12:15	208		191				399	
00:30	14		11				25		12:30	207		182				389	
00:45	20	64	12	65			32	129	12:45	204	794	162	713			366	1507
01:00	21		17				38		13:00	215		171				386	
01:15	19		15				34		13:15	203		167				370	
01:30	13		34				47		13:30	184		178				362	
01:45	16	69	21	87			37	156	13:45	220	822	167	683			387	1505
02:00	11		21				32		14:00	205		164				369	
02:15	16		10				26		14:15	214		173				387	
02:30	9		5				14		14:30	262		177				439	
02:45	20	56	9	45			29	101	14:45	269	950	209	723			478	1673
03:00	10		7				17		15:00	243		195				438	
03:15	20		9				29		15:15	241		172				413	
03:30	16		8				24		15:30	274		215				489	
03:45	18	64	8	32			26	96	15:45	237	995	203	785			440	1780
04:00	31		12				43		16:00	240		183				423	
04:15	36		5				41		16:15	283		181				464	
04:30	34		9				43		16:30	287		192				479	
04:45	48	149	15	41			63	190	16:45	316	1126	205	761			521	1887
05:00	39		28				67		17:00	308		227				535	
05:15	62		30				92		17:15	318		208				526	
05:30	88		52				140		17:30	314		195				509	
05:45	117	306	121	231			238	537	17:45	331	1271	165	795			496	2066
06:00	99		146				245		18:00	268		175				443	
06:15	151		239				390		18:15	275		159				434	
06:30	137		280				417		18:30	217		178				395	
06:45	147	534	323	988			470	1522	18:45	220	980	123	635			343	1615
07:00	151		385				536		19:00	168		140				308	
07:15	170		383				553		19:15	175		114				289	
07:30	152		386				538		19:30	141		102				243	
07:45	191	664	404	1558			595	2222	19:45	147	631	114	470			261	1101
08:00	185		425				610		20:00	175		123				298	
08:15	177		376				553		20:15	163		90				253	
08:30	168		305				473		20:30	114		87				201	
08:45	168	698	311	1417			479	2115	20:45	116	568	71	371			187	939
09:00	189		290				479		21:00	133		70				203	
09:15	180		269				449		21:15	87		75				162	
09:30	188		205				393		21:30	90		66				156	
09:45	163	720	200	964			363	1684	21:45	79	389	57	268			136	657
10:00	191		162				353		22:00	75		67				142	
10:15	172		184				356		22:15	71		56				127	
10:30	185		150				335		22:30	57		52				109	
10:45	170	718	159	655			329	1373	22:45	57	260	28	203			85	463
11:00	176		145				321		23:00	43		44				87	
11:15	167		155				322		23:15	36		38				74	
11:30	187		157				344		23:30	28		38				66	
11:45	201	731	169	626			370	1357	23:45	33	140	20	140			53	280
TOTALS		4773		6709				**11482**	**TOTALS**		8926		6547				**15473**
SPLIT %		41.6%		58.4%				**42.6%**	**SPLIT %**		57.7%		42.3%				**57.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	13,699	13,256	0	0	26,955

AM Peak Hour	11:45	07:15			**07:15**	**PM Peak Hour**	17:00	16:45			**16:45**
AM Pk Volume	791	1598			**2296**	**PM Pk Volume**	1271	835			**2091**
Pk Hr Factor	0.951	0.940			**0.941**	**Pk Hr Factor**	0.960	0.920			**0.977**
7 - 9 Volume	1362	2975	0	0	**4337**	**4 - 6 Volume**	2397	1556	0	0	**3953**
7 - 9 Peak Hour	07:45	07:15			**07:15**	**4 - 6 Peak Hour**	17:00	16:45			**16:45**
7 - 9 Pk Volume	721	1598	0	0	**2296**	**4 - 6 Pk Volume**	1271	835	0	0	**2091**
Pk Hr Factor	0.944	0.940	0.000	0.000	**0.941**	**Pk Hr Factor**	0.960	0.920	0.000	0.000	**0.977**

Prepared by NDS/ATD

VOLUME

Roscoe Blvd W/o Woodley Ave

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_016

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,126	21,156	42,282

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			56		48		104		12:00			266		258		524	
00:15			46		63		109		12:15			282		233		515	
00:30			47		63		110		12:30			296		234		530	
00:45			29	178	38	212	67	390	12:45			267	1111	261	986	528	2097
01:00			34		52		86		13:00			287		256		543	
01:15			28		34		62		13:15			279		232		511	
01:30			33		31		64		13:30			319		263		582	
01:45			20	115	32	149	52	264	13:45			340	1225	219	970	559	2195
02:00			29		38		67		14:00			301		229		530	
02:15			28		34		62		14:15			343		294		637	
02:30			35		16		51		14:30			348		378		726	
02:45			27	119	21	109	48	228	14:45			382	1374	362	1263	744	2637
03:00			26		26		52		15:00			338		342		680	
03:15			25		16		41		15:15			346		345		691	
03:30			17		22		39		15:30			387		348		735	
03:45			43	111	20	84	63	195	15:45			391	1462	327	1362	718	2824
04:00			31		26		57		16:00			368		359		727	
04:15			54		37		91		16:15			384		376		760	
04:30			51		39		90		16:30			386		361		747	
04:45			63	199	68	170	131	369	16:45			385	1523	393	1489	778	3012
05:00			68		74		142		17:00			419		369		788	
05:15			104		93		197		17:15			413		349		762	
05:30			154		133		287		17:30			403		395		798	
05:45			192	518	182	482	374	1000	17:45			409	1644	330	1443	739	3087
06:00			173		176		349		18:00			374		325		699	
06:15			206		245		451		18:15			333		366		699	
06:30			243		297		540		18:30			297		362		659	
06:45			267	889	393	1111	660	2000	18:45			319	1323	298	1351	617	2674
07:00			282		322		604		19:00			278		277		555	
07:15			340		471		811		19:15			285		271		556	
07:30			384		502		886		19:30			249		257		506	
07:45			391	1397	543	1838	934	3235	19:45			214	1026	256	1061	470	2087
08:00			343		424		767		20:00			222		220		442	
08:15			357		492		849		20:15			215		196		411	
08:30			303		376		679		20:30			180		186		366	
08:45			356	1359	348	1640	704	2999	20:45			166	783	197	799	363	1582
09:00			275		327		602		21:00			169		220		389	
09:15			264		307		571		21:15			182		186		368	
09:30			270		280		550		21:30			147		157		304	
09:45			272	1081	266	1180	538	2261	21:45			154	652	149	712	303	1364
10:00			292		223		515		22:00			102		157		259	
10:15			259		234		493		22:15			157		158		315	
10:30			287		223		510		22:30			98		124		222	
10:45			264	1102	229	909	493	2011	22:45			106	463	124	563	230	1026
11:00			263		225		488		23:00			97		109		206	
11:15			257		204		461		23:15			97		95		192	
11:30			287		214		501		23:30			76		105		181	
11:45			320	1127	233	876	553	2003	23:45			75	345	88	397	163	742
TOTALS				8195		8760		16955	TOTALS				12931		12396		25327
SPLIT %				48.3%		51.7%		40.1%	SPLIT %				51.1%		48.9%		59.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,126	21,156	42,282

AM Peak Hour			07:30	07:30	07:30	PM Peak Hour			17:00	16:45	16:45
AM Pk Volume			1475	1961	3436	PM Pk Volume			1644	1506	3126
Pk Hr Factor			0.943	0.903	0.920	Pk Hr Factor			0.981	0.953	0.979
7 - 9 Volume	0	0	2756	3478	6234	4 - 6 Volume	0	0	3167	2932	6099
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			17:00	16:45	16:45
7 - 9 Pk Volume	0	0	1475	1961	3436	4 - 6 Pk Volume	0	0	1644	1506	3126
Pk Hr Factor	0.000	0.000	0.943	0.903	0.920	Pk Hr Factor	0.000	0.000	0.981	0.953	0.979

Prepared by NDS/ATD

VOLUME

Roscoe Blvd W/o Haskell Ave

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_017

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,955	23,859	47,814

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			71		86		157		12:00			320		268		588	
00:15			58		79		137		12:15			326		224		550	
00:30			62		69		131		12:30			322		226		548	
00:45			50	241	53	287	103	528	12:45			339	1307	270	988	609	2295
01:00			56		78		134		13:00			333		256		589	
01:15			49		52		101		13:15			332		227		559	
01:30			70		34		104		13:30			343		251		594	
01:45			35	210	55	219	90	429	13:45			356	1364	243	977	599	2341
02:00			53		49		102		14:00			342		227		569	
02:15			38		43		81		14:15			361		301		662	
02:30			38		40		78		14:30			396		421		817	
02:45			45	174	33	165	78	339	14:45			452	1551	415	1364	867	2915
03:00			37		36		73		15:00			397		338		735	
03:15			35		42		77		15:15			342		353		695	
03:30			27		39		66		15:30			441		336		777	
03:45			48	147	65	182	113	329	15:45			446	1626	367	1394	813	3020
04:00			45		45		90		16:00			428		348		776	
04:15			67		69		136		16:15			432		355		787	
04:30			53		102		155		16:30			457		347		804	
04:45			63	228	149	365	212	593	16:45			443	1760	401	1451	844	3211
05:00			99		112		211		17:00			511		359		870	
05:15			113		166		279		17:15			490		353		843	
05:30			162		231		393		17:30			449		334		783	
05:45			199	573	288	797	487	1370	17:45			480	1930	369	1415	849	3345
06:00			176		269		445		18:00			430		318		748	
06:15			213		327		540		18:15			376		405		781	
06:30			259		355		614		18:30			367		380		747	
06:45			266	914	480	1431	746	2345	18:45			377	1550	341	1444	718	2994
07:00			279		420		699		19:00			304		323		627	
07:15			316		502		818		19:15			345		273		618	
07:30			365		556		921		19:30			280		283		563	
07:45			315	1275	598	2076	913	3351	19:45			258	1187	261	1140	519	2327
08:00			358		545		903		20:00			244		246		490	
08:15			303		545		848		20:15			261		229		490	
08:30			338		482		820		20:30			212		231		443	
08:45			345	1344	388	1960	733	3304	20:45			217	934	246	952	463	1886
09:00			308		358		666		21:00			211		239		450	
09:15			324		291		615		21:15			208		230		438	
09:30			298		291		589		21:30			157		205		362	
09:45			288	1218	287	1227	575	2445	21:45			179	755	201	875	380	1630
10:00			333		257		590		22:00			156		193		349	
10:15			320		275		595		22:15			149		197		346	
10:30			339		263		602		22:30			195		152		347	
10:45			309	1301	248	1043	557	2344	22:45			127	627	144	686	271	1313
11:00			288		248		536		23:00			140		129		269	
11:15			289		199		488		23:15			121		130		251	
11:30			320		245		565		23:30			126		114		240	
11:45			359	1256	254	946	613	2202	23:45			96	483	102	475	198	958
TOTALS				8881		10698		19579	TOTALS				15074		13161		28235
SPLIT %				45.4%		54.6%		40.9%	SPLIT %				53.4%		46.6%		59.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,955	23,859	47,814

AM Peak Hour			07:15	07:30	07:30	PM Peak Hour			17:00	14:30	16:30
AM Pk Volume			1354	2244	3585	PM Pk Volume			1930	1527	3361
Pk Hr Factor			0.927	0.938	0.973	Pk Hr Factor			0.944	0.907	0.966
7 - 9 Volume	0	0	2619	4036	6655	4 - 6 Volume	0	0	3690	2866	6556
7 - 9 Peak Hour			07:15	07:30	07:30	4 - 6 Peak Hour			17:00	16:15	16:30
7 - 9 Pk Volume	0	0	1354	2244	3585	4 - 6 Pk Volume	0	0	1930	1462	3361
Pk Hr Factor	0.000	0.000	0.927	0.938	0.973	Pk Hr Factor	0.000	0.000	0.944	0.911	0.966

Prepared by NDS/ATD

VOLUME

Haskell Ave S/o Parthenia St

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_018

DAILY TOTALS	NB	SB	EB	WB	Total
	3,213	3,605	0	0	6,818

AM Period	NB		SB		EB		WB		TOTAL	
00:00	7		7						14	
00:15	5		6						11	
00:30	3		4						7	
00:45	4	19	2	19					6	38
01:00	4		3						7	
01:15	5		5						10	
01:30	6		5						11	
01:45	4	19	7	20					11	39
02:00	5		6						11	
02:15	1		1						2	
02:30	3		1						4	
02:45	3	12	2	10					5	22
03:00	0		1						1	
03:15	2		2						4	
03:30	3		3						6	
03:45	4	9	6	12					10	21
04:00	2		3						5	
04:15	5		2						7	
04:30	3		6						9	
04:45	8	18	10	21					18	39
05:00	5		17						22	
05:15	17		23						40	
05:30	26		41						67	
05:45	36	84	54	135					90	219
06:00	27		35						62	
06:15	33		57						90	
06:30	39		29						68	
06:45	28	127	73	194					101	321
07:00	31		61						92	
07:15	52		84						136	
07:30	97		116						213	
07:45	74	254	147	408					221	662
08:00	49		139						188	
08:15	34		109						143	
08:30	37		68						105	
08:45	35	155	80	396					115	551
09:00	26		59						85	
09:15	26		47						73	
09:30	32		42						74	
09:45	32	116	43	191					75	307
10:00	22		44						66	
10:15	27		30						57	
10:30	22		40						62	
10:45	31	102	40	154					71	256
11:00	34		36						70	
11:15	29		43						72	
11:30	39		41						80	
11:45	22	124	40	160					62	284
TOTALS		1039		1720						**2759**
SPLIT %		37.7%		62.3%						**40.5%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	34		36						70	
12:15	36		51						87	
12:30	27		46						73	
12:45	33	130	43	176					76	306
13:00	41		55						96	
13:15	38		45						83	
13:30	42		48						90	
13:45	48	169	40	188					88	357
14:00	40		60						100	
14:15	46		89						135	
14:30	85		64						149	
14:45	64	235	51	264					115	499
15:00	66		66						132	
15:15	45		57						102	
15:30	59		49						108	
15:45	78	248	42	214					120	462
16:00	64		44						108	
16:15	82		56						138	
16:30	63		49						112	
16:45	72	281	38	187					110	468
17:00	81		52						133	
17:15	97		58						155	
17:30	80		60						140	
17:45	85	343	66	236					151	579
18:00	74		43						117	
18:15	55		44						99	
18:30	56		35						91	
18:45	56	241	47	169					103	410
19:00	43		49						92	
19:15	49		34						83	
19:30	39		31						70	
19:45	29	160	25	139					54	299
20:00	36		27						63	
20:15	32		36						68	
20:30	22		33						55	
20:45	24	114	31	127					55	241
21:00	22		35						57	
21:15	33		29						62	
21:30	29		16						45	
21:45	27	111	11	91					38	202
22:00	23		23						46	
22:15	24		8						32	
22:30	15		11						26	
22:45	19	81	10	52					29	133
23:00	18		13						31	
23:15	14		12						26	
23:30	11		7						18	
23:45	18	61	10	42					28	103
TOTALS		2174		1885						**4059**
SPLIT %		53.6%		46.4%						**59.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	3,213	3,605	0	0	6,818

AM Peak Hour	07:15	07:30			**07:30**
AM Pk Volume	272	511			**765**
Pk Hr Factor	0.701	0.869			**0.865**
7 - 9 Volume	409	804	0	0	**1213**
7 - 9 Peak Hour	07:15	07:30			**07:30**
7 - 9 Pk Volume	272	511	0	0	**765**
Pk Hr Factor	0.701	0.869	0.000	0.000	**0.865**

PM Peak Hour	17:00	14:15			**17:00**
PM Pk Volume	343	270			**579**
Pk Hr Factor	0.884	0.758			**0.934**
4 - 6 Volume	624	423	0	0	**1047**
4 - 6 Peak Hour	17:00	17:00			**17:00**
4 - 6 Pk Volume	343	236	0	0	**579**
Pk Hr Factor	0.884	0.894	0.000	0.000	**0.934**

Prepared by NDS/ATD

VOLUME

Haskell Ave N/o Nordhoff St

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_019

DAILY TOTALS	NB	SB	EB	WB	Total
	5,120	5,362	0	0	10,482

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	6		1						7		12:00	55		72						127	
00:15	10		6						16		12:15	66		55						121	
00:30	3		7						10		12:30	62		78						140	
00:45	4	23	4	18					8	41	12:45	73	256	65	270					138	526
01:00	4		5						9		13:00	71		64						135	
01:15	3		2						5		13:15	76		54						130	
01:30	2		1						3		13:30	77		59						136	
01:45	7	16	3	11					10	27	13:45	83	307	79	256					162	563
02:00	2		3						5		14:00	109		78						187	
02:15	4		2						6		14:15	145		213						358	
02:30	5		2						7		14:30	103		93						196	
02:45	3	14	1	8					4	22	14:45	101	458	92	476					193	934
03:00	3		1						4		15:00	91		112						203	
03:15	2		2						4		15:15	85		91						176	
03:30	1		2						3		15:30	73		73						146	
03:45	4	10	5	10					9	20	15:45	85	334	69	345					154	679
04:00	1		1						2		16:00	96		82						178	
04:15	2		4						6		16:15	114		94						208	
04:30	3		2						5		16:30	118		89						207	
04:45	6	12	10	17					16	29	16:45	131	459	83	348					214	807
05:00	4		7						11		17:00	112		91						203	
05:15	4		20						24		17:15	140		96						236	
05:30	12		41						53		17:30	133		92						225	
05:45	22	42	30	98					52	140	17:45	121	506	84	363					205	869
06:00	20		37						57		18:00	105		85						190	
06:15	22		50						72		18:15	97		75						172	
06:30	42		49						91		18:30	77		67						144	
06:45	60	144	112	248					172	392	18:45	87	366	50	277					137	643
07:00	57		94						151		19:00	74		55						129	
07:15	90		161						251		19:15	79		47						126	
07:30	151		198						349		19:30	47		50						97	
07:45	158	456	249	702					407	1158	19:45	39	239	30	182					69	421
08:00	120		251						371		20:00	43		36						79	
08:15	109		180						289		20:15	35		32						67	
08:30	85		113						198		20:30	47		26						73	
08:45	63	377	83	627					146	1004	20:45	34	159	33	127					67	286
09:00	57		76						133		21:00	43		29						72	
09:15	57		80						137		21:15	38		31						69	
09:30	44		59						103		21:30	58		22						80	
09:45	60	218	61	276					121	494	21:45	40	179	26	108					66	287
10:00	57		65						122		22:00	19		35						54	
10:15	45		56						101		22:15	34		22						56	
10:30	48		67						115		22:30	19		18						37	
10:45	60	210	45	233					105	443	22:45	17	89	11	86					28	175
11:00	32		56						88		23:00	22		13						35	
11:15	39		56						95		23:15	13		11						24	
11:30	51		63						114		23:30	11		8						19	
11:45	62	184	65	240					127	424	23:45	16	62	4	36					20	98
TOTALS		1706		2488						4194	TOTALS		3414		2874						6288
SPLIT %		40.7%		59.3%						40.0%	SPLIT %		54.3%		45.7%						60.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	5,120	5,362	0	0	10,482

AM Peak Hour	07:30	07:30			07:30	PM Peak Hour	16:45	14:15			14:15
AM Pk Volume	538	878			1416	PM Pk Volume	516	510			950
Pk Hr Factor	0.851	0.875			0.870	Pk Hr Factor	0.921	0.599			0.663
7 - 9 Volume	833	1329	0	0	2162	4 - 6 Volume	965	711	0	0	1676
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	16:45	17:00			16:45
7 - 9 Pk Volume	538	878	0	0	1416	4 - 6 Pk Volume	516	363	0	0	878
Pk Hr Factor	0.851	0.875	0.000	0.000	0.870	Pk Hr Factor	0.921	0.945	0.000	0.000	0.930

Prepared by NDS/ATD

VOLUME

Victory Blvd W/o Reseda Blvd

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_020

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,321	18,019	37,340

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			35		27		62		12:00			229		225		454	
00:15			19		18		37		12:15			252		257		509	
00:30			14		12		26		12:30			284		280		564	
00:45			18	86	19	76	37	162	12:45			300	1065	272	1034	572	2099
01:00			15		13		28		13:00			244		260		504	
01:15			14		13		27		13:15			263		255		518	
01:30			3		9		12		13:30			250		262		512	
01:45			15	47	7	42	22	89	13:45			265	1022	272	1049	537	2071
02:00			10		6		16		14:00			265		257		522	
02:15			7		13		20		14:15			278		261		539	
02:30			7		7		14		14:30			272		291		563	
02:45			11	35	9	35	20	70	14:45			271	1086	284	1093	555	2179
03:00			11		4		15		15:00			362		323		685	
03:15			5		5		10		15:15			393		377		770	
03:30			12		3		15		15:30			281		372		653	
03:45			12	40	6	18	18	58	15:45			354	1390	338	1410	692	2800
04:00			5		9		14		16:00			387		358		745	
04:15			5		13		18		16:15			372		356		728	
04:30			16		18		34		16:30			364		342		706	
04:45			10	36	14	54	24	90	16:45			390	1513	329	1385	719	2898
05:00			25		17		42		17:00			376		383		759	
05:15			45		30		75		17:15			430		421		851	
05:30			57		59		116		17:30			389		373		762	
05:45			68	195	67	173	135	368	17:45			397	1592	383	1560	780	3152
06:00			87		77		164		18:00			364		414		778	
06:15			134		107		241		18:15			404		375		779	
06:30			219		169		388		18:30			390		341		731	
06:45			270	710	207	560	477	1270	18:45			344	1502	343	1473	687	2975
07:00			358		264		622		19:00			288		296		584	
07:15			374		324		698		19:15			250		254		504	
07:30			411		388		799		19:30			205		217		422	
07:45			440	1583	396	1372	836	2955	19:45			180	923	193	960	373	1883
08:00			370		382		752		20:00			219		147		366	
08:15			349		363		712		20:15			197		161		358	
08:30			301		331		632		20:30			194		129		323	
08:45			317	1337	356	1432	673	2769	20:45			183	793	112	549	295	1342
09:00			292		321		613		21:00			170		106		276	
09:15			266		260		526		21:15			186		107		293	
09:30			336		253		589		21:30			138		91		229	
09:45			289	1183	228	1062	517	2245	21:45			145	639	73	377	218	1016
10:00			240		244		484		22:00			136		79		215	
10:15			237		220		457		22:15			138		73		211	
10:30			225		255		480		22:30			83		65		148	
10:45			253	955	244	963	497	1918	22:45			65	422	60	277	125	699
11:00			244		220		464		23:00			73		46		119	
11:15			221		214		435		23:15			74		41		115	
11:30			234		249		483		23:30			51		36		87	
11:45			234	933	236	919	470	1852	23:45			36	234	23	146	59	380
TOTALS				7140		6706		**13846**	**TOTALS**				12181		11313		**23494**
SPLIT %				51.6%		48.4%		**37.1%**	**SPLIT %**				51.8%		48.2%		**62.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,321	18,019	37,340

AM Peak Hour			07:15	07:30	**07:30**	**PM Peak Hour**			17:00	17:15	**17:15**
AM Pk Volume			1595	1529	**3099**	**PM Pk Volume**			1592	1591	**3171**
Pk Hr Factor			0.906	0.965	**0.927**	**Pk Hr Factor**			0.926	0.945	**0.932**
7 - 9 Volume	0	0	2920	2804	**5724**	**4 - 6 Volume**	0	0	3105	2945	**6050**
7 - 9 Peak Hour			07:15	07:30	**07:30**	**4 - 6 Peak Hour**			17:00	17:00	**17:00**
7 - 9 Pk Volume	0	0	1595	1529	**3099**	**4 - 6 Pk Volume**	0	0	1592	1560	**3152**
Pk Hr Factor	0.000	0.000	0.906	0.965	**0.927**	**Pk Hr Factor**	0.000	0.000	0.926	0.926	**0.926**

Prepared by NDS/ATD

VOLUME

Victory Blvd E/o Mason Ave/Stadium Way

Day: Tuesday
Date: 5/15/2012

City: North Hollywood
Project #: CA12_5188_021

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,155	18,584	37,739

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			34		29		63		12:00			232		276		508	
00:15			24		28		52		12:15			262		249		511	
00:30			21		21		42		12:30			377		300		677	
00:45			21	100	16	94	37	194	12:45			304	1175	296	1121	600	2296
01:00			19		12		31		13:00			321		247		568	
01:15			10		13		23		13:15			273		232		505	
01:30			12		11		23		13:30			265		267		532	
01:45			10	51	7	43	17	94	13:45			283	1142	233	979	516	2121
02:00			9		10		19		14:00			346		277		623	
02:15			6		6		12		14:15			294		284		578	
02:30			10		4		14		14:30			309		329		638	
02:45			9	34	6	26	15	60	14:45			287	1236	283	1173	570	2409
03:00			5		8		13		15:00			354		282		636	
03:15			9		9		18		15:15			322		285		607	
03:30			10		5		15		15:30			359		302		661	
03:45			4	28	8	30	12	58	15:45			394	1429	356	1225	750	2654
04:00			10		6		16		16:00			397		321		718	
04:15			10		9		19		16:15			392		322		714	
04:30			10		17		27		16:30			388		311		699	
04:45			14	44	24	56	38	100	16:45			391	1568	330	1284	721	2852
05:00			25		16		41		17:00			452		321		773	
05:15			29		38		67		17:15			427		356		783	
05:30			50		45		95		17:30			450		351		801	
05:45			51	155	100	199	151	354	17:45			479	1808	362	1390	841	3198
06:00			56		76		132		18:00			417		327		744	
06:15			81		126		207		18:15			418		347		765	
06:30			135		206		341		18:30			387		307		694	
06:45			164	436	277	685	441	1121	18:45			336	1558	322	1303	658	2861
07:00			244		248		492		19:00			268		288		556	
07:15			236		383		619		19:15			236		269		505	
07:30			327		481		808		19:30			250		222		472	
07:45			306	1113	484	1596	790	2709	19:45			216	970	218	997	434	1967
08:00			304		441		745		20:00			241		199		440	
08:15			256		383		639		20:15			209		215		424	
08:30			232		384		616		20:30			243		178		421	
08:45			240	1032	351	1559	591	2591	20:45			221	914	166	758	387	1672
09:00			228		274		502		21:00			257		156		413	
09:15			246		302		548		21:15			193		120		313	
09:30			269		247		516		21:30			202		137		339	
09:45			210	953	256	1079	466	2032	21:45			173	825	124	537	297	1362
10:00			248		222		470		22:00			170		101		271	
10:15			193		248		441		22:15			140		100		240	
10:30			211		226		437		22:30			83		80		163	
10:45			257	909	238	934	495	1843	22:45			65	458	65	346	130	804
11:00			324		267		591		23:00			66		48		114	
11:15			232		233		465		23:15			63		62		125	
11:30			226		244		470		23:30			57		28		85	
11:45			219	1001	246	990	465	1991	23:45			30	216	42	180	72	396
TOTALS				5856		7291		13147	TOTALS				13299		11293		24592
SPLIT %				44.5%		55.5%		34.8%	SPLIT %				54.1%		45.9%		65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	19,155	18,584	37,739

AM Peak Hour			07:30	07:15	07:30	PM Peak Hour			17:00	17:15	17:00
AM Pk Volume			1193	1789	2982	PM Pk Volume			1808	1396	3198
Pk Hr Factor			0.912	0.924	0.923	Pk Hr Factor			0.944	0.964	0.951
7 - 9 Volume	0	0	2145	3155	5300	4 - 6 Volume	0	0	3376	2674	6050
7 - 9 Peak Hour			07:30	07:15	07:30	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	1193	1789	2982	4 - 6 Pk Volume	0	0	1808	1390	3198
Pk Hr Factor	0.000	0.000	0.912	0.924	0.923	Pk Hr Factor	0.000	0.000	0.944	0.960	0.951

APPENDIX B –
RELATED PROJECT LIST

	Project Name	Location	Land use	Size	Units	Daily Total	AM Peak			PM Peak		
							In	Out	Total	In	Out	Total
1	Crestview Private Elementary	18701 Calvert St	School	420	Enrollment	1504	181	205	386	97	79	176
2	Corbin Village Shopping Center	19750 Ventura Bl	Retail	55340	S.F. Gross Area	3893	36	23	59	95	87	182
3	REW Holdings LLC (Panavision site)	6219 De Soto Av	Office Industrial Apartments Apartments	-76242 -76242 394 574	S.F. Gross Area S.F. Gross Area Total Units Total Units	3858	-93	230	137	229	-19	210
4	Trammell Crow Residential (TCR)	6355 De Soto Av	Apartments	421	Total Units	2442	-4	149	145	138	48	186
5	Chalk Hill Residential Project	20600 Ventura Bl	Condominiums	340	Total Units	2559	37	130	167	134	78	212
6	Samiti Yog/Meditation Center	5530 Donna Av	Apartments Other	15 240	Persons Seats	290	41	43	84	6	0	6
7	Warner Center Apartments	6700 Eton Av	Mixed Use Mixed Use Apartments	438 10000 441	Total Units S.F. Gross Area Total Units	2774	85	338	423	333	179	512
8	Warner Business Center Office Bldg	6464 Canoga Av	Office Retail Office	154565 16117 -65903	S.F. Gross Area S.F. Gross Area S.F. Gross Area	1414	131	41	172	47	94	141
9	Apartments	6701 Eton Av	Apartments	297	Total Units	973	4	16	20	8	5	13
10	Mixed-Use	5521 Reseda Bl	Condominiums Retail Office	111 1054 20344	Total Units S.F. Gross Area S.F. Gross Area	956	69	64	133	35	54	89
11	Supermarket	17401 Ventura Bl	Retail	14500	S.F. Gross Area	889	17	11	28	46	45	91
12	The Ventana	18131 Ventura Bl	Office Office Retail	126734 16000 -19792	S.F. Gross Area S.F. Gross Area S.F. Gross Area	3290	215	49	264	59	249	308
13	Reseda Residential-UHC	7251 Amigo Av	Apartments	200	Total Units	1134	16	59	75	60	31	91
14	Child's World Center	6100 Lindley Av	School	80	Enrollment	358	34	30	64	31	34	65
15	Pierce College Master Plan EIR	6201 Winnetka Av	School	863	Enrollment	2460	206	42	248	113	97	210
16	Levi Family Partership	18719 Calvert St	Other	156	Beds	415	14	8	22	15	19	34
17	Medical Office	5411 Etiwanda Ave.	Office	93376	S.F. Gross Area	3037	153	40	193	78	213	291
18	McDonalds	18510 Victory Bl	Retail	3573	S.F. Gross Area	887	45	43	88	31	29	60
19	Restaurant	14708 Ventura Blvd.	Other	6880	S.F. Gross Area	975	33	22	55	48	42	90
20	Luther Burbank Savings	16600 Ventura Bl	Other	4100	S.F. Gross Area	460	4	4	8	49	48	97
21	Ralphs Off-Site Gas Station #189	17253 Saticoy St	Gas Station	10	Fueling Positions	843	32	30	62	34	35	69
22	Health Club	16830 Ventura Bl	Other	27263	S.F. Gross Area	-418	-23	12	-11	37	-1	36
23	Arden Panorama City	8750 N Van Nuys Bl	Office School	142105 100	S.F. Gross Area Enrollment	1196	263	58	321	16	186	202
24	Mixed-use Commercial	14450 Arminta St	Mixed Use	342276	S.F. Gross Area	2706	28	4	32	4	28	32
25	Panorama Place EIR	14665 Roscoe Bl	Condominiums	504	Total Units	18133	357	396	753	790	740	1530
26	Saticoy/Burnet Townhomes	15141 Saticoy St	Condominiums SFD	85 -10	Total Units Total Units	402	12	35	47	31	23	54
27	Restaurant Depot	16062 Chase St	Industrial	82640	S.F. Gross Area	963	117	99	216	64	40	104
28	Monroe Community Wellness Center	9119 Haskell av	Other	13230	S.F. Gross Area		24	6	30	12	34	46
29	Homeplace Village	4141 Whitsett Av	Apartments	200	Total Units	625	1	59	60	37	1	38
30	Los Angeles Valley College	5800 Fulton Av	School	2300	Enrollment	5700	441	97	538	212	120	332

	Project Name	Location	Land use	Size	Units	Daily Total	AM Peak			PM Peak		
							In	Out	Total	In	Out	Total
31	Camino Real Mixed Use Project	14121 Ventura Bl	Condominiums Retail Retail	88 6000 3500	Total Units S.F. Gross Area S.F. Gross Area	2008	57	66	123	61	46	107
32	CBS Radford Studios	4200 Radford Av	Studio	161885	S.F. Gross Area	1634	102	13	115	42	70	112
33	Il Villaggio Toscano Mixed-Use	4805 N Sepulveda Bl	Apartments Retail	465 55000	S.F. Gross Area S.F. Gross Area	5844	102	229	331	318	231	549
34	Tract 62077 Mixed-Use	15222 Ventura Bl	Condominiums Retail	52 7460	Total Units S.F. Gross Area	609	9	23	32	27	20	47
35	Dasher/Lawless Mixed Use	13103 Victory Bl	Apartments Office Retail Mixed Use Mixed Use	110 20000 60000 20000 20000	Total Units S.F. Gross Area S.F. Gross Area S.F. Gross Area S.F. Gross Area	6726	199	197	396	249	259	508
36	Westfield Fashion Square	14006 Riverside Dr	Retail	220000	S.F. Gross Area	n/a	58	37	95	229	247	476
37	Sherman Village	12629 Riverside Dr	Condominiums	270	Total Units	1620	-16	104	88	93	36	129
38	Plaza at the Glen	13007 Victory Bl	Mixed Use	151806	S.F. Gross Area	18763	887	257	1144	566	1146	1712
39	Sepulveda Square	5700 N Sepulveda Bl	Condominiums Retail	97 34775	Total Units S.F. Gross Area	1813	27	42	69	62	61	123
40	Mixed-Use	12548 Ventura Blvd.	Retail Other Apartments Retail	10747 1925 62 -3000	S.F. Gross Area S.F. Gross Area Total Units S.F. Gross Area	1000	23	41	64	46	34	80
41	CVS Pharmacy	5601 Van Nuys Bl	Retail	12830	S.F. Gross Area	679	11	9	20	40	40	80
42	Mixed-Use	11617 Ventura Bl	Apartments Retail Office	391 -12663 -7793	Total Units S.F. Gross Area S.F. Gross Area	2077	36	169	205	136	62	198
43	Condominium	11331 Ventura Bl	Condominiums Office	62 -21694	Total Units S.F. Gross Area	189	-24	25	1	22	-13	9
44	Valley Plaza and Laurel Plaza	6301 Laurel Canyon Bl	Condominiums Apartments Theatre Other Mixed Use	572 170 69962 707180 -779933	Total Units Total Units S.F. Gross Area S.F. Gross Area S.F. Gross Area	3456	-236	158	-78	82	-7	75
45	Condominiums (Cumulative Study)	11933 W Magnolia Bl	Condominiums	107	Total Units	981	24	65	89	55	47	102
46	Mixed-Use Project	12425 Victory Bl	Condominiums Retail Other	54 3850 4500	Total Units S.F. Gross Area S.F. Gross Area	460	3	21	24	28	16	44
47	No Ho Lankershim Station	5401 N Lankershim Bl	Office Retail Retail Mixed Use	17900 9500 29300 -10714	S.F. Gross Area S.F. Gross Area S.F. Gross Area S.F. Gross Area	1826	36	15	51	70	65	135
48	NoHo San Marino	11405 Chandler Bl	Apartments	73	Total Units	519	8	26	34	28	18	46
49	New NoHo Artwalk Project	11126 Chandler Bl	Condominiums Retail Office Retail	220 9400 -31500 -2500	Total Units S.F. Gross Area S.F. Gross Area S.F. Gross Area	903	-27	67	40	61	2	63
50	Walgreens Pharmacy	11000 Ventura Bl	Retail	12079	S.F. Gross Area	719	2	-4	-2	31	41	72
51	Cohen Apartments	10621 Riverside Dr	Apartments Retail	82 13327	Total Units S.F. Gross Area	1083	17	39	56	47	36	83
52	Carl's Jr.	6601 Lankershim Bl	Retail Other	4180 2723	S.F. Gross Area S.F. Gross Area	1535	71	68	139	53	50	103
53	NBC Universal Evolution Plan	555 E Universal Holllywood Dr	Office Studio Retail Studio	1286112 1239456 1513644 136759	S.F. Gross Area S.F. Gross Area S.F. Gross Area S.F. Gross Area	44883	2433	582	3015	1530	3184	4714
54	Residential Project (Apartments)	3716 N Barham Bl	Apartments	364	Total Units	1290	18	74	92	78	42	120

KOA CORPORATION
PLANNING & ENGINEERING

1100 Corporate Center Dr., Suite 201
Monterey Park, CA 91754
t: 323-260-4703 f: 323-260-4705
www.koacorporation.com

TECHNICAL MEMORANDUM

Date: March 11, 2013

To: Shannon D. Ledet, AECOM

From: Brian A. Marchetti, AICP

Subject: Traffic Study Supplement - LADWP San Fernando Valley WRP Project

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This memorandum serves as a supplement to the project traffic impact study document completed by KOA and dated June 15, 2012. Additional roadway segments have been considered by the City of Los Angeles Department of Water and Power for inclusion in the overall San Fernando Valley Water Reclamation Project (Project) pipeline network:

- Colfax Avenue – Between Magnolia Boulevard and westbound side of Chandler Boulevard
- Chandler Boulevard westbound – Between SR-170 freeway and Colfax Avenue
- Chandler Boulevard eastbound – Between Morella Avenue and Colfax Avenue

Project Description for Added Extensions

The North Hollywood Park portion of the Project would connect to an existing City of Burbank pipeline on the City of Los Angeles border. The added segments would add approximately 3,530 feet to the project pipeline length totals. The first extension would travel approximately 1,400 feet north on Colfax Avenue from Magnolia Boulevard to Chandler Boulevard. This extension would be further split into two legs. One leg would travel approximately 480 feet west on Chandler Boulevard, terminating at North Hollywood High School. The second leg would travel approximately 800 feet east on Chandler Boulevard, terminating at California State Route 170 (SR-170, Hollywood Freeway). The second extension would travel approximately 350 feet south on Irvine Avenue from Magnolia Boulevard to Hartsook Street, approximately 800 feet east on Hartsook Street to Westpark Drive, and approximately 250 feet south on Westpark Drive terminating at North Hollywood Park.

The Los Angeles County Metropolitan Transportation Authority (Metro) Orange Line Busway operates in the median of Chandler Boulevard in this area. For any portion of the pipeline that would cross the Metro Orange Line ROW, they would tunnel the pipeline underneath. Also, the new segments of pipeline along Chandler Boulevard would be primarily beneath the traffic lanes and not beneath the Orange Line right-of-way that is located in the median of the street.

Traffic Analysis for Added Extensions

This supplemental study was conducted as a cursory analysis of these extensions, as the typical impacts that would be caused by the project have been identified in the main study. General conditions of the roadways where the extensions would be constructed were therefore reviewed based on that information and were assumed to provide a reasonable determination of impacts.

Existing daily traffic counts are available for the extension roadway routes from on-line data provided by the City of Los Angeles Department of Transportation. Daily volume totals and related count dates in the area are as follows:

- Chandler Boulevard, at Colfax Avenue: 8,963 daily vehicles (August 2010)
- Colfax Avenue, at Burbank Blvd: 11,179 daily vehicles (September 2010 – north edge of study area)
- Irvine Avenue, at Moorpark Street: 1,156 (May, 2009 – out of study area)

Estimated Capacity Effects by Project

Table 7 of the June 2012 report analyzed peak-hour capacities of the original study roadway segments. The daily volumes above can be converted to peak-hour volumes by applying a one-tenth proportional reduction. This is generally the ratio of vehicles traveling through a given facility in a peak hour, versus an entire day.

Applying the 2012 methodology, the impact potential of construction-related capacity reductions at the roadway segments along the Project extension routes would be as follows:

- Chandler Boulevard: Estimated peak-hour volume of 896 vehicles, four-lane capacity of 2,500 vehicles reduced to two-lane capacity of 1,250 vehicles, volume-to-capacity ratio of 0.36 reduced to 0.72, level of service A reduced to LOS C
- Colfax Avenue: Estimated peak-hour volume of 1,118 vehicles, two-lane capacity of 2,500 vehicles remains with temporary removal of bicycle lanes and on-street parking during construction, volume-to-capacity ratio of 0.36, level of service A

The level of service values above indicate that good operations would remain on the roadways, with construction-period assumptions applied.

For the Irvine Avenue roadway segment, typical capacities would not normally apply, as the facility is a residential roadway. Impacts on that facility would be more related to access issues, discussed in the section below.

Other Potential Impacts

It is likely that the Project will include the closure of the existing bicycle lanes on Chandler Boulevard and Colfax Avenue. If these lanes are closed, bicycle lane closure signs and detour signs should be provided

Project construction could potentially impact pedestrian movements at closed sidewalks and crosswalk locations. It is important that marked pedestrian crosswalks be maintained throughout Project construction, especially along Colfax Avenue adjacent to North Hollywood High School. They should be replaced temporarily, immediately beyond the construction work area, if and when construction overlaps with the intersection and crosswalks.

Project construction-related closures along Irvine Avenue and Hartsook Street will affect nearby residential uses, including access into and out of driveways, use of adjacent on-street parking, and general neighborhood circulation. The construction control plan for these residential roadway segments should address these areas of potential impact.

APPENDIX E
MITIGATION MONITORING AND REPORTING PROGRAM

MITIGATION MONITORING AND REPORTING PROGRAM

San Fernando Valley Water Recycling Project
Final Mitigated Negative Declaration
(State Clearinghouse No. 2012111053)

Introduction

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared pursuant to the California Environmental Quality Act (CEQA) and the State CEQA Guidelines to provide for monitoring of the mitigation measures required by certification of the San Fernando Valley Water Recycling Project (proposed project) Final Mitigated Negative Declaration (MND). Section 21081.6 of the Public Resources Code and Section 15091(d) of the CEQA Guidelines require public agencies to "adopt a reporting or monitoring program for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." The lead agency must define specific reporting and/or monitoring requirements to be enforced during project implementation prior to final approval of the proposed project.

The Los Angeles Department of Water and Power (LADWP) is the lead agency for the proposed project and is responsible for administering and implementing the MMRP. The MMRP stipulates how all required mitigation measures are to be implemented and completed during the appropriate project phase. It also facilitates documentation necessary to verify that mitigation measures were in fact properly implemented.

Mitigation Monitoring and Reporting Program Procedures

Since the proposed mitigation measures apply to the construction of the project, the MMRP will be in effect, as applicable, during preconstruction activities and during the construction period. This MMRP gives LADWP the primary responsibility for taking all actions necessary to implement the mitigation measures according to the specifications provided for each measure and for demonstrating that the action has been successfully completed. LADWP's designated environmental monitor will track and document compliance with mitigation measures, note any problems that may result, and take appropriate action to remedy problems. LADWP, at its discretion, may delegate responsibility for measure implementation and monitoring, or portions thereof, to other responsible individuals, such as a licensed contractor. Specific responsibilities for LADWP include:

- Coordination of all mitigation monitoring activities
- Management of the preparation, approval, and filing of monitoring or permit compliance reports
- Maintenance of records concerning the status of all approved mitigation measures
- Quality control assurance of field monitoring personnel
- Coordination with other agencies regarding compliance with mitigation or permit requirements
- Reviewing and recommending acceptance and certification of implementation documentation

- Acting as a contact for interested parties or surrounding property owners who wish to register complaints, observations of unsafe conditions, or environmental violations; verifying any such circumstances; and developing any necessary corrective actions

Resolution of Noncompliance Complaints

Any person or agency may file a complaint regarding noncompliance with the mitigation measures addressed in the MMRP. The complaint shall be directed to LADWP (111 North Hope Street, Room 1044, Los Angeles, CA 90012) in written form providing detailed information on the purported violation. LADWP will investigate any complaints filed to determine the validity of the complaint. If noncompliance with a mitigation measure is verified, LADWP will take the necessary action(s) to remedy the violation. The complainant will receive written confirmation indicating the results of the investigation or the final corrective action that was implemented in response to the specific noncompliance issue.

Mitigation Monitoring and Reporting Program Matrix

The MMRP is organized in a matrix format. The first column identifies the mitigation measure number. The second column identifies the mitigation measure. The third column, entitled “Time Frame for Implementation,” refers to when monitoring will occur. The timing for implementing mitigation measures and the definition of the approval process has been provided to assist LADWP staff to plan for monitoring activities. The fourth column, entitled “Responsible Monitoring Agency,” refers to the agency responsible for ensuring that the mitigation measure is implemented. The fifth column, entitled “Verification of Compliance,” has subcolumns for initials, date, and remarks. This last column will be used by the lead agency to document the person who verified that the mitigation measure was satisfactorily implemented, the date on which this verification occurred, and any other notable remarks. The mitigation measures are presented by environmental issue area.

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
CULTURAL RESOURCES						
CR-1	An archaeological monitoring program shall be implemented within segments identified as having cultural resources sensitivity. a. Archaeological monitoring of ground disturbing activities shall include: • Archaeological monitoring for the North Hollywood Park segment due to the presence of the Tujunga Wash, historic development, and evidence of prehistoric settlement 19-100281; • Archaeological monitoring for the Van Nuys Sherman Oaks Park segment due to the proximity of the San Fernando Mission, Los Angeles River, and Santa Monica Mountains; and • Archaeological monitoring for the VA Hospital segment pipe jacking entry and exit pits in the location of the former Southern Pacific Railroad crossing. b. The on-site archaeological monitor shall work under the direction of a qualified archaeological Principal Investigator. 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	During construction	LADWP			

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
	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 archaeological monitor shall have the authority to redirect construction equipment in the event potential archaeological resources are encountered. c. In the event archaeological resources are encountered, 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 and Section 106 of the National Historic Preservation Act. d. Ground-disturbing activities include, but are not limited to, geotechnical boring, boring, trenching, grading, excavating, and the demolition of building foundations. The archaeological monitor shall observe ground-disturbing activities in the segments requiring monitoring, to depth. e. Once ground-disturbing activities begin, if the level of disturbance of 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 LADWP may recommend that archaeological monitoring be continued intermittently, as appropriate, or discontinued within the segment or portion thereof.					

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
	f. In the event that archaeological resources are encountered during archaeological monitoring, the monitor may halt work in the immediate vicinity until the discovery is assessed by the project archaeologist and appropriate treatment is determined. Additional monitoring recommendations may be made at that time. g. Upon completion of all ground-disturbing activities, 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 shall also document the associated cultural materials and the methods of treatment as determined appropriate by the archaeologist. This report shall be placed on file at the South Central Coastal Information Center upon its completion.					
CR-2	Any excavations below 5 feet, should they be necessary, shall be monitored to quickly and professionally recover any discovered fossil remains. In the event that paleontological resources are encountered, a qualified paleontologist shall be retained in order to recover and record any fossil remains discovered. Any discovered fossils shall be prepared, identified, and catalogued before curation in an accredited repository such as designated in consultation with LADWP.	During construction	LADWP			
NOISE						
N-1	All construction equipment shall be properly maintained and equipped with mufflers and other suitable noise attenuation devices.	During construction	LADWP			

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
N-2	LADWP shall endeavor to use rubber-tired equipment rather than track equipment. Noisy equipment shall be used only when necessary and shall be switched off when not in use.	During construction	LADWP			
N-3	LADWP shall ensure that all stockpiling and vehicle staging areas are located away from noise-sensitive receivers.	During construction	LADWP			
N-4	LADWP shall establish a public liaison for project construction that shall be responsible for addressing public concerns about construction activities, including excessive noise. The liaison shall determine the cause of the concern (e.g., starting too early, bad muffler, etc.) and shall work with LADWP to implement reasonable measures to address the concern.	Prior to and during construction	LADWP			
N-5	The construction contractor shall develop a construction schedule to ensure that the construction would be completed quickly to minimize the time a sensitive receptor will be exposed to construction noise.	Prior to and during construction	LADWP			
N-6	Construction supervisors shall be informed of project-specific noise requirements, noise issues for sensitive land uses adjacent to the pipeline route, and/or equipment operations.	Prior to and during construction	LADWP			
N-7	Construction equipment shall be electric- and hydraulic-powered rather than diesel and pneumatic powered, as feasible.	During construction	LADWP			
N-8	During all construction activities in residential neighborhoods, temporary barriers, such as noise blankets, shall be utilized, as applicable to site conditions, around noisy equipment located within 500 feet of a sensitive receptor. Staging sites shall not be located within 500 feet of a sensitive receptor. A temporary barrier shall be employed when staging sites are restricted to residential neighborhoods.	During construction	LADWP			

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
N-9	Prior to construction work, the public shall be notified of the location and dates of construction. Residents shall be kept informed of any changes to the schedule.	Prior to and during construction	LADWP			
N-10	Haul routes shall be on major arterial roads within non-residential areas. If not feasible, haul routes shall be reviewed and approved by LADOT before the haul route can be on major arterial roads in residential areas.	Prior to and during construction	LADWP			
N-11	LADWP shall coordinate with the site administrator for institutional land uses located adjacent to the pipeline. These include North Hollywood High School, Oakwood Secondary School, North Hollywood Regional Library, James Madison Middle School, Valley Plaza Library, Sherman Oaks Hospital, Los Angeles Valley College, Birmingham High School, Valley Alternative School, High Tech High School, Mulholland Middle School, Veteran's Administration Hospital, Monroe High School, and Pierce College. Coordination between the site administrator and LADWP shall continue on an as-needed basis while construction is occurring adjacent to these land uses to minimize potential disruption to the land uses.	Prior to and during construction	LADWP			
N-12	Construction activities shall be prohibited between the hours of 9:00 p.m. and 7:00 a.m. when located within 500 feet of occupied sleeping quarters or other land uses sensitive to increased nighttime noise levels.	During construction	LADWP			
N-13	Prior to the completion of final design, LADWP shall conduct a survey of the pipeline alignment to determine if buildings extremely susceptible to vibration damage are located less than 21 feet from the alignment. If identified, LADWP shall design the final pipeline alignment to avoid placing construction equipment within 21 feet of	Prior to final design, prior to construction, and during construction	LADWP			

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
	buildings extremely susceptible to vibration damage. In the event that avoidance is not possible, LADWP shall hire qualified structural and geotechnical engineers to review the predicted vibration levels and determine if there are any risks to the building(s). If potential risks are identified, all necessary steps would be taken to protect the building including, but not limited to, photographing and/or videotaping the building in order to provide a record of the existing conditions prior to construction activities. If any visible building damage occurs due to construction vibration activity, LADWP shall be responsible for performing repairs, under the direction of a qualified structural or geotechnical engineer, at the completion of construction.					
TRANSPORTATION/TRAFFIC						
TR-1	LADWP, prior to the start of construction, shall coordinate with LADOT to prepare a Traffic Management Plan (TMP). The TMP shall be prepared by a registered traffic or civil engineer, as appropriate, based on City of Los Angeles permit guidelines. The TMP shall consist of traffic control plans showing striping changes, and a traffic signal plan for any signalized intersections indicating modifications to existing traffic signals and associated controllers to be adjusted during the construction phase. Methods to inform the public regarding project construction and roadway detours and closures shall be implemented as part of the TMP. Additional measures to be incorporated into the TMP to improve traffic flow shall include the following: a. Directional capacity (generally southbound/ westbound in the morning peak hour and	Prior to construction	LADWP			

Number	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
	northbound/eastbound in the evening peak hour) shall be considered in roadway closure planning where work area placement is flexible. The provision of the original one-way capacity of the affected roadway (in number of travel lanes) in the peak direction, while providing a reduced number of travel lanes for the opposite direction of traffic flow, shall be used to alleviate any potential poor level of service conditions. b. Left-turn lanes and other approach lanes (as feasible) shall be maintained in close vicinity to major intersections along the proposed pipeline routes. c. Considerations for maintained access to adjacent residential driveways, as feasible, shall be incorporated into the construction planning process. d. Provide continued through access via detours for vehicles and to provide for adequate pedestrian and transit circulation. Signed detour routes and other potential routes that drivers would utilize during the construction period would become alternate routes for a proportion of the vehicles that would otherwise travel along the corridor where construction would be taking place. e. For the project detour routes, wayfinding signs and other relevant traffic control devices shall be placed on all major roadways into the larger area around each construction closure locations, and shall be repositioned for each construction segment (as the construction zones progress along the proposed project alignment). Wayfinding signs shall be placed at major detour decision points to keep vehicles on-track					

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	through the detour route, and shall also be placed at the next major intersection location in advance of the first detour decision point. f. Consult with local transit agencies to minimize impacts to passenger loading areas and to minimize travel times on scheduled transit routes. All affected transit agencies shall be contacted to provide for any required modifications or temporary relocation of transit facilities.					
TR-2	LADWP shall consult with Caltrans to obtain permits for the transport of oversized loads, and to obtain encroachment permits for any work along State facilities.	Prior to construction	LADWP			