

# State Route 2 Freeway Terminus Improvement Project

(Branden Street to Oak Glen Place Overpass)

Los Angeles County, California

07-LA-02

Post Miles 13.5/15.0

EA 205500

## Initial Study/Environmental Assessment



Prepared by the  
**California Department of Transportation**  
and the  
**Los Angeles County Metropolitan Transportation Authority**

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by the Department under its assumption of responsibility pursuant to 23 United States Code 327.



April 2009



SCH # \_\_\_\_\_  
07- LA-02  
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**STATE ROUTE 2  
FREEWAY TERMINUS IMPROVEMENT PROJECT**

Modify the Southern Terminus of State Route 2 from  
Branden Street to Oak Glen Place in Los Angeles County, California

**INITIAL STUDY/ENVIRONMENTAL ASSESSMENT**

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project are being, or have been, carried out by the California Department of Transportation under its assumption of responsibility pursuant to 23 United States Code 327

Submitted Pursuant to (State) Division 13, California Public Resources Code  
(Federal) 42 United States Code 4332(2)(C); 23 USC 327

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

and the

CALIFORNIA DEPARTMENT OF TRANSPORTATION

April 22, 2009  
Date of Approval

  
Irving N. Taylor  
Project Manager  
Los Angeles County Metropolitan Transportation Authority

April 30, 2009  
Date of Approval

  
Ron Kosinski  
Deputy Director, District 7  
Division of Environmental Planning  
California Department of Transportation



# PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

## Project Description

The Los Angeles County Metropolitan Transportation Authority (Metro) in cooperation with the California Department of Transportation (Department) and City of Los Angeles Department of Transportation (LADOT) propose to modify the southern Terminus of State Route 2 (SR-2) from Braden Street (PM 13.5) to Oak Glen Place (PM 15.0) in the City and County of Los Angeles. The purpose of the project is to better manage traffic flow at the terminus and enhance vehicular and pedestrian mobility and safety in the vicinity of the SR-2 terminus. Five build alternatives have been proposed, which range from widening the existing entrance and exit ramps to realigning the entrance and exit ramps to the east.

## Determination

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the Department's intent to adopt an MND for this project. This does not mean that the Department's decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for the proposed project and, pending public review, expects to determine that the proposed project would not have a significant effect on the environment for the following reasons.

1. The proposed project would have no effect on growth, farmlands, residential or business relocations, natural communities, wetlands, animal species, and threatened and endangered species.
2. In addition, the proposed project would have no significant effect on land uses and planning, parks and recreation, community facilities and services, visual resources, utilities/emergency services, cultural resources, and hydrology and floodplains.

The proposed project would have no significantly adverse effect on traffic and transportation, archaeological resources, water quality, geology/soils/seismic, hazardous waste, air quality, noise, plant species, and invasive species because mitigation measures would avoid or reduce potential effects to insignificance.

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Irving N. Taylor  
Project Manager  
Los Angeles County Metropolitan Transportation Authority

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Date

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Ron Kosinski  
District Director, District 7  
Division of Environmental Planning  
California Department of Transportation

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Date



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**Technical Studies [The following studies are printed under separate cover and are available at Caltrans District 7 offices during normal business hours.]**

- Air Quality Report
- Community Impact Assessment
- Historic Property Survey, Historical Resources Evaluation, and Archaeological Survey Reports
- Initial Site Assessment
- Natural Environment Study (Minimal Impacts)
- Noise Study Report
- Preliminary Geologic Report
- Traffic Study
- Visual Impact Assessment
- Water Quality Report

# Chapter 1. Proposed Project

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## 1.1 Introduction

The Los Angeles County Metropolitan Transportation Authority (Metro), in cooperation with the California Department of Transportation (Department) and City of Los Angeles Department of Transportation (LADOT), propose to modify the southern terminus of State Route 2 (SR-2) from approximately Branden Street (PM 13.5) to Oak Glen Place (PM 15.0) in the City and County of Los Angeles. The SR-2 freeway intersects the Interstate 5 (I-5), the Golden State Freeway, approximately 1 mile north of the freeway terminus. This segment of SR-2 is bordered by residences and commercial uses within the City's Silver Lake and Echo Park communities. Figure 1-1 and Figure 1-2 show project location and vicinity maps.

Five build alternatives have been proposed by the Project Development Team (PDT)<sup>1</sup> as part of the SR- 2 Freeway Terminus Improvement Project. The build alternatives range from widening the existing entrance and exit ramps to realigning the entrance and exit ramps to the east. Various options under these alternatives include retaining the southbound flyover ramp, removing all or part of the flyover ramp and overpass above Glendale Boulevard, and relocating the retaining wall along the eastern edge of the northbound SR-2 ramps. The purpose of the project is to better manage traffic flow and enhance mobility and safety at the SR-2 freeway terminus. The estimated cost of these alternatives ranges from \$12 million to \$24 million. Funding sources for this project include the Transportation Equity Act for the 21st Century (TEA-21) High Priority Highway Project Authorization and local matching funds from the City of Angeles through a Metro Call for Projects grant.

### 1.1.1 Background

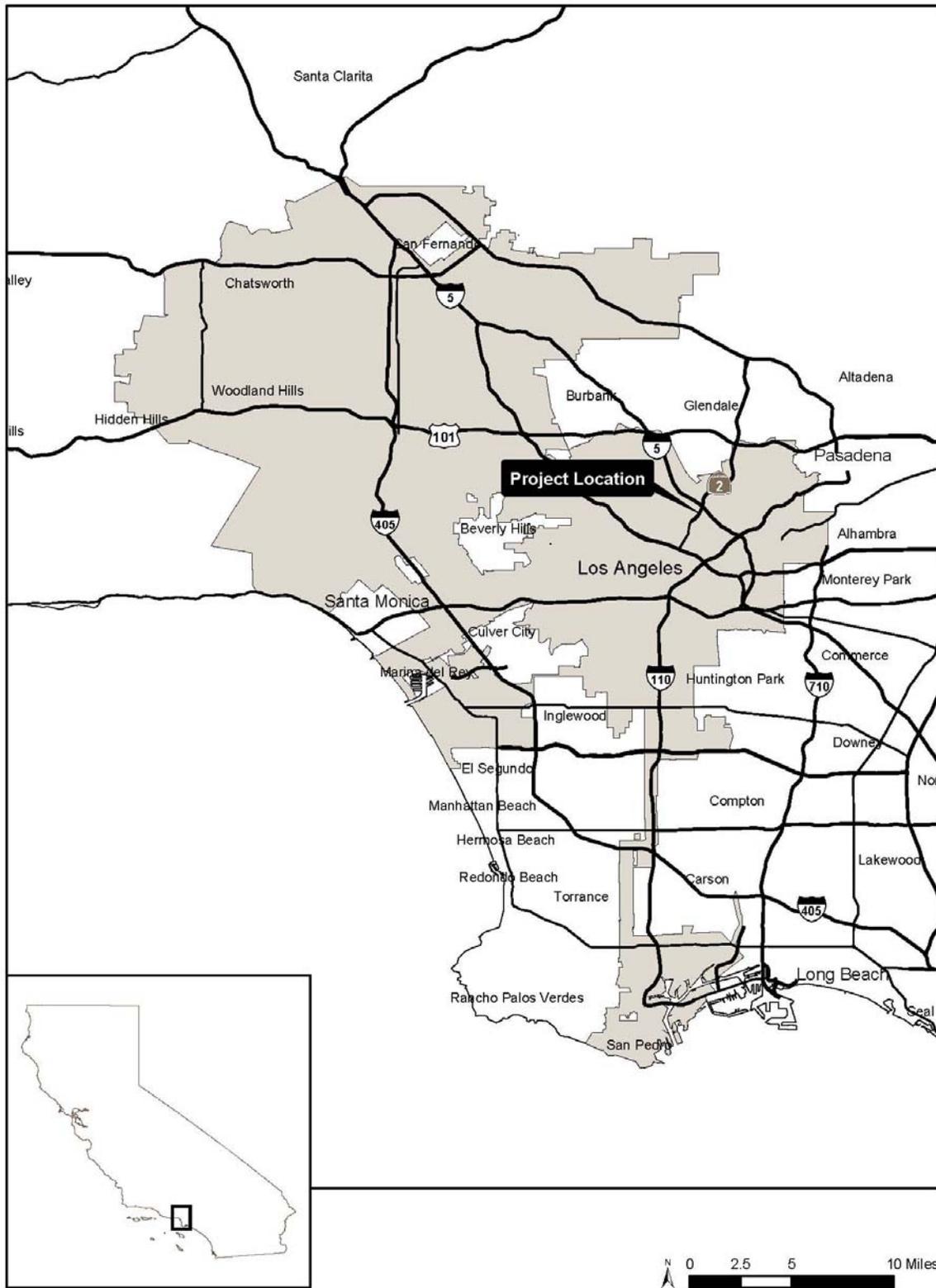
The Glendale SR-2 Freeway was originally planned and constructed in 1959 to connect with the Hollywood Freeway (US 101). In 1962, as a result of local community opposition, the full build-out plan was rescinded and construction was terminated at Glendale Boulevard. A half diamond interchange with a direct connector was constructed with ramps connecting the freeway terminus to Glendale Boulevard. This condition currently remains. Over time, deterioration of traffic flow has occurred as regional and local commuters increasingly converge in this location.

There have been three relevant studies concerning the terminus of SR-2, also known as the Glendale freeway, where the freeway transitions to a conventional highway (major arterial). Metro prepared a study in 1992 to develop a course of action regarding future traffic and transportation plans for the Glendale Freeway and Glendale Boulevard. This included a review of existing traffic conditions and proposed transportation improvements, evaluation of those improvements, and recommendations for implementation of the improvements.

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<sup>1</sup> The PDT consists of representatives of Caltrans District 7, Metro, LADOT, and the Consulting Team.

**Figure 1-1. Regional Vicinity Map**



**Figure 1-2. Project Location Map**



In 1994, the Glendale Boulevard corridor Preliminary Planning study – Phase II was completed by Metro and LADOT. The study analyzed existing constraints and opportunities within the corridor and developed urban design strategies and conceptual transportation measures to improve conditions along Glendale Boulevard. A list of recommended short-term and long-term measures, including alternative reconfigurations for the SR-2 terminus, was presented. The build alternatives ranged from widening the ramps in the existing interchange configuration to realigning the ramps to tie into Glendale Boulevard in a new configuration.

Metro initiated a Preliminary Study Report-Preliminary Development Support (PSR-PDS) in cooperation with Caltrans and LADOT, which was completed in January 2002. The PSR-PDS developed four alternatives to manage traffic flow at the terminus, enhance vehicular movement, and increase pedestrian mobility and safety in the vicinity of the SR-2 terminus. Subsequently, the Metro Board approved the inclusion of a fifth alternative as proposed by a local community group. The request for additional design alternatives stemmed from community review of the PSR/PDS. To accommodate the community's request, Metro is undertaking this study.

The proposed SR-2 Freeway Terminus Improvement Project is included in the Southern California Association of Governments (SCAG) 2008 Regional Transportation Plan (RTP) and SCAG 2008 Regional Transportation Improvement Program (RTIP), listed as Project ID LA990351. All projects incorporated into the 2008 RTIP are consistent with current RTP policies, programs, and projects. The 2008 RTP and 2008 RTIP were both found to be conforming by the Federal Highway Administration (FHWA) on June 5, 2008, and November 17, 2008, respectively.

A Draft Project Report was completed in August 2008 to provide updated and more detailed information on the existing facility and proposed project alternatives.

## **1.2 Purpose and Need**

The City of Los Angeles is experiencing continued growth. This segment of SR-2 provides ingress and egress to the densely populated communities of Echo Park and Silver Lake and is a major thoroughfare for the surrounding area. This segment of SR-2 also provides a vital link for commuters traveling from communities in the northern and eastern parts of the Los Angeles Basin to downtown Los Angeles. Traffic flow during peak hours in the project area is severely impeded due to the existing configuration of the SR-2 terminus and pedestrians and bicycles are not well accommodated by existing facilities in the vicinity of the freeway terminus. Additionally, during off-peak periods, the southbound direct connector traffic often merges onto southbound Glendale Boulevard at a high rate of speed.

The existing facilities also have a number of problems and deficiencies, which are described in detail in Section 1.2.1 below.

The purpose of the project was developed by the Department, Metro, and LADOT, with the cooperation of members of the community. The purposes, or objectives, of the project are to:

1. Better manage traffic flow at the terminus;
2. Enhance accessibility and safety in the vicinity of the SR-2 terminus; and
3. Develop a freeway terminus design that is compatible with existing residential and commercial uses in the immediate vicinity.

The proposed improvements that have been identified to address the project purpose and need have independent utility and logical termini, as discussed in Section 1.3 below.

### **1.2.1 Existing Facility**

South of I-5, the four southbound SR-2 freeway lanes transition to three lanes near the Oak Glen Place overpass. Continuing southbound, the outside lane becomes a mandatory exit lane, which widens to a two-lane ramp connecting to Glendale Boulevard. At the ramp terminal, the left lane is a left-turn lane and the right lane is a left-turn/through/right-turn choice lane. The remaining two southbound freeway lanes continue over a flyover and combine with Glendale Boulevard's two southbound lanes near Duane Street for a total of four lanes. These four southbound lanes narrow to three 10-foot-wide lanes between Clifford and Branden Streets, and continue south through Echo Park. In the present SR-2 terminus configuration, there are four lanes exiting the SR-2 freeway to southbound Glendale Boulevard, two left-turns from the exit ramp plus two lanes on the flyover. Existing shoulders on the southbound ramps are narrow (1.0 foot wide or less) or non-existent. There are no shoulders on southbound Glendale Boulevard.

On Glendale Boulevard, south of Clifford Street, northbound and southbound traffic is separated by a painted median of varying width. Lanes on northbound Glendale Boulevard are 10 feet wide approaching the terminus. These lanes bifurcate into two through lanes continuing north on Glendale Boulevard and two through lanes forming the entrance ramp onto SR-2. On Glendale Boulevard, a raised median begins just before the freeway entrance ramp and continues under the SR-2 flyover up to the intersection with Waterloo/Fargo Street and the freeway exit ramp. The two northbound entrance ramp lanes lead directly onto the eight-lane freeway, widening to become the four freeway lanes. These four lanes continue northbound towards the I-5 interchange.

The following is a brief description of the streets that intersect the proposed SR-2 project site:

Glendale Boulevard – Glendale Boulevard is a north-south arterial and serves as SR-2 between the SR-2 freeway terminus and Alvarado Street. The street provides three travel lanes in each direction between the SR-2 terminus and Montana Street. South of Montana Street, two travel lanes in each direction are provided.

Alvarado Street – Alvarado Street is a secondary arterial south of its intersection with Glendale Boulevard. The north-south road provides access to US 101 and to the SR-2 freeway via Glendale Boulevard. Between US 101 and Glendale Boulevard, Alvarado Street is also SR-2. In the study area, two travel lanes in each direction are provided.

Fargo Street – Fargo Street is a local street that intersects with the southbound off-ramps of the SR-2 freeway terminus, Glendale Boulevard, and Waterloo Street. It provides one travel lane in each direction.

Waterloo Street – Waterloo Street is a local street that intersects with the southbound off-ramps of the SR-2 freeway terminus, Glendale Boulevard, and Fargo Street. It provides one travel lane in each direction.

Allesandro Street – Allesandro Street is a north-south collector street that begins at its intersection with Glendale Boulevard. It provides one travel lane in each direction except at the intersection with Glendale Boulevard where two left-turn lanes and one right-turn lane are provided.

Aaron Street – Aaron Street is a local east-west street that intersects Glendale Boulevard. It provides one travel lane in each direction.

## **1.2.2 Non-Standard Features and Operational Deficiencies**

The current SR-2 terminus configuration has several limitations associated with its layout. The southbound exit ramp and southbound direct connector interrupt Glendale Boulevard traffic flows in two locations, at Waterloo/Fargo Street and then again near Allesandro Street. Because the northbound lanes consist of a northbound Glendale Boulevard, a northbound freeway entrance ramp and a center “choice” lane; weaving maneuvers are required between Allesandro Street and the terminus. Pedestrians and bicycles are not well accommodated by existing facilities in the vicinity of the freeway terminus. Additionally, during off-peak periods, the southbound direct connector traffic often merges onto southbound Glendale Boulevard at a high rate of speed.

## **1.2.3 Capacity, Level of Service, Safety, and Transportation Demand**

The segment of SR-2 was originally planned and constructed in 1959 to connect I-5 with U.S. 101 through the neighborhoods of Silver Lake and Echo Park. In 1962, as a result of local community opposition, the full-buildout plan was rescinded and construction was halted at the present SR-2 terminus near Glendale Boulevard and Duane Street, thus creating traffic congestion along Glendale Boulevard and Alvarado Street.

### **Capacity**

Traffic volumes within the proposed project area have increased substantially over time. Traffic volume data along the SR-2 facility in the vicinity of the project site was collected from the Caltrans Traffic Counts Database. Table 1-1 presents the 2006 annual Average Daily Traffic (ADT) and Peak hour traffic volumes at the proposed project site. At the freeway terminus, SR-2, the ADT and peak hour traffic volumes in 2006 were 71,000 and 7,200 vehicles, respectively.

**Table 1-1.** Average Daily Traffic (ADT) and Peak Hour Traffic at SR-2 Project Site

<b>State Route 2 Location</b>	<b>Post Mile</b>	<b>ADT (Annual)*</b>	<b>Peak Hour Traffic**</b>
Intersections			
Alvarado Street at Sunset Boulevard	13.19	39,000	3,650
Alvarado Street left onto Glendale Boulevard	13.59	40,000	3,900
<b>Freeway Terminus at Glendale Boulevard</b>	<b>14.21</b>	<b>71,000</b>	<b>7,200</b>
Juncture with I-5	15.14	60,000	5,900

\*Annual average daily traffic is the total traffic volume for the year divided by 365 \* days.

\*\*Peak hour Traffic indicates the hour during which the Route is most congested.

Source: 2006 Traffic Volumes on the California State Highway System, Caltrans 2007.

### **Level of Service**

Level of Service (LOS) is a qualitative measure describing operational conditions within a traffic stream, generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. As shown in Table 1-2, LOS conditions are designated as “A,” indicating best free-flow condition, through “F,” indicating worst-case congested conditions.

LOS is derived from a volume-to-capacity (V/C) ratio value. The V/C ratio signifies the number of vehicles, or volume (V), using the roadway compared to the roadway capacity (C). A V/C ratio of 1.00 indicates that the roadway is at capacity, which translates into LOS E. Any V/C values over 1.00 mean that the number of vehicles on the roadway exceeds capacity, and LOS is deemed to be F. Figure 1-3 illustrates LOS conditions A through F.

### **Freeway Terminus and Intersection Operations**

Weekday a.m. peak period (7:00-10:00 a.m.) and p.m. peak period (3:00 – 6:00 p.m.) traffic counts were collected for four intersections within the project limits in May and June 2006. Table 1-3 summarizes the existing weekday morning and evening peak hour V/C ratio and delay and the corresponding LOS for intersections in the immediate vicinity of the SR-2 freeway terminus based on the Critical Movement Analysis (CMA) and the Highway Capacity Manual (HCM) methodologies, respectively (See Section 2.1.9 Traffic and Transportation/Pedestrian and Bicycle Facilities for a description of these two methodologies). The results of this analysis indicate that all but two of the intersections in the immediate vicinity of the SR-2 freeway terminus are currently operating at LOS D or better during both the morning and afternoon peak periods. Glendale Boulevard & SR-2 SB Off-Ramp/Fargo Street/Waterloo Street (No. 1) and Glendale Boulevard/Alvarado Street and Berkeley Avenue (No. 4) operate at LOS E and F, respectively, during the morning peak period, indicating congested conditions.

**Table 1-2. Traffic Level of Service Descriptions**

LOS	Description	Volume-to-Capacity Ratio
		Typical Speed
A	Indicates primarily free-flow operations and ability to maneuver unimpeded.	0.00–0.33 50-plus mph
B	Indicates stable flow with few restrictions on operating speed or maneuverability.	0.34–0.50 48–49 mph
C	Indicates stable flow but higher volume and more restriction on speed and lane changing.	0.51–0.65 44–47 mph
D	Indicates approaching unstable flow, little freedom to maneuver, and conditions tolerable for short periods.	0.66–0.80 40–43 mph
E	Indicates unstable flow, lower operating speeds than LOS D, and some momentary stoppages.	0.81–1.00 30–39 mph
F	Indicates forced flow operating at low speeds where the highway acts as a storage area and there are many stoppages.	Greater than 1.00 Less than 30 mph

Source: Highway Capacity Manual Special Report 209, Transportation Research Board, 1995.

**Table 1-3. Intersection Level of Service Analysis Existing Conditions (2006)**

No.	Intersection	Peak Hour	V/C [d]	LOS	Delay [e]	LOS
1. [a]	Glendale Boulevard & SR 2 SB Off-Ramp/Fargo Street/Waterloo Street	A.M.	-	-	56.5	E
		P.M.			16.3	B
2. [a]	Glendale Boulevard & Allesandro Street	A.M.	-	-	17.3	B
		P.M.			16.6	B
3. [b]	Glendale Boulevard & Aaron Street	A.M.	0.723	C	18.1	B
		P.M.	0.714	C	11.4	B
4. [a]	Glendale Boulevard/Alvarado Street & Berkeley Avenue	A.M.	0.888	D	>80.0	F
		P.M.	0.876	D	34.3	C
5. [c]	Glendale Boulevard & SR 2 Ramps	A.M.	-	-	-	-
		P.M.	-	-	-	-

**Notes:**

[a] Intersection is currently operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the above analysis.

[b] Intersection is currently operating under the LADOT Automated Traffic Surveillance and Control (ATSAC) system. A credit of 0.07 in V/C ratio was included in the above analysis.

[c] Intersection is uncontrolled under existing conditions.

[d] V/C ratio calculated based on LADOT CMA methodology.

[e] Delay calculated based on HCM methodology using Synchro/Simtraffic.

Source: Fehr & Peers/Kaku Associates, 2008.

Figure 1-3. Freeway Levels of Service A through F

<b>LEVELS OF SERVICE</b> for Freeways			
Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
<b>A</b>		70	Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. <b>No delays</b>
<b>B</b>		70	Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. <b>No delays</b>
<b>C</b>		67	Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. <b>Minimal delays</b>
<b>D</b>		62	Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. <b>Minimal delays</b>
<b>E</b>		53	Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. <b>Significant delays</b>
<b>F</b>		<53	Very congested traffic with traffic jams, especially in areas where vehicles have to merge. <b>Considerable delays</b>

## Safety

Table 1-4 shows the accident data within this segment of SR-2 for a 36-month period between January 1, 2004 and December 31, 2006 obtained from the Caltrans Traffic Accident Surveillance and Analysis System (TASAS). The actual accident rates are compared with average accident rates for similar highway facilities throughout the State.

The data indicates that the overall accident rate within this segment of SR-2 is lower than the statewide average. There are no reported fatalities and 11 reported injuries. There were 32 reported accidents, which include eight “improper turn” collisions (21%), 10 “speeding” collisions (26%), and 10 “other” collisions (26%). Eleven (29%) of these accidents are “rear end” collisions, and 10 (26%) are “hit object” collisions. Of the total number of accidents, 35 (92%) involved no unusual road conditions, 31 (82%) occurred on a clear day, 26 (68%) occurring during day light and 34 (90%) occurred in dry conditions.

**Table 1-4.** Accident Rates through 1/1/04 through 12/31/06

PM	Statistical Data			Actual Accident Rates (ACCS/MVM*)			Average Accident Rates (ACCS/MVM*)		
	No. of Accidents	Fatal	Fatal+ Injury	Total	Fatal	Fatal+ Injury	Total	Fatal	Fatal+ Injury
13.5 to 14.5	32	0	11	0.46	0	0.16	1.88	0.012	0.77

\*MVM denotes million vehicle mile

Source: Draft Project Report, State Route 2 Terminus Project, 2008.

## Transportation Demand

The project area, as well as the City as a whole, is projected to experience a growth in transportation demand. The year 2033 traffic projections reflect an average annual growth of 1.04% for the a.m. peak and 0.97% for the p.m. peak weekday periods. These rates were obtained from the Metro travel demand mode and were applied to the existing traffic volumes to obtain future traffic volumes at the analyzed intersections. Under year 2030 no-build alternative (baseline) conditions, eight of the 20 analyzed intersections in the traffic study are projected to operate at LOS E or F during at least one of the analyzed peak hours. These are listed below:

- Glendale Boulevard and SR-2 southbound off-ramp/Fargo Street/Waterloo Street (AM)
- Glendale Boulevard and Allesandro Street (PM)
- Glendale Boulevard and Aaron Street (AM)
- Glendale Boulevard/Alvarado Street and Berkeley Avenue (AM and PM)
- Glendale Boulevard & Montana Street (AM)
- Glendale Boulevard & Bellevue Avenue (AM)
- Glendale Boulevard & Temple Street (AM and PM)
- Alvarado Street & Temple Street (PM)

## Non-Modal Design Elements

The approach used to achieve these three project objectives included the use of a community-based vision for the revitalization of the major arterial boulevards, which run through the dense local communities of Echo Park and Silver Lake. Through design techniques such as Context Sensitive Design (CSD) (see Section 1.3.1 for a description of the methodology), the transportation facility at the southern terminus can be developed in a manner that is sensitive to the local setting while simultaneously improving traffic flow and vehicular and pedestrian mobility. The various proposed alternatives that have been developed allow for a design that is compatible with existing land use, one in which opportunities for additional open space will also be created. Through CSD, vehicular and pedestrian interaction will also be improved by allowing for the design of a more pedestrian friendly environment through the various proposed alternatives.

The proposed improvements that have been identified to address the project purpose and need have independent utility and logical termini, as discussed in Section 1.3 below.

## 1.3 Project Description

This section describes the proposed project alternatives developed by a multi-disciplinary team using CSD to achieve the objectives of the project to better manage traffic flow; enhance accessibility and safety; and develop a design that is compatible with existing residential and commercial uses. The proposed project is within the boundaries of the City of Los Angeles. The project limits for this 1.5 mile-long SR-2 reconfiguration project are from the Branden Street (post mile [PM] 13.5) intersection and the Interstate 5 (I-5) (PM 15.0) intersection (see Figure 1-1).

### 1.3.1 Context Sensitive Design

The FHWA defines CSD as “. . . a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility. CSD is an approach that considers the total context within which a transportation improvement project will exist.”<sup>2</sup> Caltrans (the Department) also incorporates context sensitive design in their efforts. According to the Director’s Policy effective November 29, 2001, “context sensitive solutions” are used by the Department “. . . as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through collaborative, interdisciplinary approach involving all stakeholders. The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed.”<sup>3</sup>

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<sup>2</sup> Federal Highway Administration Context Sensitive Design webpage. Viewable at <http://www.fhwa.dot.gov/csd/>.

<sup>3</sup> *Director’s Policy: Context Sensitive Solutions*. California Department of Transportation. Effective 11-29-01.

The Caltrans Highway Design Manual (HDM) philosophy mirrors the concepts of context sensitive solutions. This philosophy for the project development process seeks to provide a degree of mobility to users of the transportation system that is in balance with other values. Caltrans policies, practices, or mandatory design standards provide a guide for highway designers to exercise sound judgment in applying the policies, practices, or standards consistent with this philosophy. This flexibility is the foundation of highway design, and highway designers must strive to provide for the needs of all highway users in balance with the needs of the local community and the context of the project. Caltrans policies, practices or mandatory design standards allow sufficient flexibility in order to encourage independent designs that fit the needs of each situation.<sup>4</sup>

Caltrans does not view CSD as incompatible with existing design standards: “The policies, practices or mandatory design standards used for any project should meet the minimum guidance given to the maximum extent feasible, but the philosophy provides for the use of nonstandard design when such use best satisfies the concerns of a given situation. Deviations from the Caltrans policies, practices or mandatory design standards require review and approval for nonstandard design through the exception process (see Index 82.2 of the [HDM]) and should be discussed early in the planning and design process.”<sup>5</sup>

### 1.3.2 Alternatives

The alternative development process included the preparation of several studies and reports such as the 1994 Glendale Boulevard Corridor Preliminary Planning Study (Phase II) and the Project Study Report/Project Development Support (PSR/PDS) as well as the incorporation of public comments received during the public scoping meetings conducted in the project area. As a result of the alternatives selection process, nine project alternatives were developed during the project development and screening process. The number of alternatives was then reduced to the following six: The No-Build Alternative, Alternative A (Widen Existing Ramps – Maintain Overpass), Alternative B (Realign Ramp East – Remove Flyover and Part of Overpass), Alternative C (Realign Ramps East – Remove Overpass), Alternative D (Realign Ramps East – Maintain Overpass), and Alternative E (Realign Ramps East, Retain Overpass and Flyover, Relocate Retaining Wall). Each alternative is described in detail below.

All of the build alternatives described below would include additional and improved signage south of the I-5 interchange, along southbound SR-2 to alert motorists of the impending freeway terminus and the transition to Glendale Boulevard to better manage traffic flow and control vehicle speeds. Proposed project improvements will also be coordinated with proposed LADOT neighborhood protection measures to reduce cut-through traffic.

Planning, design, construction, and operation of proposed improvements to Caltrans facilities will comply with Caltrans Deputy Directive 64 (DD-64) – *Accommodating Non-Motorized Travel*. Additionally, all non-motorized improvements, e.g., sidewalks and crosswalks, described below, will comply with Americans with Disabilities Act (ADA) requirements.

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<sup>4</sup> Context Sensitive Solutions. Caltrans Division of Design webpage. Viewable at <http://www.dot.ca.gov/hq/oppd/context/index.htm>.

<sup>5</sup> Ibid.

### **No-Build Alternative: Baseline Alternative**

This alternative requires no new construction or capital cost (see Figure 1-4). The No-Build Alternative would maintain the existing terminus configuration and would require no capital expenditure at this time. Traffic volumes at the terminus would continue to grow and the existing levels of service would continue to degrade to unacceptable levels prior to 2033. Traffic queues would become longer and vehicle delays would increase substantially. The higher levels of congestion could reduce air quality in the vicinity of the interchange. Pedestrian and bicycle circulation would remain inefficient and circuitous at the terminus. This alternative does not meet the purpose and need for this project, i.e., managing traffic flow and enhancing accessibility and safety at the SR-2 terminus.

### **Alternative A: Widen Existing Ramps – Maintain Overpass**

This alternative would widen the existing southbound exit ramp from two to three lanes and widen the existing northbound entrance ramp from two to three lanes (see Figure 1-5). It would also maintain the southbound flyover ramp (two lanes). The overpass above Glendale Boulevard would remain in place. This alternative does not have the potential to provide new open space to meet community needs.

Alternative A would not include any non-standard mandatory or advisory design features. The existing catch basins on the freeway ramps would be relocated to accommodate the widening (Figure 1-5). Additional right-of-way acquisition may be required for the relocation of gas, telephone, cable and street lighting lines within the project limits.

Pedestrian circulation at the terminus under Alternative A would be similar to the existing condition. However, the crosswalks would be marked or stamped to distinguish them from the roadway and would conform to LADOT standards in terms of line thickness and width of crosswalk. Additionally, the sidewalk on the east side of Glendale Boulevard between Allesandro Street and the northbound entrance ramp and the crosswalk crossing the northbound entrance ramp, which is currently unsignalized, would be eliminated to improve pedestrian safety. The proposed sidewalks and curb ramps would be ADA compliant.

The estimate cost to design and construct this alternative is approximately \$8.1 million.

### **Alternative B: Realign Ramp East – Remove Flyover and Part of Overpass**

This alternative would shift the entrance and exit ramps to the east. It would reduce the number of freeway off-ramp lanes from four to three and maintain the two on-ramp lanes (see Figure 1-6). It would also remove the southbound flyover ramp and a portion of the overpass above Glendale Boulevard. The remaining portion of the overpass above Glendale Boulevard would be retained for community reuse and greening. This alternative offers the potential for new open space.

**Figure 1-4. No-Build Alternative (Baseline Alternative)**



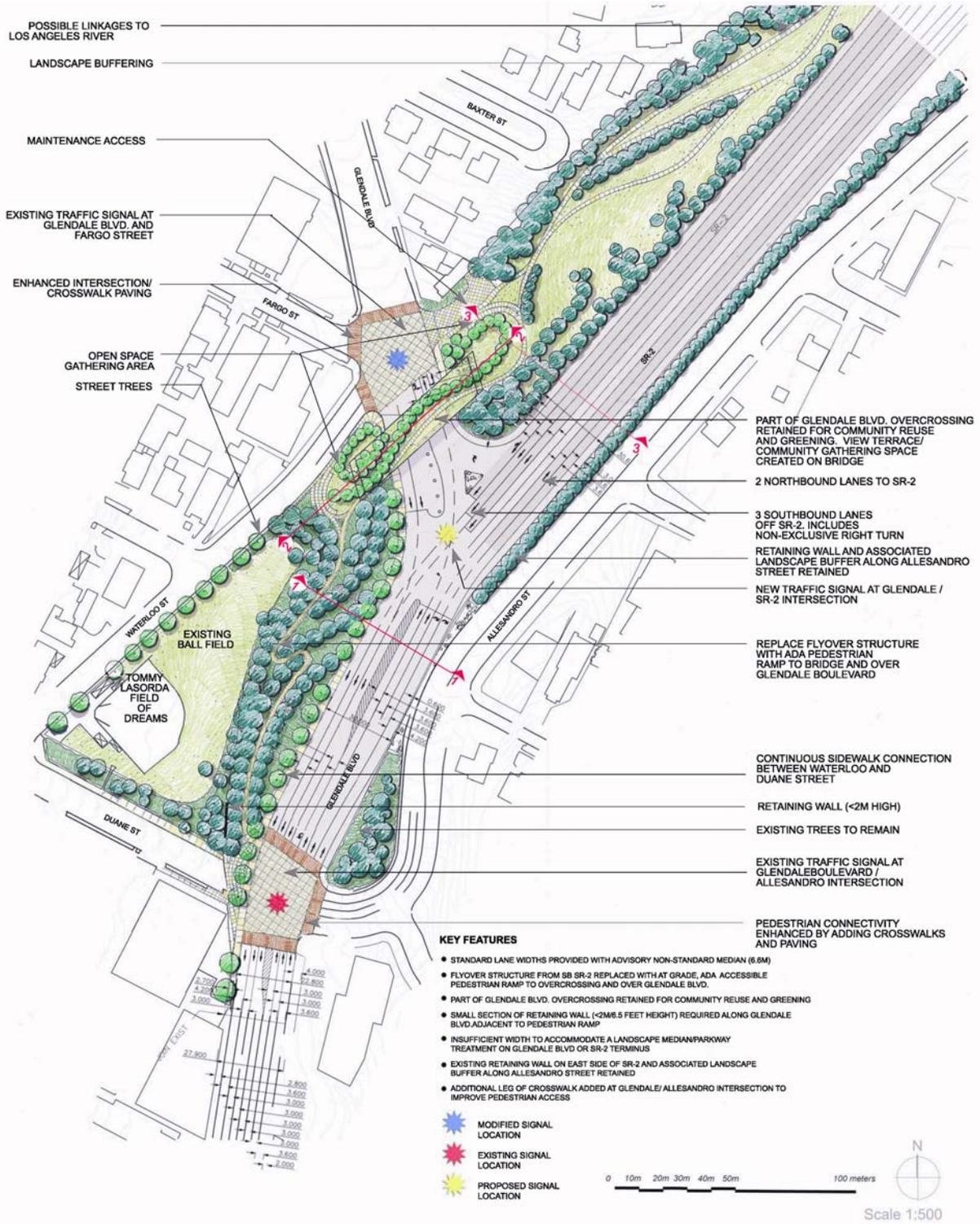
Source: Melendrez, 2008.

**Figure 1-5. Alternative A (Widen Existing Ramps)**



Source: Melendrez, 2008.

**Figure 1-6. Alternative B (Realign Ramp East – Remove Flyover and Part of Overpass)**



Source: Melendrez, 2008.

This alternative would remove the entirety of the right side of the overpass as well as a strip 21 feet 6 inches wide next to the Glendale Freeway centerline. The remaining portion of the left side would be planned for future community use and greenery. The retaining wall on the southern portion of the overpass would also need to be removed. The remaining structure would be 47 feet 3.5 inches wide and would require new barriers for pedestrians along both edges of deck. Removal of the structure would require demolition of the abutment, and retaining wall footings down to a depth that would accommodate for re-grading and landscaping. The removal would expose the enclosure of both cellular abutments; therefore, new wingwalls are proposed to reseal the enclosures. The minimum vertical clearance of the remaining structure would continue to be approximately 15 feet. Seismic retrofit of the left side of the overpass would likely be necessary. Infill walls are proposed in between a few of the remaining columns.

The existing catch basin on the off-ramp would be relocated to the edge of pavement of the proposed off-ramp. The existing catch basin of the on-ramp would be relocated closer to the proposed median.

The proposed project will include standard mandatory design features. However, the proposed project would include one non-standard advisory design feature. The proposed SR-2 median is 22 feet, while the advisory standard is 36 feet.

A new signal would be constructed as part of this alternative at the intersection of Glendale Boulevard and the realigned ramps. As a result of these improvements, signal interconnection and timing coordination would be considered during design along Glendale Boulevard at the intersections of Glendale Boulevard with Branden Street, the SR-2 ramps and Waterloo/Fargo Streets.

Pedestrian circulation would be improved at the terminus under Alternative B. Currently, the flyover precludes pedestrians from crossing from the east side of Glendale Boulevard at Allesandro Street to the west side of Glendale Boulevard at Duane Street. Alternative B would eliminate the flyover at this portion and create the opportunity for another pedestrian crossing of Glendale Boulevard at Allesandro Street. The existing sidewalk on the east side of Glendale Boulevard between Allesandro Street and the proposed freeway ramps intersection, plus the crosswalk crossing the northern leg of this intersection, would be eliminated to reduce pedestrian conflicts with freeway traffic. The proposed median of Glendale Boulevard and areas directly adjacent to the improved SR-2 terminus and Glendale Boulevard could be fully landscaped. The proposed sidewalks and curb ramps would be ADA compliant.

A considerable additional amount of potential open space would be created in Alternative B. The ballpark and other areas (approximately 1.7 acres existing plus 0.5 acres additional) west of Glendale Boulevard are currently within the State's right of way. Since Alternative 3 is removing a portion of the existing overpass, additional park open space could potentially be added. The part of the Glendale Boulevard overpass that would be retained could be used for community reuse and greening. Alternative B could allow public access to the potential additional open space (approximately 3 acres) east of Glendale Boulevard. These open space areas are currently within the State's right of way, but could potentially be considered excess State land that could be transferred/conveyed to the City of Los Angeles at a later date.

The estimated cost to design and construct this alternative is \$13.3 million.

### **Alternative C: Realign Ramps East – Remove Overpass**

This alternative would shift the entrance and exit ramps to the east. It would reduce the number of freeway off-ramp lanes from four to three and maintain the two on-ramp lanes. It would remove the southbound flyover ramp and overpass above Glendale Boulevard. This alternative provides a landscaped median and a parkway treatment and offers the potential for new open space (Figure 1-7).

The existing catch basin on the off-ramp would be relocated to the edge of the pavement of the proposed off-ramp. The existing catch basin of the on-ramp would be relocated closer to the proposed median.

The proposed alternative would have full standard design features.

A new signal would be constructed as part of this alternative at the intersection of Glendale Boulevard and the realigned ramps. As a result of these improvements, signal interconnection and timing coordination would be considered during design along Glendale Boulevard at the intersections of Glendale Boulevard with Branden Street, the SR-2 ramps and Waterloo/Fargo Streets.

Pedestrian circulation would be improved at the terminus in Alternative C. Currently, the direct connector precludes pedestrians from crossing from the east side of Glendale Boulevard at Allesandro Street to the west side of Glendale Boulevard at Duane Street. Alternative C would eliminate the direct connector for southbound SR-2 motor vehicles and create the opportunity for another pedestrian crossing of Glendale Boulevard at Allesandro Street. The existing sidewalk on the east side of Glendale Boulevard between Allesandro Street and the proposed freeway ramps intersection, plus the crosswalk crossing the northern leg of this intersection, would be eliminated to reduce pedestrian conflicts with freeway traffic. The proposed median of Glendale Boulevard, SR-2, and areas directly adjacent to the improved SR-2 terminus and Glendale Boulevard could be fully landscaped.

A considerable additional amount of potential open space would be created under Alternative C. The ballpark and other areas (approximately 1.7 acres existing plus 0.5 acres additional) west of Glendale Boulevard are currently within the State's right of way. Since Alternative C would remove the existing overpass and level the ground to the west and east of Glendale Boulevard, additional activities could potentially be added. Alternative 3 could allow public access to the potential additional open space (approximately 3 acres) east of Glendale Boulevard. These open space areas are currently within the State's right of way, but could potentially be considered excess State land that could be transferred/conveyed to the City of Los Angeles at a later date.

The estimated cost to design and construct this alternative is \$12.6 million.

**Figure 1-7. Alternative C (Realign Ramps East – Remove Flyover and Overpass)**



Source: Melendrez. 2008.

## **Alternative D: Realign Ramps East – Maintain Overpass**

This alternative would shift the exit ramps to the east and modify the existing flyover structure and overpass, converting it to community open space. It would also reduce the number of freeway off-ramp lanes from four to three and maintain the two on-ramp lanes. This alternative provides a landscaped median and parkway treatment further north of the terminus area. The existing retaining wall and associated landscaping along Allesandro Street would remain unchanged.

This alternative offers the potential for new open space (Figure 1-8). A new signal would be constructed as part of this alternative at the intersection of Glendale Boulevard and the realigned ramps. As a result of these improvements, signal interconnection and timing coordination should be considered during design along Glendale Boulevard at the intersections of Glendale Boulevard with Branden Street, the SR-2 ramps and Waterloo/Fargo Streets.

The existing catch basin on the off-ramp would be relocated to the edge of the pavement of the proposed off-ramp. The existing catch basin of the on-ramp would be relocated closer to the proposed median. The proposed alternative would include a few non-standard mandatory or advisory design features. The number two lane on the northbound SR-2 onramp would be 11 feet, while the right shoulder on the northbound SR-2 onramp would range from 2 to 4 feet. In addition, the median would be non-standard with variable widths.

Pedestrian circulation would be improved at the terminus under Alternative D. Currently, the direct connector precludes pedestrians from crossing from the east side of Glendale Boulevard at Allesandro Street to the west side of Glendale Boulevard at Duane Street. Alternative D would eliminate the direct connector for southbound SR-2 motor vehicles and create the opportunity for another pedestrian crossing of Glendale Boulevard at Allesandro Street. The existing sidewalk on the east side of Glendale Boulevard between Allesandro Street and the proposed freeway ramps intersection, plus the crosswalk crossing the northern leg of this intersection, would be eliminated to reduce pedestrian conflicts with freeway traffic. The proposed median of Glendale Boulevard and areas directly adjacent to the improved SR-2 terminus and Glendale Boulevard could be fully landscaped.

A considerable additional amount of potential open space would be created under Alternative D. The ballpark and other areas (approximately 1.7 acres existing plus 0.5 acres additional) west of Glendale Boulevard are currently within the State's right of way. Since Alternative D would remove the existing overpass and level the ground to the west and east of Glendale Boulevard, additional open space could potentially be added. Alternative D could allow public access to the potential additional open space (approximately 3 acres) east of Glendale Boulevard. These open space areas are currently within the State's right of way, but could potentially be considered excess State land that could be transferred/conveyed to the City of Los Angeles at a later date.

The estimated cost to design and construct this alternative is \$10.3 million.

**Figure 1-8. Alternative D (Realign Ramps East – Retain Flyover and Overpass)**



Source: Melendrez, 2008.

## **Alternative E: Realign Ramps East, Retain Overpass and Flyover, Relocate Retaining Wall**

This alternative would shift the exit ramps to the east and modify the existing flyover structure and overpass, converting it to community open space. It would also reduce the number of freeway off-ramp lanes from four to three and maintain the two on-ramp lanes. Alternative E would provide a landscaped median and a parkway treatment further north of the terminus area. This alternative also offers the potential for new open space (Figure 1-9).

The existing retaining wall along Allesandro Street would be relocated to the east to maintain Caltrans' highway standards. A portion of the existing retaining wall along the east side of Glendale Boulevard and the Glendale Boulevard on-ramp, and a portion of the existing slope, would be demolished as part of Alternative E. A replacement wall with an approximate length of 547 feet would be constructed. The replacement wall would tie in at the ends into the existing wall and at its widest point, the proposed wall would provide up to 165 additional feet of roadway space on the Glendale Boulevard on-ramp.

The existing catch basin on the off-ramp would be relocated to the edge of pavement of the proposed off ramp and the catch basin of the on-ramp would be relocated closer to the proposed median.

The proposed alternative would include one non-standard mandatory or advisory design feature. The proposed SR-2 median would be 27 feet while the advisory standard is 36 feet.

The estimated cost to design and construct this alternative is \$16.3 million.

### **1.3.3 Alternatives and Design Options Eliminated from further Consideration**

#### **Widen Direct Connector/Remove Exit Ramp**

This alternative proposed to widen the southbound direct connector and remove the southbound exit ramp and movements to northbound Glendale Boulevard from southbound SR-2. This alternative would likely receive little or no public support due to the expanded use of the direct connector. Additionally, this alternative limits access to northbound Glendale Boulevard from SR-2. On April 11, 2001, the PDT determined that this alternative did not adequately meet the goals and objectives of the project.

#### **Duane Street Extension**

Variations of Alternatives B to E were considered in which Duane Street would be extended eastward to Glendale Boulevard at its intersection with Allesandro Street. The extension of Duane Street would cause added congestion along Glendale Boulevard. This is due to additional conflicting traffic movements and an additional traffic signal phase at the intersection of Glendale Boulevard and Allesandro Street. The added northbound left-turn lane would eliminate one northbound through lane on Glendale Boulevard, further reducing corridor capacity and increasing congestion. In addition, the extension of Duane Street would encourage "cut-through" traffic on Duane Street. On July 18, 2001, the PDT determined that this alternative did not adequately meet goals and objectives of the project.

**Figure 1-9. Alternative E (Realign Ramps East – Retain Flyover and Overpass – Relocate Retaining Wall)**



Source: Melendrez, 2008.

## **Design Options**

Through the project's outreach efforts, members of the local community have expressed a desire to explore other access and traffic control options at the SR-2 terminus. These suggestions included adding a left turn onto the SR-2 freeway from southbound Glendale Boulevard and a right-turn prohibition onto northbound Glendale Boulevard

The community suggested design options were considered and evaluated but are not recommended for implementation for the reasons identified below.

With a left-turn, the average vehicular delay for southbound Glendale Boulevard movements and northbound Glendale Boulevard right-turn movements to SR-2 would substantially increase.

A right-turn prohibition is not recommended by Metro, Caltrans, or LADOT, as the prohibition of the right turn (1) conflicts with Caltrans' truck route designation, (2) conflicts with FHWA policy not to restrict user access on a federally-funded facility, (3) would redirect traffic into neighborhoods, which conflicts with LADOT's traffic operations policy, (4) poses traffic enforcement issues for the Los Angeles Police Department, (5) restricts the demonstrated need for neighborhood access by residents, and (6) could redirect traffic to exit at the southbound SR-2 Fletcher Drive off-ramp. Prohibiting the SR-2 right-turn lane would merely shift the vehicles wanting to make that movement to other street segments accessing Glendale Boulevard. The traffic demand would remain and could result in unforeseen traffic impacts.

## **1.4 Other Local and Regional Improvements**

The proposed project improvements focus on the area in the immediate vicinity of the SR-2 freeway terminus. Much of the congestion that occurs at the terminus and surrounding streets is a result of regional commuter traffic, and thus the proposed project is limited in its ability to resolve the larger transportation and mobility problems in the study area. To address regional commuter traffic issues, other improvements beyond the scope of this study are recommended and could include improvements at the I-5/SR-2 interchange and the Alvarado Street/Glendale Boulevard intersection as well as corridor wide transit improvements.

## **1.5 Areas of Controversy**

No substantial areas of controversy were identified during the public scoping meetings and design workshops. However, several issues of concern or interest were repeatedly raised by individual members of the public during the alternatives development process. These included:

- opposition to any improvements that would increase roadway and freeway capacity resulting in additional traffic
- reduction in commuter traffic at the SR-2 terminus
- preservation of the existing flyover and overpass in its entirety for use as open space

- measures to alleviate neighborhood cut-through traffic
- excessive motorists speeds on Glendale Boulevard and surrounding streets
- improved bicycle and pedestrian access, and
- noise impacts.

## 1.6 Permits and Approvals Needed

**Table 1-5.** Permits and Approvals Needed

<b>Permit/Approval</b>	<b>Agency</b>	<b>Status</b>
Air Quality Conformity Determination	FHWA	Applicable documentation will be transmitted to FHWA after circulation of the Draft Environmental Document.
Freeway Agreement	City of Los Angeles	Following project approval
NPDES	Regional Water Quality Control Board	Applicable documentation to be completed by contractor prior to construction.



# Chapter 2. Affected Environment, Environmental Consequence, and Avoidance, Minimization and/or Mitigation Measures

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As part of the scoping and environmental analysis conducted for the proposed project, the following environmental issues were considered, but no adverse impacts were identified. Consequently, there is no further discussion of these issues in this document:

- Coastal Zone
- Wild and Scenic Rivers
- Farmlands/timberlands

These issues are not discussed because the proposed project is not located within a coastal zone and there are no wild or scenic rivers and farmlands/timberlands in the general vicinity of the project area.

## 2.1 Human Environment

### 2.1.1 Existing and Future Land Use

#### Regulatory Setting

##### *City of Los Angeles General Plan*

The General Plan Framework Element for the City of Los Angeles is a strategy for long-term growth that sets a citywide context to guide the subsequent amendments of the City's community plans, zoning ordinances, and other pertinent programs. The Framework Element responds to State and federal mandates to plan for the City of Los Angeles' future. The Framework Element supersedes Concept Los Angeles and the citywide elements of the City of Los Angeles General Plan. In many respects, the Framework Element is an evolution of the Centers Concept, adopted in 1974, that provides fundamental guidance regarding the City's future.

The proposed project area falls within the Silver Lake-Echo Park-Elysian Valley Community Plan. The Silver Lake-Echo Park-Elysian Valley Community Plan is one of the 35-community plans that comprise the Land Use element of the City of Los Angeles General Plan. A detailed discussion of the Silver Lake-Echo Park-Elysian Valley Community Plan is provided below.

##### *Silver Lake-Echo Park-Elysian Valley Community Plan*

The Silver Lake-Echo Park-Elysian Valley Community Plan Area (Community Plan Area) is located north of downtown Los Angeles. The Community Plan Area encompasses 4,579 acres (7 square miles) and is surrounded by the Hollywood and Wilshire Community Plan Area to the west, Westlake Community Plan Area to the southwest, Central City North Community Plan

Area to the south, and the Northeast Community Plan Area to the north and east. The Community Plan Area encompasses 2% of the City's land area and approximately 42% of the land located within the Community Plan Area is designated for residential use. One distinguishing feature of this area is its fairly dense hillside neighborhoods, which are often characterized by steep slopes and narrow streets. Glendale Boulevard runs north and south, splitting the plan area in half.<sup>1</sup>

## **Affected Environment**

The information presented in this section is based primarily on the Community Impact Assessment (CIA) prepared for the proposed project (printed under separate cover). As shown in Figure 2-1, the project area encompasses a 1-mile-long section of SR-2, including the SR-2 freeway terminus, and is bordered by the communities of Silver Lake and Echo Park, within the City of Los Angeles.

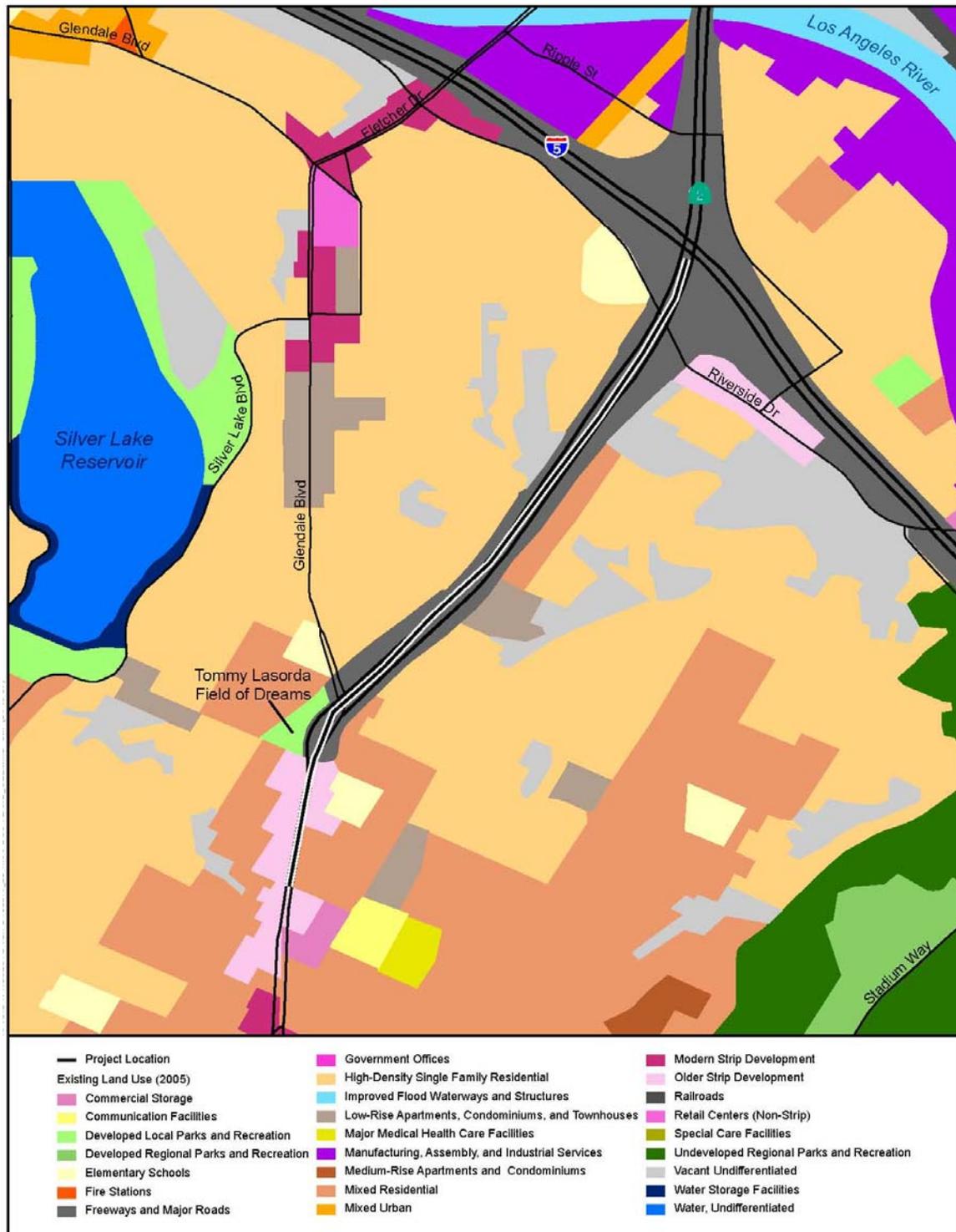
The project area is highly developed with predominantly residential uses (see Figure 2-1, Existing Land Use). Adjacent land uses on either side of the SR-2 right-of-way consist of multiple-family and single-family residences. In addition, some commercial buildings, a park, a church, and other public facilities are located in the immediate vicinity of the SR-2 freeway terminus. Industrial uses are located north of the proposed project site, adjacent to I-5. SR-2 is a designated state freeway that runs generally from north to south in the project area, terminating on the south at Glendale Boulevard. Glendale Boulevard is designated by the City of Los Angeles as a Major Highway Class II.

As described in Section 2.1.4 (Growth), the population of the City of Los Angeles is expected to increase to 4,309,625 by 2030, an increase of 17% over the year 2000 population level. The number of households is projected to increase to 1,637,475 by 2030, an increase of about 28% over the same 30-year period. The projected population in the project area in 2030 is 18,262, an increase of about 16.2% from the year 2000 population, while 7,829 households are projected in 2030, an increase of about 25.2% from 2000. To accommodate the expected population growth, the Silver Lake-Echo Park-Elysian Valley Community Plan proposes new development to be concentrated along identified Mixed Use Boulevards, in Neighborhood Districts, and in Community Centers. Adopted Mixed Use boulevards have been established along portions of Temple Street, Sunset Boulevard Cesar E. Chavez Avenue, Fountain Avenue, and Hyperion Avenue. Proposed Mixed Use Boulevards are located along other remaining portions of Sunset Boulevard and Temple Street. Adopted Neighborhood Districts and Community Centers include the Silver Lake Boulevard/Glendale Boulevard Neighborhood District; and the Sunset Boulevard/Glendale Boulevard, Sunset Boulevard/Echo Park Avenue, and Alvarado Street Community Centers. The former three community centers are proposed to be combined into one community center.

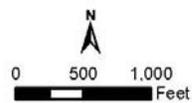
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<sup>1</sup> Chapter I, Silver Lake-Echo Park-Elysian Valley Community Plan (I-1).

**Figure 2-1. Existing Land Use**



SOURCE: SCAG (2005); TeleAtlas (2006)



## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no construction would occur and consequently no adverse effects to land uses would occur.

#### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

Alternative A would not displace residential, industrial, or commercial land uses, such as businesses. Construction activities associated with implementation of Alternative A would be contained largely within the existing public right-of-way and no relocations or changes in land use would occur. Although construction activities would result in temporary noise and air quality impacts that could affect nearby land uses, as well as traffic disruptions that could affect the local community, regional commuters, and access for emergency services, construction of Alternative A is not expected to result in substantial adverse land use impacts or substantially affect the overall pattern and rate of land use and development in the project area during the construction period.

#### **Alternative B (Realign Ramp East – Remove Flyover and Part of Overpass)**

Alternative B would not displace residential, industrial, or commercial land uses, such as businesses. However, Alternative B would require more extensive construction than Alternative A due to realignment of the SR-2 ramps and removal of the flyover and part of the overpass. This alternative would be similar to Alternative A in that construction activities would be largely contained within the existing public right-of-way, and temporary construction impacts would not have a substantial adverse effect on nearby land uses. Although definitive information on construction easements is not available at this time, it is likely that temporary construction easements may be required along Waterloo Street (to access the overpass/space on the south side of Glendale Boulevard next to the Tommy Lasorda Field of Dreams). These easements would be necessary only for the duration of construction and would not interfere substantially with the use of the affected parcels. Construction activities would be longer in duration than those under Alternative A due to the need for partial demolition of the overpass and result in temporary noise, air quality, and traffic effects, including lane closures and detours that would affect the local community, regional commuters, and access for emergency services. However, construction of Alternative B is not expected to result in substantial adverse land use impacts or affect the overall pattern and rate of land use and development in the project area during the construction period. No residential or business displacements would occur.

#### **Alternative C (Realign Ramps East – Remove Overpass)**

Alternative C would not displace residential, industrial or commercial land uses, such as businesses. The construction impacts of Alternative C would be slightly greater, due to removal of the overpass, but generally similar to those of Alternative B. Demolition of the entire overpass would result in a longer construction period than that of Alternative B. In addition, demolition would result in greater or more extensive temporary noise, air quality, and traffic disruption impacts, including lane closures and traffic detours, that would affect the local community, regional commuters, and access for emergency services during the construction period. However,

as described in Sections 2.2.6, and 2.2.7, and 2.1.9, construction would not result in substantial adverse impacts in these areas and consequently no substantial adverse land use impacts or changes in the overall pattern and rate of land use and development in the project area are expected to occur.

#### **Alternative D (Realign Ramps East – Maintain Overpass)**

Alternative D would not displace residential, industrial or commercial land uses, such as businesses. The construction impacts of Alternative D would be similar but slightly less than Alternative B since Alternative A would not result in removal of the overpass. Construction activities would result in temporary noise and air quality effects, and traffic disruption affecting the local community and regional commuters and emergency service access. No substantial adverse impacts would occur.

#### **Alternative E (Realign Ramps East, Retain Overpass and Flyover, Relocate Retaining Wall)**

Alternative E would not displace residential, industrial or commercial land uses, such as businesses. The construction impacts of Alternative E would be slightly greater than those that would occur under Alternative D due to the relocation of the retaining wall along the eastside of SR-2, which may require construction easements. However, no substantial adverse impacts are anticipated.

#### ***Operational Impacts***

Operational impacts would occur if the proposed project would result in changes in land use or the pattern of development that are inconsistent with local plans and policies, introduce new land uses that are incompatible with surrounding uses or inconsistent with existing zoning and general plan designations, or result in impacts that would adversely affect adjacent land uses.

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, the existing SR-2 facility's deficient conditions would continue to exist and no changes would occur to the existing or surrounding land uses. Consequently, no adverse effects to existing and future land uses would occur.

#### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

Since the project involves transportation improvements to an existing transportation facility that would occur largely within existing public right-of-way, no substantial change in land use or the pattern of development in the area would occur. No substantial adverse operational impacts on adjacent land uses are anticipated (see Sections 2.2.5 and 2.2.6 for discussions of operational air quality and noise effects) and the proposed improvements would not be incompatible with land uses in the immediate surrounding area.

The need for reconfiguration of and improvements to the freeway terminus are a result of existing traffic and land use patterns. The existing deficiencies are identified as a community issue in the Community Plan. Alternative A would widen the existing freeway ramps to better manage and improve traffic flow, which would be consistent with the transportation goals, objectives, and policies of local community and mobility plans. This alternative would, however, retain the flyover and its associated hazards due to vehicles traveling at high speeds on the flyover then merging with slower traffic travelling southbound on Glendale Boulevard.

**Alternative B (Realign Ramp East – Remove Flyover and Part of Overpass)**

The operational land use impacts of Alternative B would be similar to those identified above for Alternative A but this alternative would also eliminate the flyover and provide a new signal at the terminus thereby improving pedestrian and vehicular safety. This alternative would also provide the opportunity for additional open space, which would have a beneficial land use effect by providing a buffer between the freeway and residential uses to the northwest and by supporting the goal and policy of the local community plan to preserve and develop new open space (Objective 5.1) and to “encourage the retention of passive and visual open space that provides a balance to the urban development of the plan area” (Policy 5-1.1). Consequently, no substantial adverse operational land use effects would occur.

**Alternative C (Realign Ramps East – Remove Overpass)**

The operational impacts of Alternative C would be similar to those identified above for Alternative B.

**Alternative D (Realign Ramps East – Maintain Overpass)**

The operational impacts of Alternative D would be similar to those for Alternative B but slightly more open space could be created by maintaining the existing overpass.

**Alternative E (Realign Ramps East, Retain Overpass and Flyover, Relocate Retaining Wall)**

The operational impacts of Alternative E would be the similar to those that would occur under Alternative D.

**Avoidance, Minimization, and/or Mitigation Measures**

Because none of the proposed build alternatives would result in substantial adverse land use effects, no avoidance, minimization, and/or mitigation measures are required.

## **2.1.2 Consistency with State, Regional, and Local Plans and Programs**

### **Regulatory Setting**

#### ***Southern California Association of Governments Regional Comprehensive Plan and Guide***

The Regional Comprehensive Plan (RCP) was developed by the Southern California Association of Governments (SCAG) in partnership with 13 subregions and adopted in 2008. SCAG is the metropolitan planning organization for six counties in Southern California: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. According to the RCP, SCAG projects that 24 million people will reside in the six-county SCAG region by 2035. The RCP is intended to be a problem-solving guidance document that directly responds to challenges facing Southern California as identified in the annual State of the Region report card. It responds to SCAG's Regional Council directive in the 2002 Strategic Plan to develop a holistic, strategic plan for defining and solving inter-related housing, traffic, water, air quality, and other regional challenges. The RCP is a structured policy framework that links broad principles to an action plan that moves the region towards balanced goals. It includes vision statements and guiding principles based on the region's adopted Compass Growth Vision Principles for Sustaining a Livable Region. These statements further articulate how the RCP can promote and sustain the region's mobility, livability, and prosperity for future generations.

#### ***Southern California Association of Governments 2008 Regional Transportation Plan***

The Regional Transportation Plan (RTP) is a long-term (minimum of 20 years) vision document that outlines transportation goals, objectives, and policies for the SCAG region. Every three years, SCAG revises the RTP with updated information and new environmental clearance. The 2008 RTP was adopted on May 8, 2008 and was given a conformity determination on June 5, 2008. The update reflects population, housing, employment, environmental, land use forecasts, and technology changes. This regional planning document is required by a number of state and federal mandates and requirements. The 2008 RTP is a \$531.5 billion plan that emphasizes the importance of system management, goods movement, and innovative transportation financing. The proposed SR-2 Terminus Project is included in the SCAG 2008 RTP as Project # LA990351.

#### ***SCAG 2008 Regional Transportation Improvement Program***

SCAG's 2008 Regional Transportation Improvement Program (RTIP) is a capital listing of transportation projects proposed over a *six*-year period—fiscal years 2008/2009 to 2013/2014. The RTIP must include all transportation projects that require federal funding as well as all regionally significant transportation projects for which federal approval (by the Federal Highway Administration [FHWA] or the Federal Transit Administration [FTA]) is required, regardless of funding source. The proposed project is also included in the SCAG 2008 RTIP and listed on page 37 of Los Angeles County Local Projects as Project ID LA990351. All projects incorporated into the 2008 RTIP are consistent with current RTP policies, programs, and projects.

## **City of Los Angeles General Plan**

Please see the discussion above under Section 2.1.1.

### **Silver Lake-Echo Park-Elysian Valley Community Plan**

The role of the Silver Lake-Echo Park-Elysian Valley Community Plan is to help guide decisions regarding land use, building design and character, open space, housing, conservation and development, provision of supporting infrastructure and public and human services, protection of environmental resources and protection of residents from natural and man-made hazards.<sup>2</sup> The Community Plan helps ensure that sufficient land is designed to provide for the housing, commercial, employment, education, recreational, cultural, social, and aesthetic needs of the residents of the plan area.

Several planning goals, objectives, policies, and programs have been organized by land use category in the Community Plan to assist in enhancing quality of life and preserving neighborhood character.

Specific relevant transportation issues identified in the Silver Lake-Echo Park-Elysian Valley Community Plan include the following:

- Major boulevards are used as thoroughfares by commuter traffic cutting through the Plan area to avoid freeway traffic en route to downtown.
- Residential neighborhood streets are being used to avoid traffic on congested major thoroughfares, disturbing quality of life and making neighborhood streets unsafe for children and pedestrians.
- Traffic congestion and circulation issues in the Plan area should reflect regional transportation problems and citywide deficiencies in multi-modal transit options.
- There is a need to find long-term, workable solutions to congestion on Glendale Boulevard and the Glendale Freeway Terminus.

Specific goals, objectives, and policies of the Community Plan that are relevant to the proposed project include:

- Goal 5: A community with sufficient open space in balance with new development to serve the recreational, environmental, and health needs of the community.
  - Objective 5-1: Preserve existing and develop new open space resources
    - Policy 5-1.1: Encourage the retention of passive and visual open space which provides a balance to the urban development of the Plan area.

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<sup>2</sup> Chapter 2 Silver Lake-Echo Park-Elysian Valley Community Plan (II-2)

- Policy 5-1.4: Recognize the Plan area’s considerable urban forest, in both the public and private realms, as a feature which greatly contributes to its character and the quality of life enjoyed by residents by encouraging streetscape, greenways and the incorporation of green space within the urban form, as feasible.
- Goal 12: A system of highways, freeways and streets that provides adequate circulation to support existing, approved and planned land uses and maintains a desired level of service at all intersections.
- Objective 13-1: To comply with citywide performance standards for acceptable levels of service (LOS) and insure that necessary road access and street improvements are provided to accommodate traffic generated by all new development.
  - Policy 13-1.1: Maintain a satisfactory LOS for streets and highways that should not exceed LOS D for Major Highways, Secondary Highways, and Collector Streets. If existing levels of service are LOS “E” or LOS “F” on a portion of a highway or collector street, then the level of service for future growth should be maintained at LOS “E.”
  - Program: Implement a variety of regional capital improvements that will alleviate the impacts of commuter traffic in the Plan area and improve internal circulation.
    - Glendale Freeway Terminus at Glendale Boulevard – reconfiguration of the Glendale Freeway terminus to reduce speeds as the traffic enters Glendale Boulevard. Alternatives are currently being studied by LACMTA and a preferred alternative aligns the southbound off-ramp to the east to intersect Glendale Boulevard in a single signalized intersection adjacent to the northbound on-ramp. The right-of-way occupied by the existing off-ramp, as envisioned in this alternative, would be used as open space.
    - I-5/Glendale Freeway – improvement to the interchange to improve access to Downtown Los Angeles from the southbound I-5. This project, which would alleviate traffic on Glendale Boulevard and other arterial highways, is listed in the 2001 Long Range Transportation Plan (LRTP) as a “Priority Freeway Improvement Project,” to be funded by 2010.

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

The No-Build Alternative would not alter the existing conditions at the proposed project site. Thus, no construction activities would be conducted at the project site, and no adverse effects would occur as a result of regional or local plan inconsistencies.

## **Alternatives A to E**

Construction activities would be conducted in accordance with the City's General Plan policies and guidelines as well as in accordance with Caltrans guidelines. As such, no plan inconsistencies are expected to occur during the construction periods of the proposed build alternatives.

### ***Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no improvements would be made to the existing terminus. As a consequence, no traffic management, safety, or open space improvements would occur and this alternative would do nothing to further the relevant goals of the Community Plan, as noted above.

#### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

This alternative would improve traffic operations at the on- and off-ramps (see Section 2.1.10 for a detailed discussion of traffic impacts). It would retain the flyover and its associated safety hazards due to vehicles traveling at high speeds on the flyover then merging with slower traffic travelling southbound on Glendale Boulevard. Although this alternative would not result in substantial adverse land use impacts due to inconsistencies with local plan objectives, policies, and programs, it would not be as consistent as the other build alternatives below.

#### **Alternative B (Realign Ramp East – Remove Flyover and Part of Overpass)**

This alternative would eliminate the flyover and provide a new signal at the realigned ramp terminus. Consequently, it would generally be consistent with the relevant goals, objectives, policies, and programs of the Community Plan identified above.

#### **Alternative C (Realign Ramps East – Remove Overpass)**

Similar to Alternative B, this alternative would generally be consistent with the relevant Community Plan goals, objectives, policies, and programs. This alternative would result in slightly less open space than Alternative B due to removal of the overpass but, unlike Alternative B, it would provide sufficient space for a landscaped median on SR-2 at the freeway terminus.

#### **Alternative D (Realign Ramps East – Maintain Overpass)**

This alternative, similar to the other build alternatives, would generally be consistent with and supportive of the relevant goals, objectives, policies, and programs of the local Community Plan. This alternative would provide more open space than Alternative C though it would also result in substandard roadway design features, e.g., inadequate shoulder widths at the freeway terminus, which would pose a potential safety hazard by limiting access for emergency vehicles. Additionally, the proposed landscaped median on SR-2 would terminate farther north of the terminus due to the constrained roadway width.

**Alternative E (Realign Ramps East, Retain Overpass and Flyover, Relocate Retaining Wall)**

This alternative would be similar to Alternative D but would relocate the retaining wall located on the eastside of SR-2 in order to provide sufficient shoulder width to meet Caltrans standards.

**Avoidance, Minimization, and/or Mitigation Measures**

Because none of the proposed build alternatives would result in substantial adverse inconsistencies with local land use plans, no avoidance, minimization, and/or mitigation measures are required.

## 2.1.3 Parks and Recreation

### Affected Environment

The proposed project is located in an urban residential setting. Several parks are located in the general project area though only Tommy Lasorda Field of Dreams is located in close proximity to the project site. Table 2-1 shows the park and recreational facilities located in the general vicinity of the proposed project.

**Table 2-1.** Park and Recreational Facilities

<b>Name</b>	<b>Address</b>	<b>Distance from Project (miles)</b>
Elysian Valley Recreational Center Park	1811 Ripple Street	0.96
Elysian Park	1880 Academy Drive	0.73
Silver Lake Reservoir	1850 West Silver Lake Drive	0.55
Silver Lake Recreation Center	1850 West Silver Lake Drive	0.44
Tommy Lasorda Field of Dreams	Corner of Duane Street and SR-2	Adjacent

Source: ICF Jones & Stokes, 2008.

The Tommy Lasorda Field of Dreams (field) is a 1.8-acre field located adjacent to the SR-2 terminus (see Figure 2-2). The facility is owned by Caltrans but is currently leased to the City of Los Angeles for a 10-year term, from 2006 to 2016. Access to the field is restricted and entry is allowed by permits issued by the City of Los Angeles Department of Recreation and Parks at a rate of \$16 per hour. The field has a baseball diamond (two dugouts, backstop), one set of concrete and wooden bleachers with shade canopies, a cargo storage bin, three picnic tables, a wooden scoreboard, two Porta-Potties, a drinking fountain, and a water system box. The greatest use of the facility occurs from April to July; the field is used Monday through Friday from 5 to 7 p.m. and Saturdays from 9 a.m. to 2 p.m. for Silver Lake Recreation Center baseball practice and games. There is no nighttime lighting equipment installed at the field.

### Environmental Consequences

#### *Construction Impacts*

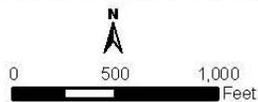
#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, the intersection of the Glendale Freeway and Glendale Boulevard would continue to operate as is. Nearby parks, including the Tommy Lasorda Field of Dreams, would not be affected.

Figure 2-2. Location of Tommy Lasorda Field of Dreams (Section 4(f) Resource)



SOURCE: TeleAtlas (2006); NAIP Imagery (2005)



Source: ICF Jones & Stokes, 2008.

## **Alternatives A to E**

Construction activities would be limited to the existing roadway areas and public rights-of-way. No construction activities would occur on the Tommy Lasorda Field of Dreams and construction staging and the construction zone for the build alternatives would be located outside the field. The field is currently fenced, and there would not be encroachment of the field by any construction activities. Although construction activities would generate dust and create noise, construction activities would generally be limited to daytime hours on weekdays thus avoiding potential conflicts with recreational activities at the facility. The proposed build alternatives would not result in any permanent or temporary disruptions of recreational activities at the field. Additionally, pedestrian and vehicular access to the field and to the park would be maintained during construction of the proposed build alternatives.

As such, no substantial adverse effects to parks and no use of Section 4(f) park resources would occur (see Appendix B for Resources Evaluated Relative to the Requirements of Section 4(f)).

## ***Operational Impacts***

### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, the intersection of the Glendale Freeway and Glendale Boulevard would continue to operate as is. Nearby parks, including the Tommy Lasorda Field of Dreams, would not be affected.

### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

Alternative A would not result in “use” of a Section 4(f) resource and therefore, the provisions of Section 4(f) are not triggered; please see Appendix B for Resources Evaluated Relative to the Requirements of Section 4(f). Alternative A would not require any permanent use (acquisition) of the Tommy Lasorda Field of Dreams. The Tommy Lasorda Field of Dreams would continue to function as a recreational area under all of the build alternatives. The types of athletic activities (baseball, softball games, etc.) that take place at the field do not require quiet surroundings. No substantial adverse noise impacts on park users were identified, and no soundwalls are proposed in the vicinity of the field. Further, this alternative would not have aesthetic effects that would substantially impair the protected activities, features, and attributes that qualify this resource for protection under Section 4(f). Finally, this alternative would not affect access to the Tommy Lasorda Field of Dreams. As such, no adverse effects to parks and no use of Section 4(f) park resources in the project area would occur as a result of Alternative A. This alternative, however, would retain the flyover in close proximity to Tommy Lasorda Field of Dreams for use by vehicles traveling southbound on SR-2.

## **Alternatives B to E**

These proposed build alternatives would provide the potential for additional pedestrian accessible open space and green recreation areas. Therefore, these alternatives would have a potential beneficial effect on parks and recreational resources. Alternatives D and E would provide the greatest potential for open space among the build alternatives by eliminating the flyover and retaining the overpass.

Similar to Alternative A, these four build alternatives would not result in adverse operational effects on existing park and recreational areas including the Tommy Lasorda Field of Dreams and no use of Section 4(f) park resources would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

Because none of the build alternatives would result in adverse effects, no avoidance, minimization, and/or mitigation measures are required.

## **2.1.4 Growth**

### **Regulatory Setting**

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act of 1969, require evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations, 40 CFR 1508.8, refer to these consequences as secondary impacts. Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (CEQA) also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

### **Affected Environment**

The project area is highly developed with predominantly residential uses. Adjacent land uses on either side of the SR-2 and Glendale Boulevard right-of-way consist of multiple-family and low-density residences, apartment complexes, commercial buildings, industrial buildings, a park, and public facilities.

A Community Impact Assessment (CIA) was prepared for the project to evaluate the growth and community impacts of the project in detail. According to SCAG's 2004 Regional Transportation Plan (adopted April 2004), the population of the County of Los Angeles in 2030 is projected to be 12,221,799, an increase of about 28% over 2000. The number of households in the County of Los Angeles is projected to be 4,120,270 in 2030, or about 31% greater than in 2000. The population of City of Los Angeles is expected to increase by a 17% over the year 2000 level to 4,309,625 in 2030, while the number households are projected at 1,637,475, an increase of about 28% in the same 20-year period. The combined population of block groups in the census tracts in the study area (Block groups 2 and 3 of Tract 1873, Block Groups 1 and 2 of Tract 1955, Block Group 2 of Tract 1974.10, and Block Group 1 of Tract 1974.20) is projected to be 18,262 in 2030, an increase of about 16.2% from 2000. The number of households in 2030 for the study area is projected to be 7,829, an increase of about 25.2%.

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Since the No-Build Alternative does not involve any construction, no construction related growth impacts would occur.

#### **Alternatives A to E**

No displacements would occur as a result of the build alternatives. Temporary construction easements may be required during the construction period but they would not interfere with existing or future land uses in the project area or alter growth and development patterns. Construction of the build alternatives is unlikely to induce any substantial growth in terms of population or housing since most workers would be drawn from the existing large pool of workers in the greater metropolitan Los Angeles area and it is expected few, if any workers, would relocate their households as a result project related employment. Therefore, no adverse growth related environmental impacts are expected as a result of construction activities.

### ***Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Since no construction is proposed at the SR-2 terminus under the No-Build Alternative, no growth-inducing effects would occur.

#### **Alternatives A to E**

The build alternatives would reconfigure the SR-2 terminus to better manage traffic flow and improve safety. These improvements would be made to existing freeway and roadway facilities in the immediate vicinity of the SR-2 terminus, in a developed urban area, and would not substantially increase the traffic capacity of the existing facilities. The proposed improvements would not provide new roads in an area not previously served by roads or improve accessibility to and from areas previously not accessible by roads. As such, the proposed build alternatives would not induce or influence growth in terms of population or housing or alter the existing pattern and rate of population and housing growth in the project area.

## **Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, and/or mitigation measures are required.

## **2.1.5 Community Impacts**

### **Regulatory Setting**

NEPA established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 U.S.C. 4331(b)(2)]. The Federal Highway Administration in its implementation of NEPA [23 U.S.C. 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under CEQA, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical changes to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

### **Affected Environment**

The information presented in this section is based primarily on the Community Impact Assessment prepared for the proposed project (printed under separate cover). The predominant land use within the project area is residential, with a mix of single- and multi-family residential units. St. Teresa's Church and School are located in the immediate vicinity of the SR-2 terminus. Commercial uses are located along Glendale Boulevard south of the SR-2 terminus. Residential neighborhoods in the immediate vicinity were established in the late 1800s and at the turn of the last century and, at their inception, were associated with the film studios in the area. Due to its proximity to downtown and good freeway access, the neighborhood is now popular with young professionals.

The combined population of the block groups in the census tracts in the study area (Block groups 2 and 3 of Tract 1873, Block Groups 1 and 2 of Tract 1955, Block Group 2 of Tract 1974.10, and Block Group 1 of Tract 1974.20) was 15,719 in 2000. The study area population is projected to increase to 18,262 in 2030, an increase of approximately 16.2%; the number of households in the proposed project area is projected to increase by approximately 25.2% over the same 30-year period. Table 2-2 provides the existing regional and local population characteristics, and Figure 2-3 shows the study area.

According to the 2000 U.S. census, of the total housing units, 94.1% were occupied and 5.9% were vacant, generally resembling the housing tenure characteristics for Los Angeles County and the City of Los Angeles. Of the total number of occupied housing units, 38.5% were owner-occupied units and 61.5% were rented. In the study area, the percentage of owner-occupied housing units was similar to the City of Los Angeles, but less than the number in the county. Table 2-3 and Table 2-4 present the regional and local housing characteristics.

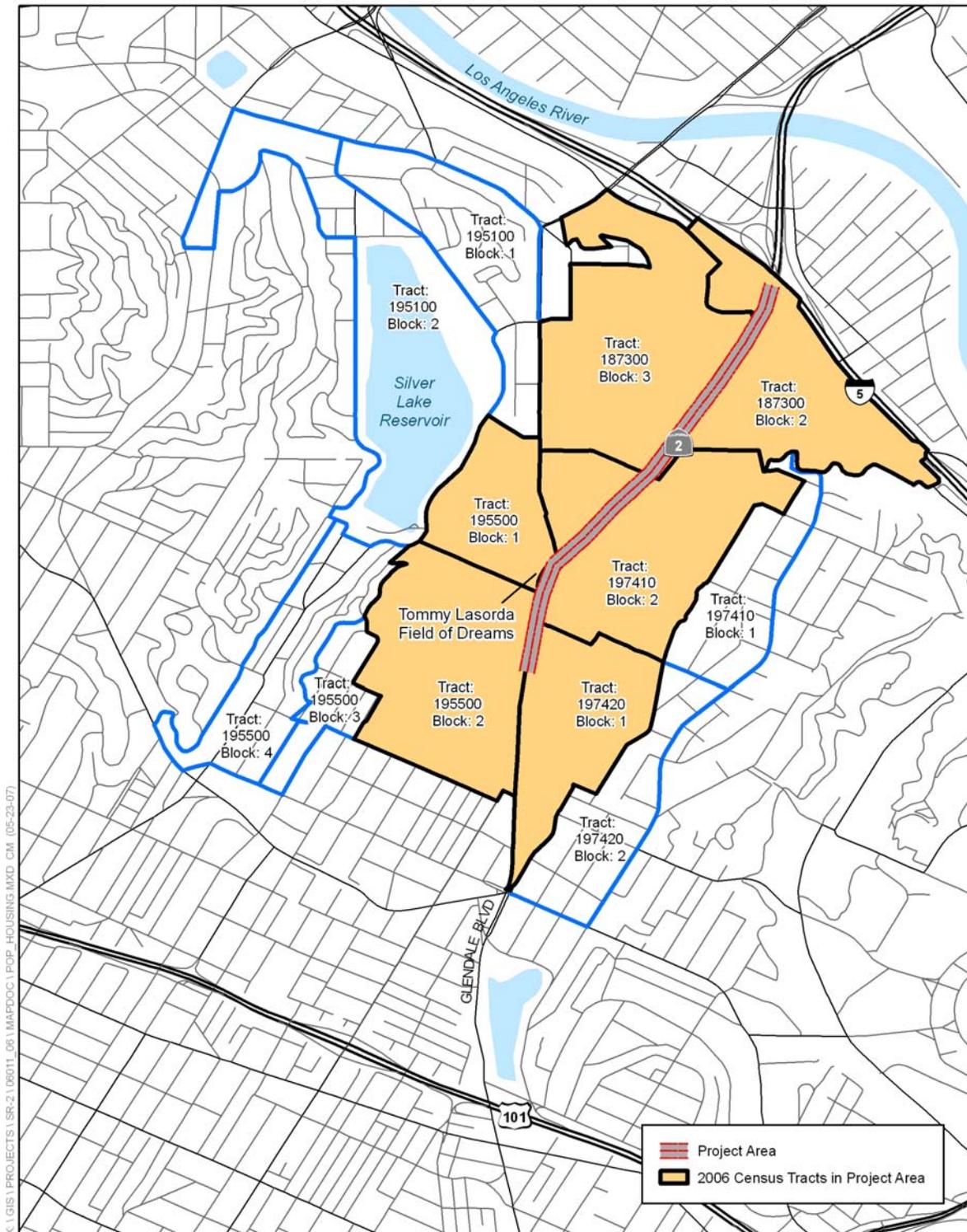
**Table 2-2. Existing Regional and Local Population Characteristics – Age (2000)**

Area	Total Population	Age			
		Under 18	%	65 and over	%
County of Los Angeles	9,519,338	2,667,976	28.03%	926,673	9.7%
City of Los Angeles	3,694,820	981,311	26.6%	357,129	9.7%
Study Area	15,719	3,306	21.0%	1,419	9.0%
Census Tract 1873	3,390	535	15.8%	312	9.2%
Block Group 2	411	104	25.3%	16	3.9%
Block Group 3	1,775	245	13.8%	73	4.1%
Census Tract 1955	5,228	951	18.29%	529	10.1%
Block Group 1	776	117	15.1%	87	11.2%
Block Group 2	2,324	543	23.4%	97	4.2%
Census Tract 1974.10	2,936	644	21.9%	235	8.0%
Block Group 2	1,748	354	20.3%	145	8.3%
Census Tract 1974.20	4,165	1176	28.2%	343	8.2%
Block Group 1	1,898	513	27.0%	54	2.8%

Source: Table P12, Summary File 1, U.S. Census 2001.

Data from the 2000 U.S. census indicate that per capita income for the study area population was slightly higher than Los Angeles County and City of Los Angeles per capita income levels. Within the study area, the range of per capita incomes was quite large. Also, the percentage of people below the poverty threshold was 16.5%, which is lower than the percentage in the City of Los Angeles and Los Angeles County. Three of the four census tracts making up the study area had lower percentages of persons below the poverty threshold (13.4% in Census Tract 1873, 14.6% in Census Tract 1955, and 17.7% in Census Tract 1974.10) than the percentage reported for either the County of Los Angeles (17.9%) or the City of Los Angeles (22.1%). However, Census tract 1974.20 had higher percentage of population below poverty level (20.6%) than the County although Block Group 1 of census Tract 1974.20, which is adjacent to the project site, has a lower percentage of population below poverty level at 15.9%. (Note: The 1999 poverty threshold used for the 2000 U.S. census data, as defined by the U.S. Census Bureau, was \$8,501 for an individual and \$17,029 for a family of four). Table 2-5 shows the Existing Regional and Local Population Characteristics – Income/Poverty (2000).

**Figure 2-3. Population and Housing Study Area**



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SOURCE: GDT (2006)

**Table 2-3.** Existing Regional and Local Housing Characteristics—Occupancy (2000)

Area	Total Units	Occupied Units	%	Vacant Units	%	Persons Per Household
County of Los Angeles	3,270,909	3,133,774	95.8%	137,135	4.2%	2.98
City of Los Angeles	1,337,706	1,275,412	95.3%	62,294	4.7%	2.83
Study Area	6,644	6,255	94.1%	389	5.9%	2.51
Census Tract 1873	1,611	1,515	94.0%	96	6.0%	2.20
Block Group 2	152	145	95.4%	7	4.6%	2.83
Block Group 3	920	851	92.5%	69	7.5%	2.09
Census Tract 1955	2,380	2,253	94.7%	127	5.3%	2.32
Block Group 1	388	367	94.6%	21	5.4%	2.1
Block Group 2	858	817	95.2%	41	4.8%	2.84
Census Tract 1974.10	1,281	1,191	92.97%	90	7.0%	2.47
Block Group 2	791	739	93.4%	52	6.6%	2.37
Census Tract 1974.20	1,372	1,296	94.5%	76	5.5%	3.11
Block Group 1	609	575	94.4%	34	5.6%	3.15

Source: Tables P17 and H3, Summary File 1, U.S. Census 2001.

**Table 2-4.** Existing Regional and Local Housing Characteristics—Tenure (2000)

Area	Total Units	Occupied Units	Owner Occupied Units	%	Renter Occupied Units	%
County of Los Angeles	3,270,909	3,133,774	1,499,744	47.9%	1,634,030	52.1%
City of Los Angeles	1,337,706	1,275,412	491,882	38.6%	783,530	61.4%
Study Area	6,644	6,255	2,408	38.5%	3,847	61.5%
Census Tract 1873	1,611	1,515	615	40.6%	900	59.4%
Block Group 2	152	145	60	41.4%	85	58.6%
Block Group 3	920	851	424	49.8%	427	50.2%
Census Tract 1955	2,380	2,253	894	39.68%	1,359	60.32%
Block Group 1	388	367	126	34.33%	241	65.67%
Block Group 2	858	817	336	41.1%	481	58.9%
Census Tract 1974.10	1,281	1,191	562	47.19%	629	52.81%
Block Group 2	791	739	373	50.47%	366	49.53%
Census Tract 1974.20	1,372	1,296	337	26.0%	959	74.0%
Block Group 1	609	575	172	29.9%	403	70.1%

Source: Table H4, Summary File 1, U.S. Census 2001.

**Table 2-5.** Existing Regional and Local Population Characteristics—Income/Poverty (2000)

Area	Population for Whom Poverty Status Is Determined	Below Poverty Threshold	%	Per Capita Income (\$)
County of Los Angeles	9,349,771	1,674,599	17.9%	20,683
City of Los Angeles	3,622,606	801,050	22.1%	20,671
Study Area	15,567	2,564	16.5%	22,672
Census Tract 1873	3,386	452	13.4%	32,598
Block Group 2	395	41	10.4%	19,175
Block Group 3	1823	259	14.2%	39,735
Census Tract 1955	5,215	762	14.6%	26,278
Block Group 1	681	40	5.9%	44,737
Block Group 2	2458	456	18.6%	19,886
Census Tract 1974.10	2,953	522	17.7%	22,004
Block Group 2	1,830	229	12.5%	22,570
Census Tract 1974.20	4,013	828	20.6%	10,537
Block Group 1	1,809	288	15.9%	11,461

Source: Tables P82 and P87, Summary File 3, U.S. Census 2001.

School services are provided by several entities within the area. Los Angeles Unified School District (LAUSD) staff has reported that, under normal conditions, approximately 88 LAUSD bus routes traverse the vicinity of the SR-2 terminus. The buses travel on these designated routes throughout the day and serve approximately 74 schools within the City of Los Angeles and in the San Fernando Valley.<sup>3</sup> A private school, Saint Teresa of Avila School (St. Teresa) located on the northwest corner of Glendale Boulevard and Fargo Street, is located adjacent to the proposed project site.

Community facilities that serve the project area are listed in Table 2-6 and depicted in Figure 2-4.

## Environmental Consequences

### *Construction Impacts*

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no construction activities are proposed and, consequently, there would be no effects on the community.

<sup>3</sup> Per Comm. with Natalie Blasco of Planning Department, LAUSD via telephone on April 12, 2007.

**Table 2-6.** Study Area Community Facilities and Services

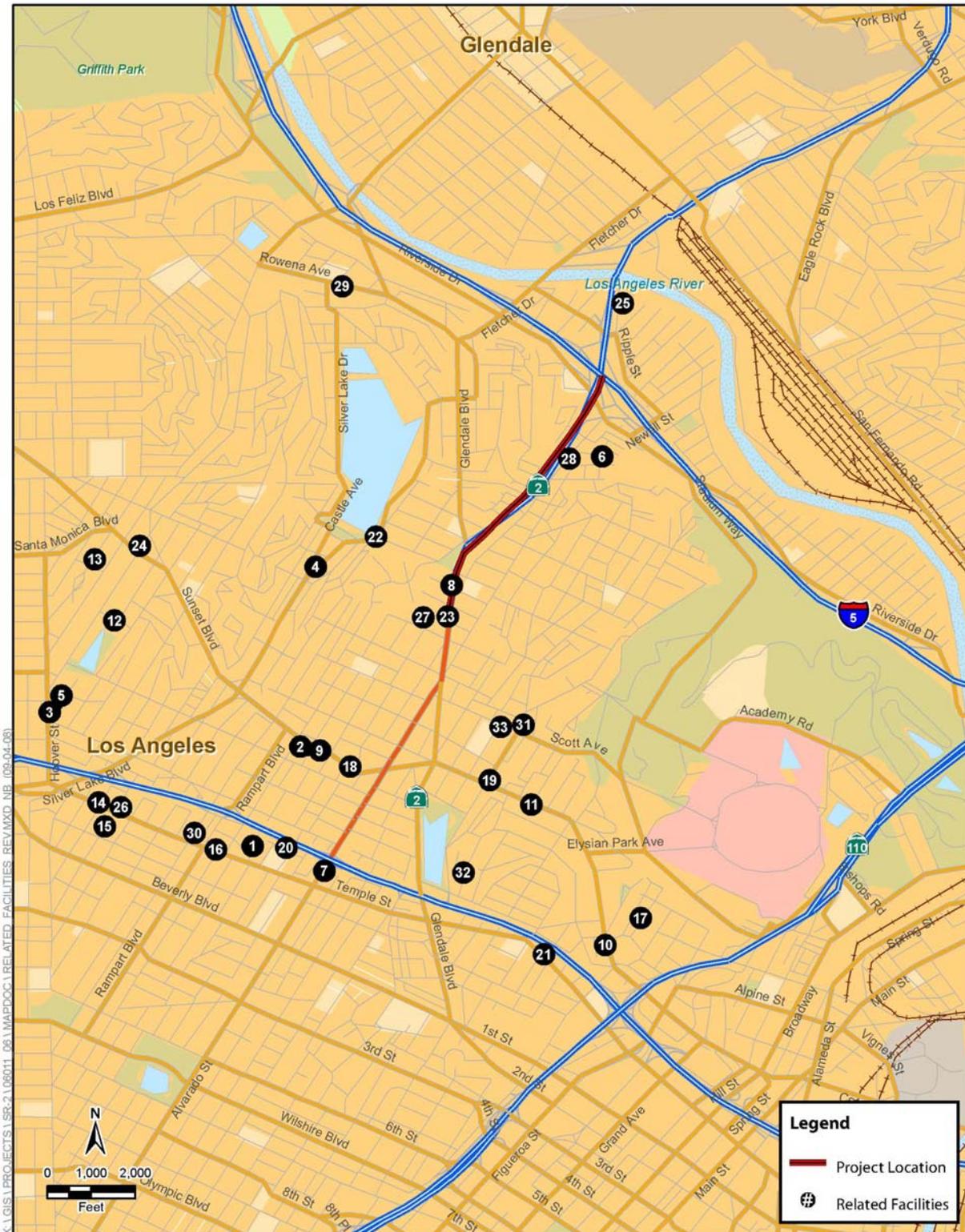
Type	Name	Address	Distance from Project (mi)	Map ID
Fire/EMS	Los Angeles Fire Department, Station #20 (Primary Responder)	2144 West Sunset Boulevard	0.95	1
Police/Sheriff	Los Angeles Police Department, Northeast Division (Primary Responder)	3353 San Fernando Road	2.12	2
Schools	Alessandro Elementary	2210 Riverside Drive	0.93	3
	Logan Street School	1711 Montana Street	0.80	4
	Mayberry Street Elementary	2418 Mayberry Street	0.60	5
	Elysian Heights School	1562 Baxter Street	0.55	6
	Clifford Elementary	2150 Duane Street	0.10	7
	Saint Teresa of Avila School (private)	2215 Fargo Street	0.08	8
Parks and Recreation Centers	Elysian Valley Recreational Center Park	1811 Ripple Street	0.96	9
	Elysian Park	1880 Academy Drive	0.73	10
	Silver Lake Reservoir	1850 West Silver Lake Drive	0.55	12
	Silver Lake Recreation Center	1850 West Silver Lake Drive	0.44	11
	Tommy Lasorda Field of Dreams	Corner of Duane Street and SR-2	Adjacent	13
Community Centers	Echo Park-Silver Lake People's Child Care Center	1953 Lake Shore Avenue	0.23	14
Library	Echo Park Branch Library	1410 West Temple Street	1.63	15

Source: ICF Jones & Stokes, 2008.

### Alternatives A to E

Construction of the proposed build alternatives would result in short-term construction impacts on the community that would vary slightly depending on the alternative. The temporary closure of freeway ramps or roadway lanes in the vicinity of the terminus could potentially affect the response times of the Los Angeles Police Department (LAPD) and Los Angeles Fire Department (LAFD). Access to school services could be temporarily affected due to reconfigured bus routes and walk routes. Construction activities could result in temporary, localized, site-specific disruptions to local businesses and residences in the proposed project area, due primarily to construction-related traffic, partial and/or complete street and lane closures (some requiring detours), increased noise and vibration, light and glare, and changes in air emissions. Since project construction activities would be temporary in duration and access to community and public facilities in the area would be maintained during the construction period, no substantial adverse effects would occur.

**Figure 2-4. Location of Community Facilities and Services**



SOURCE: ESRI Street Map (2006)

## **Operational Impacts**

### **No-Build Alternative (Baseline Alternative)**

No operational impacts would occur under the No-Build Alternative since no improvements or changes to the existing SR-2 terminus are proposed.

### **Alternatives A to E**

The proposed build alternatives would result in no permanent barriers to neighborhood access, and the proposed improvements would not physically divide an existing neighborhood. No residences or businesses would be displaced as a result of the project. Existing access and circulation routes to and from the residential neighborhoods in the project area would remain essentially the same. To the extent that the build alternatives provide a safer terminus for motorists and pedestrians and improve traffic flow (see Section 2.1.10 for a detailed discussion of traffic impacts), ancillary beneficial effects on residential neighborhoods and local commercial uses could occur. Potential operational noise impacts due to relocating freeway lanes closer to noise-sensitive residential uses would be abated by constructing new soundwalls (see Section 2.2.6 for a discussion of noise impacts and abatement measures). Thus, the proposed build alternatives would not have a substantial adverse impact on the community.

### **Avoidance, Minimization, and/or Mitigation Measures**

The following measure shall be implemented to minimize disruptions to traffic and community access during the construction period.

**C-1** A Traffic Management Plan (TMP) shall be prepared to prevent unreasonable traffic delays and impacts. The TMP shall be developed in consultation with the City, Caltrans, and the County and shall be provided, along with construction plans, to City police and fire departments prior to commencement of construction activities. The information provided should include access and traffic management plans detailing any projected temporary street closures or expected traffic delays due to construction vehicles using the roadways. The following elements will be a major component in the specific TMP:

- public awareness campaign particularly related to the scheduling of work;
- construction zone enforcement enhancement program (COZEEP);
- utilization of portable changeable message signs (PCMS);
- advance information signing pertaining to date, time and durations of lanes and road closures;
- preparation of temporary detour plans, if needed, during the plans, specifications, and estimates (PS&E) phase (note: no detours are anticipated at this time); and
- notification sent to LAUSD, St. Teresa of Avila School, and Metro Transit at least two weeks in advance of any planned street closures (including partial and/or full closures) or traffic diversions.

## **2.1.6 Relocations**

### **Regulatory Setting**

The Relocation Assistance Program (RAP) is based on the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended, and Title 49 CFR Part 24. The purpose of the RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 USC 2000d, et seq.). Please see Appendix C for a copy of the Title VI Policy Statement.

### **Affected Environment**

Land uses in the vicinity of the SR-2 freeway terminus consist of multiple-family and single-family residences, commercial buildings, industrial uses, a park, and public facilities. Tommy Lasorda Field of Dreams is located on land owned by Caltrans and leased to the City.

### **Environmental Consequences**

#### ***Construction and Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no displacements or construction easements would be required.

#### **Alternatives A to E**

The proposed build alternatives would be constructed within public rights-of-way and no residential or business displacements or relocations would occur as a result of construction of the proposed project. Temporary construction easements may be required to accommodate construction activities. Although definitive information on the construction easements is not available at this time, it is likely that temporary construction easements may be required along Waterloo Street (to access the overpass/space on south side of Glendale Boulevard next to the Tommy Lasorda Field of Dreams), and along Allesandro Street north of Glendale Boulevard if the existing retaining wall requires relocation (Alternative E).

#### **Avoidance, Minimization, and/or Mitigation Measures**

No relocations and displacements have been identified; therefore, mitigation is not required.

## 2.1.7 Environmental Justice

### Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2008, \$21,200 in yearly income for a family of four is the threshold defining low-income families.<sup>4</sup>

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. The Department's commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix C of this document

### Affected Environment

A CIA was prepared to analyze the impacts of the proposed project. As described in the CIA, the population of the project study area is not characterized by proportions of minority or low-income persons that are substantially higher than averages for the City or county as a whole (i.e., 48.3% minority, 13.4% below federal poverty threshold, and per capita incomes 15% to 17% higher than the City or county for three of the four census tracts).<sup>5</sup> Other indicators of a disadvantaged community also do not appear in the data (e.g., substantially more renter-occupied housing and greater housing density as measured by persons per household compared to the City and county). In addition, given the relatively smaller number of low-income persons reported in the census block groups adjacent to the project area compared to the census tracts adjacent to the project area, it is fair to state that the population that would be most affected by the project is not disadvantaged.

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<sup>4</sup> The 1999 poverty threshold used for 2000 U.S. census data, as defined by the U.S. Census Bureau, was \$8,501 for an individual and \$17,029 for a family of four. As such, the number of families that were considered low-income families in 2008 is higher than the Census 2000 data (see Table 2-5), since the threshold is \$4,171 higher.

<sup>5</sup> *Ibid.*

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no construction activities would occur, so there would be no impacts on the community. Minority or low-income populations would not be affected. Therefore, no effects involving environmental justice would occur.

#### **Alternatives A to E**

The effects of the build alternatives would occur within an area having a relatively small population that is both minority and low-income; these effects cannot reasonably be considered disproportionately high and adverse under the circumstances. The community as a whole is likely to be affected by the construction activities and not a particular minority group or economic class. SR-2 is an important part of both the local and regional circulation system. Consequently, local motorists and pedestrians from the immediate project area, as well as those traveling to and from the project area from elsewhere, would all be inconvenienced by traffic delays and other disruptions during the project construction period (a TMP would be prepared to prevent unreasonable traffic delays and impacts). No relocations or acquisitions would be required under the project alternative. Thus, the proposed build alternatives would not cause disproportionately high and adverse effects on any minority or low-income populations as per EO 12898 regarding environmental justice during construction period.

### ***Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no displacements or effects to the environment would occur, and minority or low-income populations would not be affected. Therefore, no effects involving environmental justice would occur.

#### **Alternatives A to E**

As stated above, the project area has a relatively small minority and low-income population. The potential adverse effects resulting from the proposed project would not be appreciably more severe or greater in magnitude on minority or low-income populations than they would be on the population as a whole. All the potential adverse effects identified in this IS/EA could be satisfactorily avoided or minimized through the implementation of avoidance and minimization measures. Because there has been no evidence to suggest that the efficacy of these measures would differ with respect to different population groups, the net result would be the same for all population groups for these resource areas. No adverse effects have been identified as unavoidable after implementation of mitigation. No acquisition or displacement would result due to the project. Given all of the above, a disproportionately high and adverse effect on minority and/or low-income population groups would not result from implementation of the build alternatives.

## **Avoidance, Minimization, and/or Mitigation Measures**

The Department has instituted public involvement and community outreach efforts to ensure that issues of concern or controversy to minority and low-income populations are identified and addressed where practicable as part of the project planning and development process and the environmental process. Efforts will continue to be made to ensure meaningful opportunities for public participation during the project planning and development process. This may include, but not necessarily be limited to, additional community meetings, informational mailings, a project website, and news releases to local media. The community outreach and public involvement programs for the project will seek to actively and effectively engage the affected community and include mechanisms to reduce cultural, language, and economic barriers to participation.

The proposed project should also comply with applicable federal requirements promulgated in accordance with EO 13166, Improving Access to Services for Persons with Limited English Proficiency (August 11, 2000), which requires that federal programs and activities be accessible to persons with limited English language proficiency.

The proposed project will be developed in accordance with Title VI of the Civil Rights Act of 1964, which provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

## **2.1.8 Utilities/Emergency Services**

### **Affected Environment**

The proposed project area is located within the City of Los Angeles. The City receives utility and public services from several agencies as discussed below.

#### ***Utilities***

The Department of Water and Power (LADWP) manages the water supply for Los Angeles, which obtains its water from the Los Angeles Aqueduct, local wells, purchased water from the Metropolitan Water District, and use of reclaimed wastewater. LADWP also provides electric service to the project area. Seventeen (17) percent of required power is obtained by LADWP from four municipally- owned power plants in the Los Angeles basin. Remaining power requirements are obtained by LADWP from sources outside of the Los Angeles Basin, helping to improve fuel diversity, while taking advantage of low-priced surplus electricity and minimizing the air emissions in the South Coast Air Basin. Most wastewater is treated through the Hyperion Treatment System, which consists of the Hyperion Treatment Plant and the upstream Tillman Water Reclamation Plant (TWRP), the Los Angeles Glendale Water Reclamation Plant (LAGWRP). This system partially treats upstream flows at the TWRP and LAGWRP, and the remaining flows are routed to the HTP facility. The proposed project area contains water supply pipes, storm drain and sewage pipelines, gas pipelines, and electricity transmission lines.

#### ***Emergency Services***

##### **Police Service**

Police services are provided by the Central Bureau of the Los Angeles Police Department (LAPD). Additional services are provided by the Los Angeles County Sheriff, the California Highway Patrol, the Federal Bureau of Investigation, and the Drug Enforcement Administration. The LAPD operates 18 stations within four bureaus with two new stations proposed. In 2007, the Department was staffed by a total of 10,354 sworn officers and 3,648 non-sworn support personnel citywide. LAPD operates two stations in or near the project area, including the Rampart Station at 2710 West Temple Street in the adjacent Westlake Community Plan Area, approximately 1.5 miles to the southwest of the proposed project site, and the Northeast Station at 2252 San Fernando Road, in East Los Angeles, approximately 1.5 miles to the northeast of the proposed project site. Additionally, there are three community outreach facilities, including one in Elysian Valley, and two in Echo Park.

##### **Fire Service**

The Los Angeles Fire Department (LAFD) provides fire prevention, fire protection and Emergency Medical Service (EMS) for the City of Los Angeles to the project area. Station 20, at 2144 West Sunset Boulevard is the nearest LAFD facility, and is approximately 1 mile southwest of the proposed project site. Emergency medical service is provided by the LAFD Bureau of Emergency Medical Services. The City standard for EMS is one and one half miles, similar to that of the desirable response distance for engine companies for neighborhood land uses. Most ambulances are accompanied by trained paramedics to provide additional service other than only transport.

The Emergency Operations Master Plan and Procedures (Master Plan) for the City of Los Angeles is established in accordance with the Los Angeles Administrative Code (LAAC).<sup>6</sup> The Master Plan is consistent and compatible with the State Emergency Plan, and identifies potential hazards in the planning area, such as earthquakes and floods, and presents mitigation measures, and an emergency response and action plan.

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, there would be no adverse effect on utilities, police, or fire and emergency services.

#### **Alternatives A to E**

##### Utilities

Some minor relocations of utility lines may be required during construction; possibly resulting in short-term temporary disruptions in service. However, no major relocations of utilities are anticipated and consequently no substantial adverse effects are expected to utility infrastructure during construction of the proposed build alternatives.

##### Police Service

The temporary closure of lanes or ramps at the SR-2 terminus could potentially affect the Los Angeles Police Department (LAPD), Northeast Division, which is the primary responder to the area. At present, the LAPD Northeast Division, which is located approximately 1.5 miles north of the proposed project area, utilizes these streets to access its service area. The average response time is currently 9.7 minutes.<sup>7</sup> According to Lt. Baeza of the LAPD, road closures to Glendale Boulevard and/or SR-2 could affect the response time of the LAPD within the area. However, alternative routes exist that would provide access to the project area for emergency service providers. Alternative routes to gain access to north of the project area would potentially include Silver Lake Boulevard to the west and Echo Park Boulevard to the east of the project area.<sup>8</sup>

Given that all project-related traffic disruptions would be temporary, lasting only for the period of construction, and that alternate routes are available, the impacts to police services would not be substantial.

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<sup>6</sup> Emergency Management Department, City of Los Angeles, accessed March 2008, <http://www.lacity.org/epd/>

<sup>7</sup> ICF Jones & Stokes communication with Captain Eric T. Davis, Patrol Commanding Officer from the Los Angeles Police Department, Northeast Division. via letter on April 23, 2007.

<sup>8</sup> Per comm. with Captain Fluxa from the Los Angeles Fire Department, Station 20. via telephone on April 11, 2007.

## Fire Service

The temporary closure of some lanes in the vicinity of the terminus could potentially affect City of Los Angeles Fire Department Station 20. At present, Station 20 fire engines and emergency vehicles, which are located approximately 1.5 miles southwest of the project site, utilize the local roads including Glendale Boulevard and the SR-2 freeway to serve the community. The average response time is currently 1 to 4 minutes.<sup>9</sup> According to Captain Fluxa of the LAFD as long as one lane of traffic is open during construction, minimal impacts to the response time in the area are expected. If a total closure of Glendale Boulevard would occur, major delays could potentially occur. A construction-period mitigation measure has been included as part of the proposed project. Given that all project-related traffic disruptions would be temporary, lasting only for the period of construction, the fact that Glendale Boulevard is expected to remain open during construction, and that alternate routes are available, impacts to fire services would not be substantial.

## ***Operational Impacts***

### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, there would be no adverse effect on utilities, police, fire or emergency medical services. Existing conditions would prevail.

### **Alternatives A to E**

The proposed build alternatives are designed to correct existing deficiencies in the roadway configuration, providing a safe and efficient configuration for the freeway terminus, and aiding traffic flow by reducing or managing congestion. To the extent that the alternatives achieve these objectives, the operational impacts of the build alternatives on police, fire and emergency service access and response times in the local project area would be beneficial. However, it should be noted that under Alternative D, substandard shoulder widths would be provided along SR-2 at the terminus, which would restrict emergency vehicle access. This would be a potential safety issue and an adverse effect.

## **Avoidance, Minimization, and/or Mitigation Measures**

A TMP will be prepared, prior to construction, to identify detour routes and other measures to manage traffic to avoid and minimize disruptions to public services during the construction period (please see mitigation measure C-1 in Section 2.1.6 above and Section 2.1.10, Traffic and Transportation). No further mitigation measures are required.

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<sup>9</sup> ICF Jones & Stokes personal communication with Captain Fluxa from the Los Angeles Fire Department, Station 20, via telephone on April 11, 2007.

## 2.1.9 Traffic and Transportation/Pedestrian and Bicycle Facilities

### Regulatory Setting

The Department, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

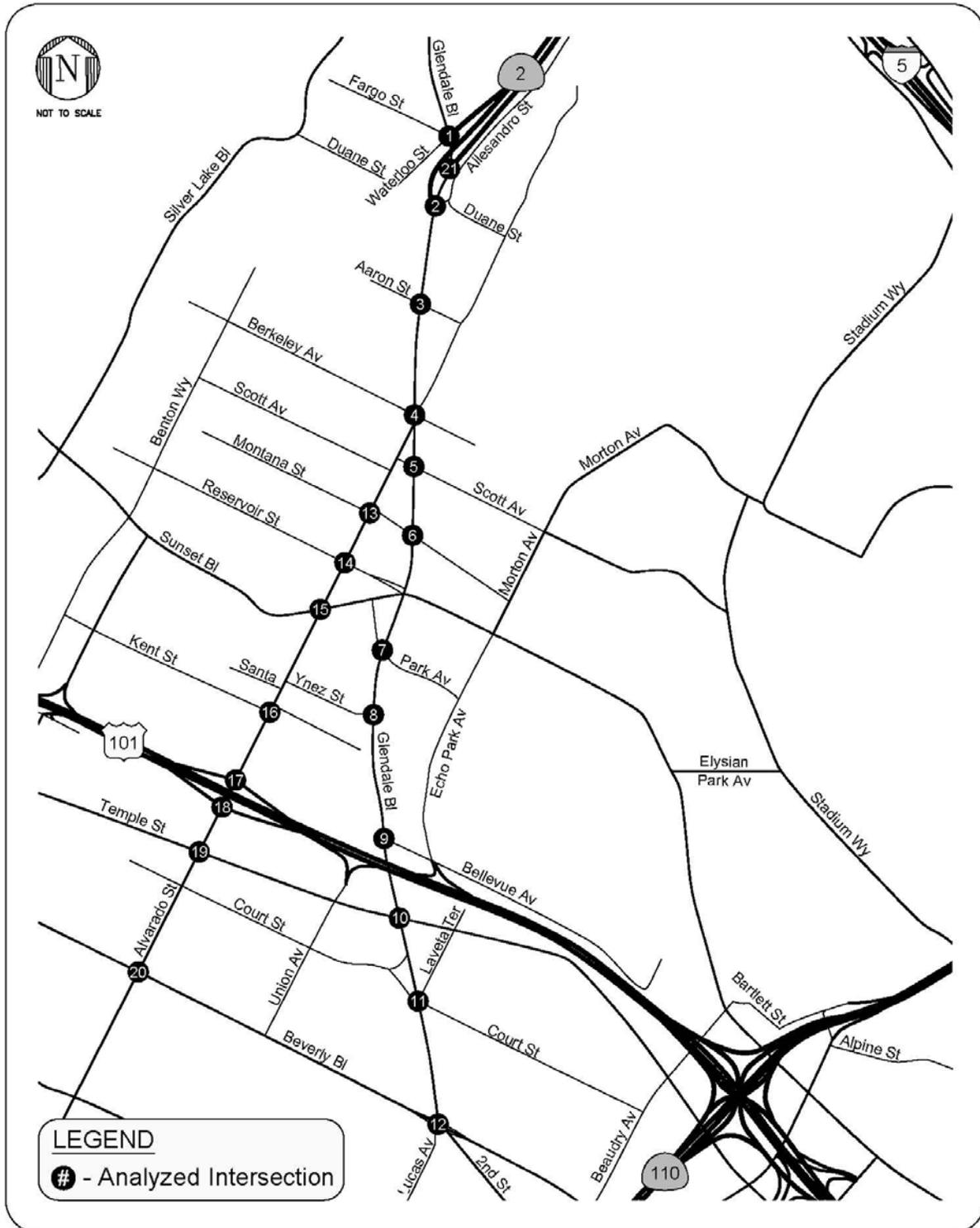
The Department is committed to carrying out the 1990 Americans with Disabilities Act (ADA) by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

### Affected Environment

A traffic study (June 2008) was prepared for the proposed project (printed under separate cover). The traffic study evaluated existing traffic conditions at 21 intersections, which are listed below and are shown in Figure 2-5.

1. Glendale Boulevard & SR-2 southbound off-ramp/Fargo Street/Waterloo Street
2. Glendale Boulevard & Allesandro Street
3. Glendale Boulevard & Aaron Street
4. Glendale Boulevard/Alvarado Street & Berkeley Avenue
5. Glendale Boulevard & Scott Avenue
6. Glendale Boulevard & Montana Street
7. Glendale Boulevard & Park Avenue
8. Glendale Boulevard & Santa Ynez Street
9. Glendale Boulevard & Bellevue Avenue
10. Glendale Boulevard & Temple Street
11. Glendale Boulevard & Court Street/Laveta Terrace
12. Glendale Boulevard/Lucas Avenue/2nd Avenue & 1st Street/Beverly Boulevard
13. Alvarado Street & Montana Street
14. Alvarado Street & Reservoir Street
15. Alvarado Street & Sunset Boulevard
16. Alvarado Street & Kent Street
17. Alvarado Street & US 101 northbound ramps
18. Alvarado Street & US 101 southbound ramps
19. Alvarado Street & Temple Street
20. Alvarado Street & Beverly Boulevard
21. Glendale Boulevard & SR-2 ramps (signalized intersection exists only under build alternatives B through E)

**Figure 2-5. Study Area and Analyzed Intersections**



Source: Fehr & Peers/Kaku Associates, 2008.

A traffic mitigation and calming program was previously implemented by the City of Los Angeles in the Silver Lake neighborhood sub-area bounded by Glendale Boulevard, Silver Lake Boulevard and Duane Street. Cut-through traffic between Glendale Boulevard and Silver Lake Boulevard was effectively eliminated in this sub-area as a result of the program. The measures that were implemented included:

- A diagonal diverter at the intersection of Baxter Street and Apex Avenue
- Half-closure on Waterloo Street at Glendale Boulevard
- A median extension on Glendale Boulevard at Fargo Street
- Specified turn restriction signs on Glendale Boulevard at Baxter Street, Apex Avenue and Earl Street

In February 2007, a residential survey was conducted to determine community support for the traffic restrictions. Needing a two-thirds supermajority to keep the restrictions in place, the “yes” responses tallied just 58.97% of the total vote and the measures were removed. Traffic counts were collected at the affected study intersections in September 2007 to determine changes in travel patterns resulting from the removal of the traffic calming devices.

### ***Existing Street System***

The study area for the traffic analysis contains the Glendale Boulevard corridor between the SR-2 freeway terminus to the north and Beverly Boulevard to the south and the Alvarado Street corridor between Glendale Boulevard/Berkeley Avenue to the north and Beverly Boulevard to the south. Primary regional access to the study corridors are provided by I-5 to the north and US 101 to the south. The SR-2 freeway intersects I-5 approximately one mile north of the freeway terminus. The following is a brief description of the streets that compose the study corridors and their cross streets:

- Glendale Boulevard – Glendale Boulevard is a north-south arterial and serves as SR-2 between the SR-2 freeway terminus and Alvarado Street. The street provides three travel lanes in each direction between the SR-2 terminus and Montana Street. South of Montana Street, two travel lanes in each direction are provided.
- Alvarado Street – Alvarado Street is a secondary arterial south of its intersection with Glendale Boulevard. The north-south road provides access to US 101 and to the SR-2 freeway via Glendale Boulevard. Between US 101 and Glendale Boulevard Alvarado Street is also SR-2. In the study area, two travel lanes in each direction are provided.
- Fargo Street – Fargo Street is a local street that intersects with the southbound off-ramps of the SR-2 freeway terminus, Glendale Boulevard, and Waterloo Street. It provides one travel lane in each direction.

- Waterloo Street – Waterloo Street is a local street that intersects with the southbound off-ramps of the SR-2 freeway terminus, Glendale Boulevard, and Fargo Street. It provides one travel lane in each direction.
- Allesandro Street – Allesandro Street is a north-south collector street that begins at its intersection with Glendale Boulevard. It provides one travel lane in each direction except at the intersection with Glendale Boulevard where two left-turn lanes and one right-turn lane are provided.
- Duane Street – Duane Street is a local east-west street that terminates at Allesandro Street east of Glendale Boulevard. It provides one travel lane in each direction.
- Aaron Street – Aaron Street is a local east-west street that intersects Glendale Boulevard. It provides one travel lane in each direction.
- Berkeley Avenue – Berkeley Avenue is a local east-west street that intersects Glendale Boulevard. It provides one travel lane in each direction.
- Scott Avenue – Scott Avenue is a local east-west street that intersects Glendale Boulevard and Alvarado Street. It provides one travel lane in each direction.
- Montana Street – Montana Street is a local east-west street that intersects Glendale Boulevard and Alvarado Street. It provides two travel lanes in each direction east of Alvarado Street and one travel lane in each direction west of Alvarado Street.
- Reservoir Street – Reservoir Street is a local east-west street that intersects Alvarado Street and ends at Glendale Boulevard. It provides one travel lane in each direction.
- Sunset Boulevard – Sunset Boulevard is an east-west four-lane arterial classified as a major highway. It connects to the San Diego Freeway (I-405) to the west and to the Hollywood Freeway to the east. Sunset Boulevard intersects Alvarado Street and is grade-separated from Glendale Boulevard.
- Park Avenue – Park Avenue begins at Sunset Boulevard and intersects Glendale Boulevard a block to the southeast before ending three blocks later at Echo Park Avenue. This collector street has one lane in each direction.
- Santa Ynez Street – Santa Ynez Street is a local east-west street that intersects Alvarado Street and terminates at Glendale Boulevard. It provides one travel lane in each direction.
- Kent Street – Kent Street is a local east-west street that intersects Alvarado Street. It provides one travel lane in each direction.

- Bellevue Avenue – Bellevue Avenue is a collector street that travels eastward from Glendale Boulevard. It provides one travel lane in each direction and a dedicated center median for beginning and finishing left turns. At the intersection with Glendale Boulevard two left-turn lanes and one right-turn lane are provided. The street also provides access to and from northbound US 101.
- US 101 – US 101 (the Hollywood Freeway) runs in the southeast-northwest direction as it crosses the study corridors and extends from downtown Los Angeles through Hollywood and the San Fernando Valley. In the vicinity of the study area, US 101 provides four lanes in each direction plus auxiliary lanes. Ramps are provided at Alvarado Street but no direct access is provided from Glendale Boulevard.
- Temple Street – Temple Street is a secondary arterial that runs east-west. The street provides two lanes in each direction and intersects with Glendale Boulevard and Alvarado Street.
- Court Street – Court Street is a local east-west street that intersects Glendale Boulevard and Alvarado Street. It provides one travel lane in each direction.
- Beverly Boulevard – Beverly Boulevard is an east-west four-lane arterial classified as a major highway. This arterial lies at the southern end of the study corridor and intersects both Glendale Boulevard and Alvarado Street.

### **Level of Service**

Level of service (LOS) is a qualitative measure used to describe the traffic flow conditions, ranging from excellent (LOS A) to overloaded (LOS F) conditions. A variety of methodologies is available to analyze LOS, including distinct methodologies employed by Caltrans and LADOT. Because the signal controls at the study intersections are split between Caltrans and LADOT, two LOS methodologies were required for the traffic study.

In accordance with Caltrans guidelines, the LOS analyses at Caltrans controlled signalized intersections were conducted using *Highway Capacity Manual 2000* (2000 HCM) methodology to obtain the average delay per vehicle for the respective study intersections. The delay is then used to find the corresponding LOS based on the definitions in Table 2-7.

**Table 2-7.** Level of Service Definitions for Signalized Intersections – 2000 HCM Operational Methodology

Level of Service	Average Stopped Delay per Vehicle (seconds)	Definition
A	≤10	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	>10 and ≤20	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	>20 and ≤35	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	>35 and ≤55	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	>55 and ≤80	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	>80	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Intersections analyzed according to 2000 HCM methodology include:

- #1. Glendale Boulevard & SR-2 southbound off-ramp/Fargo Street/Waterloo Street
- #2. Glendale Boulevard & Allesandro Street
- #21. Glendale Boulevard & SR-2 ramps (signalized intersection exists only under Build Alternatives B through E)

In accordance with LADOT's *Traffic Study Policies and Procedures* (March 2002), the traffic study was required to use the "Critical Movement Analysis – Planning" (Transportation Research Board, 1980) method of intersection capacity calculation to analyze LADOT maintained signalized intersections. The Critical Movement Analysis (CMA) methodology determines the intersection volume-to-capacity (V/C) ratio. The ratio is then used to find the corresponding LOS based on the definitions in Table 2-8.

**Table 2-8.** Level of Service Definitions for Signalized Intersections

Level of Service	Volume/Capacity Ratio	Definition
A	0.000 -0.6000	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	>0.600 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	>0.700 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	>0.800 – 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	>0.900 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	>1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: *Highway Capacity Manual, Special Report 209*, Transportation Research Board, 2000.

Intersections analyzed according to CMA methodology include:

- #3. Glendale Boulevard & Aaron Street
- #4. Glendale Boulevard/Alvarado Street & Berkeley Avenue
- #5. Glendale Boulevard & Scott Avenue
- #6. Glendale Boulevard & Montana Street
- #7. Glendale Boulevard & Park Avenue
- #8. Glendale Boulevard & Santa Ynez Street
- #9. Glendale Boulevard & Bellevue Avenue
- #10. Glendale Boulevard & Temple Street
- #11. Glendale Boulevard & Court Street/Laveta Terrace
- #12. Glendale Boulevard/Lucas Avenue/2nd Avenue & 1st Street/Beverly Boulevard
- #13. Alvarado Street & Montana Street
- #14. Alvarado Street & Reservoir Street
- #15. Alvarado Street & Sunset Boulevard
- #16. Alvarado Street & Kent Street
- #17. Alvarado Street & US 101 northbound ramps
- #18. Alvarado Street & US 101 southbound ramps
- #19. Alvarado Street & Temple Street
- #20. Alvarado Street & Beverly Boulevard

### **Existing Levels of Service**

New weekday AM peak period (7:00 – 10:00 AM) and PM peak period (3:00 – 6:00) traffic counts were conducted in May and June 2006, and in September 2007, for the study intersections (see traffic study printed under separate cover). The existing traffic volumes were analyzed using the intersection capacity analysis methodology described above to determine current operating conditions at the study intersections.<sup>10</sup> Table 2-9 summarizes the existing weekday morning and evening peak hour V/C ratio and delay and the corresponding LOS for each of the study intersections based on the CMA and HCM methodologies, respectively. Using the CMA methodology required by LADOT, the results indicate that all but one of the analyzed intersections are currently operating at LOS D or better during both the morning and afternoon peak periods. The following study intersection operates worse than LOS D:

- #10. Glendale Boulevard & Temple Street - LOS E in PM peak hour

According to the HCM methodology, the following study intersections operate worse than LOS D:

- #1. Glendale Boulevard & SR-2 southbound off-ramp/Fargo Street/Waterloo Street - LOS E in AM peak hour
- #4. Glendale Boulevard/Alvarado Street & Berkeley Avenue – LOS F in AM peak hour
- #5. Glendale Boulevard & Scott Avenue – LOS E in PM peak hour
- #10. Glendale Boulevard & Temple Street – LOS F in AM peak hour
- #12. Glendale Boulevard/2nd Street & 1st Street/Berkeley Avenue – LOS E during PM peak hour
- #19. Alvarado Street & Temple Street – LOS E during PM peak hour

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<sup>10</sup> The Synchro/Simtraffic software program was used to estimate vehicle delay and LOS at study intersections under existing conditions. The Synchro/Simtraffic software program employs the methodologies published in the 2000 HCM to analyze traffic operations at signalized and unsignalized intersections. The program simulates projected traffic flows and considers the effects of upstream and downstream intersection queuing when calculating traffic operations. The use of a simulation software program when analyzing traffic operations at closely spaced intersections that experience congestion during peak hours is desirable to ensure that interaction between the intersections is considered. Traffic operations were based on existing peak hour traffic volumes and traffic signal timings. The Synchro/Simtraffic model was calibrated to existing traffic conditions in the study area with respect to traffic volumes, vehicle queues, and travel times.

**Table 2-9. Intersection Level of Service Analysis - Existing Conditions (Year 2006)**

No.	Intersection	Peak Hour	V/C [d]	LOS	Delay [e]	LOS
1. [a]	Glendale Boulevard & SR 2 SB Off-Ramp/Fargo Street/Waterloo Street	A.M. P.M.	-	-	56.5 16.3	E B
2. [a]	Glendale Boulevard & Allesandro Street	A.M. P.M.	-	-	17.3 16.6	B B
3. [b]	Glendale Boulevard & Aaron Street	A.M. P.M.	0.723 0.714	C C	18.1 11.4	B B
4. [a]	Glendale Boulevard/Alvarado Street & Berkeley Avenue	A.M. P.M.	0.888 0.876	D D	>80.0 34.3	F C
5. [a]	Glendale Boulevard & Scott Avenue	A.M. P.M.	0.555 0.554	A A	10.8 61.6	B E
6. [a]	Glendale Boulevard & Montana Street	A.M. P.M.	0.742 0.515	C A	16.9 45.1	B D
7. [a]	Glendale Boulevard & Park Avenue	A.M. P.M.	0.666 0.654	B B	13.0 14.2	B B
8. [a]	Glendale Boulevard & Santa Ynez Street	A.M. P.M.	0.616 0.607	B B	3.3 10.1	A B
9. [a]	Glendale Boulevard & Bellevue Avenue	A.M. P.M.	0.748 0.687	C B	21.8 20.1	C C
10. [a]	Glendale Boulevard & Temple Street	A.M. P.M.	0.877 0.958	D E	>80.0 43.2	F D
11. [b]	Glendale Boulevard & Court Street/Laveta Terrace	A.M. P.M.	0.601 0.527	B A	8.4 7.3	A A
12. [a]	Glendale Boulevard/Lucas Avenue/2 <sup>nd</sup> Avenue & 1 <sup>st</sup> Street/Beverly Boulevard	A.M. P.M.	0.643 0.610	B B	42.5 63.2	D E
13. [a]	Alvarado Street & Montana Street	A.M. P.M.	0.331 0.391	A A	5.5 46.2	A D
14. [a]	Alvarado Street & Reservoir Street	A.M. P.M.	0.317 0.416	A A	7.4 10.2	A B
15. [a]	Alvarado Street & Sunset Boulevard	A.M. P.M.	0.619 0.649	B B	27.8 26.7	C C
16. [a]	Alvarado Street & Kent Boulevard	A.M. P.M.	0.350 0.337	A A	3.0 3.9	A A
17. [a]	Alvarado Street & US 101 Northbound Ramps	A.M. P.M.	0.671 0.655	B B	19.8 18.4	B B
18. [a]	Alvarado Street & US 101 Southbound Ramps	A.M. P.M.	0.511 0.576	A A	14.1 20.1	B C
19. [a]	Alvarado Street & Temple Street	A.M. P.M.	0.661 0.789	B C	22.9 74.7	C E

No.	Intersection	Peak Hour	V/C [d]	LOS	Delay [e]	LOS
20. [a]	Alvarado Street & Beverly Boulevard	A.M.	0.547	A	20.0	B
		P.M.	0.649	B	23.2	C
21. [c]	Glendale Boulevard & SR 2 Ramps	A.M.	-	-	-	-
		P.M.	-	-	-	-

Notes:

[a] Intersection is currently operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the above analysis.

[b] Intersection is currently operating under the LADOT Automated Traffic Surveillance and Control (ATSAC) system. A credit of 0.07 in V/C ratio was included in the above analysis.

[c] Intersection is uncontrolled under existing conditions.

[d] V/C ratio calculated based on LADOT CMA methodology.

[e] Delay calculated based on HCM methodology using Synchro/Simtraffic.

Source: Fehr & Peers/Kaku Associates, 2008.

### **Existing Transit Service**

Metro provides public transit service near the SR-2 freeway terminus and Glendale Boulevard/Alvarado Street Corridor. The following transit lines serve the study area:

- Metro Line 92 – Line 92 is a north-south route that travels from downtown Burbank to downtown Los Angeles. Limited service (approximately every other bus trip) originates and terminates at the Sylmar/San Fernando Metrolink Station. This line has stops in Burbank, Glendale, Atwater Village, Silver Lake, Echo Park, and downtown Los Angeles. The limited service has stops in San Fernando, Pacoima, and Sun Valley. In the study area, the route travels along Glendale Boulevard. This line has average headways of 10-12 minutes during the weekday peak periods.
- Metro Line 200 – Line 200 provides service between the study area and MacArthur Park, USC, and Exposition Park to the south. In the study area, Line 200 runs along Montana Street. This line has average headways of six minutes during the weekday peak periods.
- Metro Line 2/302 – Lines 2/302 are east-west lines that travel from Castellammare to downtown Los Angeles, with limited stops for Line 302 on Sunset Boulevard, from Beverly Drive to Cesar E. Chavez Avenue/Figueroa Street. These lines have stops in Brentwood, Bel Air, West Hollywood, Silver Lake, and Echo Park. In the study area these lines travel along Sunset Boulevard. These lines have average headways of six minutes during weekday peak periods.
- Metro Line 4/304 – Lines 4/304 are east-west lines that travel from Santa Monica to downtown Los Angeles, with limited stops for Line 304 along Santa Monica Boulevard and Sunset Boulevard. These lines have stops in West Los Angeles, West Hollywood, Silver Lake, and Echo Park. In the study area these lines travel along Sunset Boulevard. This line has average headways of 12 minutes during the weekday AM peak period and eight minutes during the weekday PM peak period.

- Metro Line 603 – Line 603 is a north-south route that travels between the Glendale Galleria and downtown Los Angeles. In the study area, Line 603 runs along Glendale Boulevard and Allesandro Street. This line has average headways of 10 minutes during the weekday peak periods.

## Safety

As reported in the Draft Project Report for the State Route 2 Terminus (2008), accident data was obtained from Caltrans’ Traffic Accident Surveillance and Analysis System (TASAS) for the segment bounded by Branden Street (south of the freeway terminus) and Oak Glen Place (north of the terminus) along SR-2 for a 36-month period between January 1, 2004 and December 31, 2006. The actual accident rates are compared with average accident rates for similar highway facilities throughout the State, and are presented in Table 2-10.

Data for this period indicates that the overall accident rate within this segment of SR-2 is lower than what would be expected based on a statewide average. There were no reported fatalities, and 11 reported injuries. There were 38 total reported accidents.

**Table 2-10.** Accident Rates 1/1/04 through 12/31/06

KP (PM)	Statistical Data			Actual Accident Rates (ACCS/MVM*)			Average Accident Rates (ACCS/MVM*)		
	No. of Accidents	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury
13.5 to 14.5	32	0	11	0.460	0.000	0.160	1.88	0.012	0.770

Note:

\* ACCS/MVM = Accidents per million vehicle miles

Source: Caltrans TASAS, DMJM Harris, 2007.

## Pedestrian and Bicycle Facilities

Currently, the City of Los Angeles Bicycle Master Plan indicates that this portion of Glendale Boulevard is designated as a “Bicycle Commuter Route”.<sup>11</sup> A number of vehicular, pedestrian and bicyclist problems have arisen from the current freeway terminus layout. In particular, pedestrians and bicycles are not well accommodated by existing facilities in the vicinity of the freeway terminus. During off-peak periods, SR-2 traffic using the direct connector to southbound Glendale Boulevard often merges at excessive speeds, posing safety hazards to motorists, pedestrians, and bicyclists.

<sup>11</sup> City of Los Angeles. *City of Los Angeles Bicycle Master Plan*. Adopted by City Council August 6, 1996. Available at : <http://www.lacity.org/pln/cwd/gnlpln/transelt/bikeplan/BIIntro.htm> Accessed October 29, 2008.

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, there would be no construction impacts on traffic and transportation.

#### **Alternatives A to E**

Construction of the proposed build alternatives could require temporary and intermittent lane or ramp closures, which could increase congestion and diminish access in the area. Given that the alternatives are only in the conceptual stage, the extent and duration of any lane or ramp closures are not known at this time. However, because no road closures are anticipated during peak periods and because the impacts would be temporary and limited to the construction period, the effects would not be substantial. Additionally, a Traffic Management Plan will be developed to minimize the impact of construction activities on traffic flow (see below).

### ***Operational Impacts***

Fehr & Peers/Kaku Associates estimated future traffic volumes under the no-build and the five build alternatives to evaluate the service levels of the local street system resulting from the proposed improvement project. The future no-build traffic scenario represents future traffic conditions with the existing freeway on- and off-ramp configuration. In contrast, the future Build Alternatives A, B, C, D, and E traffic scenarios represent future traffic conditions with modified freeway on- and off-ramp configurations (note: Alternatives C, D, and E would have the same basic roadway configuration and thus were considered to be equivalent for the purposes of the operational traffic analysis in the discussions that follow). The analysis of future year traffic forecasts is based on projected conditions in 2033.<sup>12</sup>

The years 2033 traffic projections for all scenarios reflect an average annual growth of 1.04% for the AM peak and 0.97% for the PM peak weekday periods. These rates were obtained from the Metro travel demand model. They reflect the ambient or background growth in traffic on an annual basis and the traffic resulting from the completion of specific projects in or in the vicinity of the study area. These growth rates were applied to the existing traffic volumes to obtain future traffic volumes at the analyzed intersections.

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<sup>12</sup> The traffic consultant originally developed traffic projections for the year 2030. Subsequently, it was determined that to meet Caltrans traffic study requirements, traffic forecasts for the year 2033 would be required. As discussed in the traffic study (printed under separate cover), since the 2030 traffic projections would exceed the capacity of the roadway network, the traffic forecasts originally developed for 2030 conditions were not modified to account for additional growth between 2030 and 2033. Traffic forecasts under 2030 conditions are already higher than could reasonably occur in the study area because of limited roadway capacity. Therefore, the traffic forecasts applied to the future traffic analysis reflect traffic volumes beyond year 2030 or 2033 conditions.

Per discussions with Caltrans and LADOT, the SR-2 terminus improvement alternatives are not expected to result in an increase in traffic above the average annual growth rate. The project itself is not considered a trip generator. The discussions also determined that traffic volumes on Alvarado Street and Glendale Boulevard south of their intersection with Aaron Street would not be affected by the terminus improvement project. The proposed project would not provide additional capacity on SR-2 or Glendale Boulevard that would attract drivers to adjust their travel patterns to use these roadways instead of their current route. Total upstream and downstream volumes would be the same for the no-build and five build alternatives. Thus, future traffic projections for the five build alternatives were only developed at the intersections that would be affected by the terminus reconfiguration. The affected intersections include:

- #1. Glendale Boulevard & SR-2 southbound off-ramp/Fargo Street/Waterloo Street
- #2. Glendale Boulevard & Allesandro Street
- #3. Glendale Boulevard & Aaron Street
- #21. Glendale Boulevard & SR-2 ramps

Because Alternative A does not change the ramp configuration, traffic volumes are projected to be the same as the no-build alternative. Because of similar ramp layouts, traffic volumes are identical for build alternatives B through E.

To determine the delay and resulting LOS for the study intersections under each project alternative, the Synchro/Simtraffic<sup>13</sup> software program was used. Since the traffic volumes and lane configurations for the majority of the 21 study intersections do not change with the implementation of the proposed project, applying the CMA methodology would produce LOS results identical to existing conditions. The Synchro/Simtraffic results capture changes in traffic operations due to upstream/downstream queuing and traffic signal timings. Traffic signal timings were reoptimized in the northern portion of the study area (primarily north of Berkeley Avenue), including signal coordination along Glendale Boulevard, to accommodate the proposed project alternatives.

### **No-Build Alternative (Baseline Alternative)**

The no-build alternative peak hour traffic volumes were analyzed to determine the delay or V/C ratio and corresponding LOS for each of the analyzed intersections under year 2033 conditions, taking into account average annual traffic growth. Table 2-11 summarizes these results.

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<sup>13</sup> *Ibid.*

**Table 2-11. Intersection Level of Service Analysis Future Conditions (Year 2033) – No-Build Alternative**

No.		Intersection	Peak Hour	Delay or V/C	LOS
1.	[a]	SR 2 SB Off-Ramp/Fargo Street/Waterloo Street	P.M.	24.6	C
2.	[a]	Glendale Boulevard & Allesandro Street	A.M. P.M.	13.7 100.9	B [d] F
3.	[b]	Glendale Boulevard & Aaron Street	A.M. P.M.	0.920 0.897	E [d] D
4.	[a]	Glendale Boulevard/Alvarado Street & Berkeley Avenue	A.M. P.M.	1.135 1.103	F F
5.	[a]	Glendale Boulevard & Scott Avenue	A.M. P.M.	0.718 0.706	C C [d]
6.	[a]	Glendale Boulevard & Montana Street	A.M. P.M.	0.951 0.658	E B [d]
7.	[a]	Glendale Boulevard & Park Avenue	A.M. P.M.	0.857 0.830	D D
8.	[a]	Glendale Boulevard & Santa Ynez Street	A.M. P.M.	0.794 0.771	C C
9.	[a]	Glendale Boulevard & Bellevue Avenue	A.M. P.M.	0.960 0.870	E D
10.	[a]	Glendale Boulevard & Temple Street	A.M. P.M.	1.120 1.205	F F
11.	[b]	Glendale Boulevard & Court Street/Laveta Terrace	A.M. P.M.	0.768 0.666	C B
12.	[a]	Glendale Boulevard/Lucas Avenue/2nd Avenue & 1st Street/Beverly Boulevard	A.M. P.M.	0.829 0.776	D C
13.	[a]	Alvarado Street & Montana Street	A.M. P.M.	0.455 0.505	A A
14.	[a]	Alvarado Street & Reservoir Street	A.M. P.M.	0.423 0.537	A A
15.	[a]	Alvarado Street & Sunset Boulevard	A.M. P.M.	0.798 0.823	C D

No.		Intersection	Peak Hour	Delay or V/C	LOS
16.	[a]	Alvarado Street & Kent Street	A.M.	0.462	A
			P.M.	0.438	A
17.	[a]	Alvarado Street & US 101 Northbound Ramps	A.M.	0.864	D
			P.M.	0.831	D
18.	[a]	Alvarado Street & US 101 Southbound Ramps	A.M.	0.663	B
			P.M.	0.733	C
19.	[a]	Alvarado Street & Temple Street	A.M.	0.851	D
			P.M.	0.996	E
20.	[a]	Alvarado Street & Beverly Boulevard	A.M.	0.709	C
			P.M.	0.871	D
21.	[c]	Glendale Boulevard & SR 2 Ramps	A.M.	-	-
			P.M.	-	-

Notes:

Growth rates of 1.04% and 0.97% per year applied to existing (year 2006) A.M. and P.M. volumes respectively to forecast year 2030 No-Build Alternative volumes based on average growth predicted by the MTA Model in the study area.

[a] Intersection is currently operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the above analysis.

[b] Intersection is currently operating under the LADOT Automated Traffic Surveillance and Control (ATSAC) system. A credit of 0.07 in V/C ratio was included in the above analysis.

[c] Intersection is uncontrolled under existing conditions.

Source: Fehr & Peers/Kaku Associates, Inc., 2008.

Under Year 2030 No-build Alternative conditions, Table 2-11 shows that 14 of the 20 analyzed intersections are projected to operate at LOS D or better during the AM peak period, and 16 of the 20 analyzed intersections are projected to operate at LOS D or better during the PM peak period. Because of bottlenecks in the transportation system, such as the Glendale Boulevard/Alvarado Street & Berkeley Avenue intersection, additional intersections would operate worse than reported, as noted in the table. The intersections projected to operate at LOS E or F during at least one of the analyzed peak hours are:

- #1. Glendale Boulevard & SR-2 southbound off-ramp/Fargo Street/Waterloo Street (AM)
- #2. Glendale Boulevard & Allesandro Street (PM)
- #3. Glendale Boulevard & Aaron Street (AM)
- #4. Glendale Boulevard/Alvarado Street & Berkeley Avenue (AM and PM)
- #6. Glendale Boulevard & Montana Street (AM)
- #9. Glendale Boulevard & Bellevue Avenue (AM)
- #10. Glendale Boulevard & Temple Street (AM and PM)
- #19. Alvarado Street & Temple Street (PM)

## **Alternatives A to E**

The projected future year 2033 peak hour traffic volumes for the build alternatives A to E were analyzed to determine the future operating conditions with the completion of each of the freeway terminus improvement alternatives. These results are presented in Table 2-12.

As explained previously, because the project is not expected to add trips, traffic volumes at intersections not affected by the reconfiguration will be the same across the no-build and five build alternatives. Thus, the LOS at all study intersections south of Berkeley Avenue for the five build alternatives is expected to be the same as in the No-build Alternative. The intersections south of Berkeley Avenue projected to operate at LOS E or F during at least one of the analyzed peak hours for build alternatives A, B, C, D and E include:

- #3. Glendale Boulevard & Aaron Street (AM)
- #4. Glendale Boulevard/Alvarado Street & Berkeley Avenue (AM and PM)
- #6. Glendale Boulevard & Montana Street (PM)
- #9. Glendale Boulevard & Bellevue Avenue (AM)
- #10. Glendale Boulevard & Temple Street (AM and PM)
- #19. Alvarado Street & Temple Street (PM)

The VISSIM software program<sup>14</sup> was used to estimate vehicle delay and travel times through the northern portion of the study area under future no-build and project alternative conditions. The VISSIM model contained SR-2 between I-5 and Glendale Boulevard and Glendale Boulevard between the SR-2 off-ramp/Fargo Street and Aaron Street. Traffic forecasts reflecting Year 2033 conditions were reflected in the VISSIM model.<sup>15</sup>

Tables 8A and 8B in the traffic study summarize the AM and PM peak hour delay and LOS results for the intersections serving the SR-2 and Glendale Boulevard interchange and nearby intersections. The number of vehicles traveling through each intersection (i.e., volume served) is also reported.

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<sup>14</sup> VISSIM models the interactions between individual vehicles as they travel through the roadway network and replicates actual signal timings and signal coordination. The VISSIM microsimulation software program was used to analyze the Glendale Boulevard/SR-2 interchange including the adjacent signalized intersections under existing conditions and with the implementation of the proposed project alternatives under future conditions. The delay and LOS for the study intersections, vehicle queues, and travel times through the interchange were estimated using VISSIM.

<sup>15</sup> The traffic growth rates (approximately 1 percent per year) were applied to the 2030 traffic volumes originally developed by the traffic consultant to develop year 2033 traffic forecasts.

**Table 2-12.** Intersection Level of Service Analysis Future Conditions (Year 2033) — Project Alternatives

No.		Intersection	Peak Hour	No-Build Alternative		Alternative A		Alternative B		Alternatives C, D, E	
				Delay or V/C	LOS	Delay or V/C	LOS	Delay or V/C	LOS	Delay or V/C	LOS
1.	[a], [b]	Glendale Boulevard & SR 2 SB Off-Ramp/Fargo Street/Waterloo Street	A.M.	92.5	F	63.7	E	5.9	A	5.9	A
			P.M.	24.6	C	24.4	C	7.9	A	7.9	A
2.	[a]	Glendale Boulevard & Allesandro Street	A.M.	13.7	B [f]	14.7	B [f]	49.2	D [f]	52.3	D [f]
			P.M.	100.9	F	100.9	F	91.4	F	91.4	F
21.	[a], [d], [e]	Glendale Boulevard & SR 2 Ramps	A.M.	-	-	-	-	51.0	D [f]	34.3	C [f]
			P.M.	-	-	-	-	101.8	F	101.5	F
3.	[c]	Glendale Boulevard & Aaron Street	A.M.	0.920	E [f]	0.920	E [f]	0.920	E [f]	0.920	E [f]
			P.M.	0.897	D	0.897	D	0.897	D	0.897	D
4.	[a]	Glendale Boulevard/Alvarado Street & Berkeley Avenue	A.M.	1.135	F	1.135	F	1.135	F	1.135	F
			P.M.	1.103	F	1.103	F	1.103	F	1.103	F
5.	[a]	Glendale Boulevard & Scott Avenue	A.M.	0.718	C	0.718	C	0.718	C	0.718	C
			P.M.	0.706	C [f]	0.706	C [f]	0.706	C [f]	0.706	C [f]
6.	[a]	Glendale Boulevard & Montana Street	A.M.	0.951	E	0.951	E	0.951	E	0.951	E
			P.M.	0.658	B [f]	0.658	B [f]	0.658	B [f]	0.658	B [f]
7.	[a]	Glendale Boulevard & Park Avenue	A.M.	0.857	D	0.857	D	0.857	D	0.857	D
			P.M.	0.830	D	0.830	D	0.830	D	0.830	D
8.	[a]	Glendale Boulevard & Santa Ynez Street	A.M.	0.794	C	0.794	C	0.794	C	0.794	C
			P.M.	0.771	C	0.771	C	0.771	C	0.771	C

No.		Intersection	Peak Hour	No-Build Alternative		Alternative A		Alternative B		Alternatives C, D, E	
				Delay or V/C	LOS	Delay or V/C	LOS	Delay or V/C	LOS	Delay or V/C	LOS
9.	[a]	Glendale Boulevard & Bellevue Avenue	A.M.	0.960	E	0.960	E	0.960	E	0.960	E
			P.M.	0.870	D	0.870	D	0.870	D	0.870	D
10.	[a]	Glendale Boulevard & Temple Street	A.M.	1.120	F	1.120	F	1.120	F	1.120	F
			P.M.	1.205	F	1.205	F	1.205	F	1.205	F
11.	[c]	Glendale Boulevard & Court Street	A.M.	0.768	C	0.768	C	0.768	C	0.768	C
			P.M.	0.666	B	0.666	B	0.666	B	0.666	B
12.	[a]	Glendale Boulevard/Lucas Avenue/2nd Avenue & 1st Street/Berkeley Avenue	A.M.	0.829	D	0.829	D	0.829	D	0.829	D
			P.M.	0.776	C	0.776	C	0.776	C	0.776	C
13.	[a]	Alvarado Street & Montana Street	A.M.	0.455	A	0.455	A	0.455	A	0.455	A
			P.M.	0.505	A	0.505	A	0.505	A	0.505	A
14.	[a]	Alvarado Street & Reservoir Street	A.M.	0.423	A	0.423	A	0.423	A	0.423	A
			P.M.	0.537	A	0.537	A	0.537	A	0.537	A
15.	[a]	Alvarado Street & Sunset Boulevard	A.M.	0.798	C	0.798	C	0.798	C	0.798	C
			P.M.	0.823	D	0.823	D	0.823	D	0.823	D
16.	[a]	Alvarado Street & Kent Street	A.M.	0.462	A	0.462	A	0.462	A	0.462	A
			P.M.	0.438	A	0.438	A	0.438	A	0.438	A
17.	[a]	Alvarado Street & US 101 Northbound Ramps	A.M.	0.864	D	0.864	D	0.864	D	0.864	D
			P.M.	0.831	D	0.831	D	0.831	D	0.831	D

No.		Intersection	Peak Hour	No-Build Alternative		Alternative A		Alternative B		Alternatives C, D, E	
				Delay or V/C	LOS	Delay or V/C	LOS	Delay or V/C	LOS	Delay or V/C	LOS
18.	[a]	Alvarado Street & US 101 Southbound Ramps	A.M.	0.663	B	0.663	B	0.663	B	0.663	B
			P.M.	0.733	C	0.733	C	0.733	C	0.733	C
19.	[a]	Alvarado Street & Temple Street	A.M.	0.851	D	0.851	D	0.851	D	0.851	D
			P.M.	0.996	E	0.996	E	0.996	E	0.996	E
20.	[a]	Alvarado Street & Beverly Boulevard	A.M.	0.709	C	0.709	C	0.709	C	0.709	C
			P.M.	0.871	D	0.871	D	0.871	D	0.871	D

Notes:

Growth rates of 1.04% and 0.97% per year applied to existing (year 2006) A.M. and P.M. volumes respectively to forecast year 2030 volumes based on average growth predicted by the MTA Model in the study area.

[a] Intersection is currently operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the above analysis.

[b] Intersection does not include the SR 2 SB Off-Ramp for Alternatives B & C.

[c] Intersection is currently operating under the LADOT Automated Traffic Surveillance and Control (ATSAC) system. A credit of 0.07 in V/C ratio was included in the above analysis.

[d] Intersection is uncontrolled for No-Build Alternative & Alternative A.

[e] It is assumed that the intersection would operate under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the above analysis.

Source: Fehr & Peers/Kaku Associates, 2008.

Although each alternative has the same demand volume, the number of vehicles being served varies based on the capacity of the intersection and roadway network.

As shown in Table 8A of the traffic study, the intersections serving the SR-2 and Glendale Boulevard interchange would operate as follows during the AM peak hour:

- Glendale Boulevard & SR-2 Off-Ramp/Fargo Street – This intersection is projected to operate at LOS F under future no-build conditions and under Alternative A. Due to the relocation of the SR-2 off-ramp under Alternatives B, C, D, and E, the intersection would improve to LOS B during the AM peak hour under future conditions.
- Glendale Boulevard & SR-2 On-/Off-Ramp – This intersection would be constructed under Alternatives B, C, D, and E and is projected to operate at LOS F during the AM peak hour under future conditions.
- Glendale Boulevard & Allesandro Street – This intersection is projected to operate at LOS F under future no-build conditions and improve to LOS D under Alternative A and LOS B under Alternatives B, C, D, and E. The delay experienced by vehicles traveling on the SR-2 flyover off-ramp is included in the average delay at this intersection although the merge area actually occurs just south of Allesandro Street. Therefore, removing the flyover off-ramp under Alternatives B, C, D, and E reduces the average delay and improves the LOS during the AM peak hour.
- Glendale Boulevard & Aaron Street – This intersection would operate at LOS C under no-build and Alternative A conditions (without the bottleneck at the Glendale Boulevard/Alvarado Street & Berkeley Avenue intersection). The delay is reduced by approximately 5 seconds resulting in LOS B conditions under Alternatives B, C, D, and E. This is due to the decrease in vehicles served (approximately 100 vehicles) on southbound Glendale Boulevard due to delays at the SR-2 off-ramp intersection during the AM peak hour.

As shown in Table 8B of the traffic study, the intersections serving the SR-2 and Glendale Boulevard interchange would operate as follows during the PM peak hour:

- Glendale Boulevard & SR-2 Off-Ramp/Fargo Street – This intersection is projected to operate at LOS F under future no-build conditions and under Alternatives A and B. Under Alternatives C, D, and E, the intersection would operate at LOS D during the PM peak hour.
- Glendale Boulevard & SR-2 On-/Off-Ramp – This intersection would be constructed under Alternatives B, C, D, and E and is projected to operate at LOS F during the PM peak hour under future conditions.

- Glendale Boulevard & Allesandro Street – This intersection is projected to operate at LOS F under future no-build and Alternative A conditions. Traffic operations would improve to LOS E under Alternatives B, C, D, and E. The delay experienced by vehicles traveling on the SR-2 flyover off-ramp is included in the average delay at this intersection although the merge area actually occurs just south of Allesandro Street. Therefore, removing the flyover off-ramp under Alternatives B, C, D, and E reduces the overall average delay and improves the LOS for the intersection as a whole during the PM peak hour. The northbound approach to this intersection would experience additional delay because of the proposed traffic signal at the SR-2 on/off-ramp under Alternatives B, C, D, and E.
- Glendale Boulevard & Aaron Street – This intersection would operate at LOS F under no-build and Alternative A, B, C, D, and E conditions. With the proposed design changes under Alternatives B, C, D, and E, the number of vehicles served on northbound Glendale Boulevard decreases (by approximately 300 to 400 vehicles) because of capacity constraints at the proposed SR-2 on-ramp intersection during the PM peak hour.

The travel time through the SR-2 and Glendale Boulevard interchange was also estimated using the VISSIM model. Table 9 of the traffic study shows the northbound and southbound travel times during the AM and PM peak hours for vehicles traveling on Glendale Boulevard to and from SR-2.

During the AM peak hour, the southbound travel times from SR-2 onto Glendale Boulevard (through the Aaron Street intersection) are as follows:

- The travel time under existing conditions ranges from 4.5 to 7.5 minutes depending on whether vehicles are traveling through the SR-2 off-ramp signalized intersection or using the flyover ramp.
- Under future no-build conditions, the travel time would increase to between 9 and 12 minutes depending on whether vehicles are traveling through the SR-2 off-ramp signalized intersection or using the flyover ramp and would remain relatively constant under Alternative A (compared to no-build conditions).
- Under Alternatives B, C, D, and E, the travel time would increase to 13 minutes due to capacity constraints at the proposed SR-2 off-ramp signalized intersection.

During the PM peak hour, the northbound travel times from Glendale Boulevard (just south of the Aaron Street intersection) to SR-2 are as follows:

- The travel time under existing conditions is approximately 1.5 minutes.

- Under future no-build conditions, the travel time would increase to approximately 2.5 minutes.
- Under Alternative A, the travel time would decrease by approximately 40 seconds compared to the 2.5 minutes under future no-build conditions.
- Under Alternatives B, C, D and E, the travel time would increase by approximately 15 to 20 seconds compared to no-build conditions because of capacity constraints at the proposed SR-2 on-ramp signalized intersection.

## **Safety**

### **No-Build Alternative (Baseline Alternative)**

No improvements to the SR-2 terminus would occur under this alternative. It is expected that safety conditions would remain the same, or deteriorate as traffic volumes continue to increase.

### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

The continued use of the southbound SR 2 off-ramp overpass and flyover would not serve to reduce the risk of collision between high speed exiting vehicular traffic and pedestrians and vehicular traffic along southbound Glendale Boulevard. Due to increasing traffic volumes over time, this risk would continue to increase, posing an adverse effect upon safety and accident rates. However, widening the existing ramps would help to alleviate congestion at the intersection of Fargo Street and Glendale Boulevard / SR-2 southbound exit, and may serve to improve traffic flow and safety. However, due to the continued use of the off-ramp overpass and flyover, this alternative is expected to have an adverse effect upon pedestrian safety and accident rates.

### **Alternatives B to E**

Under these alternatives, the removal of the flyover from southbound SR-2 would reduce the risk of collision between high speed exiting vehicular traffic and pedestrians and vehicular traffic along southbound Glendale Boulevard. Furthermore, the addition of a signalized intersection at the terminus of SR-2 and Glendale Boulevard would create a more controlled interaction of vehicles, with dedicated turn lanes that would discourage ‘weaving’ when merging onto the freeway. Overall, these alternatives are expected to have beneficial effects upon safety and accident rates. No adverse effects are expected.

## ***Pedestrian and Bicycle Facilities***

### **No-Build Alternative (Baseline Alternative)**

No improvements to the SR-2 terminus or pedestrian facilities would occur under this alternative, and there would be no improvement of current conditions for pedestrians and bicyclists.

### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

As discussed above, the continued use of the off-ramp overpass and flyover southbound from SR-2 would not serve to reduce the risk of collision between high speed exiting vehicular traffic and pedestrians and vehicular traffic along southbound Glendale Boulevard. However, modification of the existing signal at the intersection of Fargo Street and Glendale Boulevard / SR-2 southbound exit may improve the control of traffic, which would improve safety conditions for pedestrians and bicyclists. No adverse effects are expected.

### **Alternatives B to E**

Under these alternatives, the elimination of the off-ramp overpass for vehicles traveling southbound from SR-2 would reduce the risk of collision between high speed exiting vehicular traffic and pedestrians and vehicular traffic along southbound Glendale Boulevard. The addition of pedestrian sidewalks and walkways through reclaimed open space areas would further increase safety levels, facilitating the separation of pedestrians and vehicle traffic. These alternatives also include provisions for new or additional bicycle facilities. The addition of crosswalks and enhanced intersection paving would help to increase visibility and driver awareness of pedestrians and bicyclists at these improved intersections. Furthermore, the addition of a regular signalized intersection at the terminus of SR-2 and Glendale Boulevard would create a more controlled interaction of vehicles, with dedicated turn lanes that would discourage ‘weaving’ when merging onto the freeway. Alternatives B, D and E would retain the overpass for use as open space and therefore would provide an additional level of pedestrian and bicycle safety by providing a grade separated crossing of Glendale Boulevard. Overall, these alternatives are expected to have beneficial effects upon pedestrian and bicycle facilities. No adverse effects are expected.

For all project alternatives, all proposed sidewalks and curb ramps would be ADA compliant.

## **Avoidance, Minimization, and/or Mitigation Measures**

### ***Construction***

The potential for disruptions to vehicular and pedestrian movement in the project area as a result of construction activities would be minimized with preparation and implementation of a Traffic Management Plan, including construction staging and detour plans, if needed. The Traffic Management Plan would include signage, detours, flagmen, etc., in order to maintain access and safety in the local area.

- T-1** A Traffic Management Plan (TMP) shall be prepared by the project proponent to prevent unreasonable traffic delays and impacts. The TMP shall be developed in consultation with the City, Caltrans, and the County and shall be provided, along with construction plans, to City police and fire departments prior to commencement of construction activities. The information provided should include access and traffic management plans detailing any projected temporary street closures or expected traffic delays due to construction vehicles using the roadways. The following elements will be a major component in the specific TMP:

- public awareness campaign particularly related to the scheduling of work;
- construction zone enforcement enhancement program (COZEEP);
- utilization of portable changeable message signs (PCMS);
- advance information signing pertaining to date, time and durations of lanes and road closures;
- preparation of temporary detour plans, if needed, during the plans, specifications, and estimates (PS&E) phase (note: no detours are anticipated at this time); and
- notification sent to LAUSD, St. Teresa of Avila School, and Metro Transit at least two weeks in advance of any planned street closures (including partial and/or full closures) or traffic diversions.

## 2.1.10 Visual/Aesthetics

### Regulatory Setting

The National Environmental Policy Act of 1969 as amended (NEPA) establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings [42 U.S.C. 4331(b)(2)]. To further emphasize this point, the Federal Highway administration in its implementation of NEPA [23 U.S.C. 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act (CEQA) establishes that it is the policy of the State to take all action necessary to provide the people of the State “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities.” [CA Public Resources Code Section 21001(b)]

### **California Scenic Highway Program**

The California Scenic Highway Program (1963) was created to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to the highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The Scenic Highway Program includes a list of highways that are either eligible for designation as scenic highways or have been so designated. A review of official county and state scenic highway maps indicates that neither this segment of SR-2 nor the streets adjoining the project site have been designated scenic highways or scenic corridors.

### **City of Los Angeles General Plan**

The City of Los Angeles Silver Lake-Echo Park-Elysian Valley Community Plan contains relevant policies related to aesthetics. These are:

**Policy 1-3. 2:** Preserve existing views in hillside areas.

**Policy 1-6.4:** Ensure that any proposed development be designed to enhance and be compatible with adjacent development.

### **Affected Environment**

A Visual Impact Assessment (VIA) was prepared for the proposed project (printed under separate cover). According to the VIA, the topography in the project area is generally hilly, and the residential neighborhoods are set in the hills overlooking the project area. The neighborhoods are moderately densely developed and characterized by steep slopes and narrow, winding streets, and many mature trees that often serve to obscure views mid-range and distant views of SR-2 from the southwest and southeast. Both neighborhoods, Silver Lake and Echo Park, contain a mix of building types constructed in phases in the early twentieth, mid-century, and during the

recent past, including a number of historic buildings in scattered locations throughout the neighborhood. Glendale Boulevard also contains a mix of commercial, commercial-with-residential-above, light manufacturing uses, and storage facilities. However, the predominant uses in the vicinity of the project site are residential and vacant land. St. Teresa of Avila Church (at the southwest corner of Fargo Street and Glendale Boulevard) is a Mission Revival style church constructed in 1929 and is potentially eligible for the California Register of Historical Resources.

The VIA identified two key views in the vicinity of the project site: 1) views of the mountains to the north and northwest and 2) views of the downtown skyline to the south and southeast. In the vicinity of the project site, the far-off views of the mountains are available to northbound travelers along SR-2 and motorists along east–west overpasses on SR-2 (see Figure 2-6 and 2-7). The views of the downtown skyline are available along the southern extent of the project site near the Tommy Lasorda Field of Dreams to residents west of the park and park users (see Figure 2-8 and 2-9). Motorists along local streets would have the same views, as would motorists exiting SR-2 onto Glendale Boulevard southbound (see Figures 2-9 and 2-10). Residents east of Glendale Boulevard generally would not be able to acquire views of the project when looking in southerly and northerly directions due to topography and vegetation (e.g., the mature eucalyptus and Brazilian pepper tree rows along the SR-2 corridor between the I-5 interchange and Glendale Boulevard)(see Figures 2.11 through 2.13). Due to the hilly terrain and traffic at the juncture of SR-2, the area has little pedestrian activity. Pedestrians, therefore, are not considered a significant viewer group.

**Figure 2-6. Key View of the Mountains to the North**



Source: ICF Jones & Stokes, 2007.

**Figure 2-7. Key View of the Downtown Skyline**



Source: ICF Jones & Stokes, 2007.

**Figure 2-8. View of the Valley and Mountains from Residential Areas to the West**



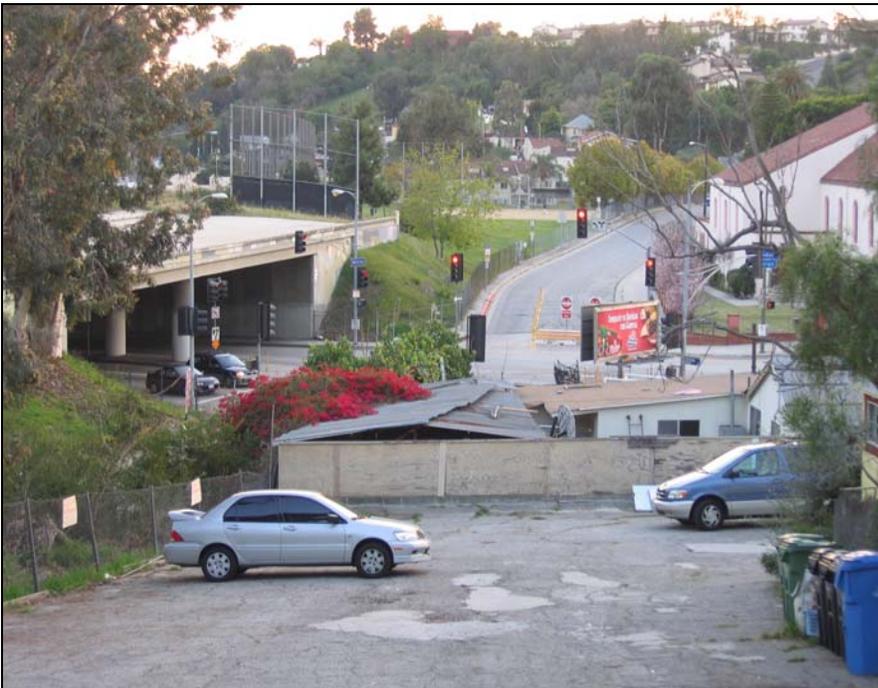
Source: ICF Jones & Stokes, 2007.

**Figure 2-9. View to the North from Intersection of Glendale Boulevard**



Source: ICF Jones & Stokes, 2007.

**Figure 2-10. View Southwest of the SR-2 Terminus from Residential Areas to the East**



Source: ICF Jones & Stokes, 2007.

**Figure 2-11. View Southeast Toward SR-2 Adjoining 2290 Lakeview Avenue**



Source: ICF Jones & Stokes, 2008.

**Figure 2-12. View Northeast along SR-2, from Oak Glen Place Overpass**



Source: ICF Jones & Stokes, 2008.

**Figure 2-13. View North Toward SR-2, From Oak Glen Place**



Source: ICF Jones & Stokes, 2008.

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no construction work is proposed. Therefore, no adverse effects on the existing visual setting and aesthetic conditions would occur.

#### **Alternatives A to E**

Minor, temporary potential visual impacts may result from the removal of vegetation in the construction zone and other construction activities (viz., staging/stockpiling road-building materials, operating construction equipment, erecting temporary traffic barricades, and the construction of soundwalls). It should be noted that relocation of the existing retaining wall under Alternative E would require removal of the existing vegetation (consisting of trees and shrubs) that exists along the eastside of the northbound SR-2 ramps—resulting in a greater degree of landscape removal than under the other alternatives. Construction hours are not expected to extend into the night; therefore, use of lights would be minimal. If use of lights occurs, an adequate buffer would be provided to avoid spill. Visible activities would include routine construction activities and truck deliveries. These activities would be visible from residential areas along both sides of SR-2, the Tommy Lasorda Field of Dreams, and along SR-2, Glendale Boulevard, and local streets. Nonetheless, these visual impacts would be limited to the period of construction. The Tommy Lasorda Field of Dreams field has a baseball diamond and other amenities associated with little league baseball. The greatest use of the facility occurs from April to July; the field is used Monday through Friday from 5 p.m. to 7 p.m. and Saturdays from 9 a.m. to 2 p.m. for Silver Lake Recreation Center baseball practice and games. There is no nighttime lighting equipment installed at the field. In the future, restrooms would be located

adjacent to the field. Since the field is used after 5:00 p.m. on weekdays and on weekends, there would be limited impacts due to construction activities. Also, since this user group is limited to little league baseball players and fans, the viewer group is only moderately sensitive.

The presence of construction personnel and equipment would be short term and, therefore, would not result in any substantial adverse impacts. Due to the temporary nature of the impacts, the loss of visual quality during construction is not considered to be a substantial adverse effect under NEPA.

### ***Operational Impacts***

Adverse changes to the visual setting would be of a temporary nature rather than long-term impacts. These are associated with the removal of some of the existing right-of-way landscaping to construct soundwalls and the visibility of the new concrete masonry soundwalls before new replacement landscaping matures to screen the soundwalls from view. In addition, under Alternatives B, C, D and E, the realignment of the north and southbound lanes so that they are side-by-side would require the removal of the existing median, which separates southbound and northbound traffic visually with a dense stand of mature eucalyptus and other evergreen trees. In the short-term, the loss of the median planting would be a significant adverse change in visual character of the project corridor for motorists rather than residents with ongoing fixed views across the visual setting. However, motorists are considered only low to moderately sensitive to such changes because most are commuters with only limited interest in the visual setting. Due to the dense landscaping outside of /and along the perimeter of the right-of-way, only a small number of nearby residents will notice the loss of the median landscaping, and thus, are unlikely to experience that loss as a significant adverse change to visual quality.

The key view of the mountains to the north would remain unchanged due to changes proposed under the build alternatives. Given the moderate level of motorist sensitivity (most being commuters rather than sightseers), were soundwalls to be constructed, the motorist experience on SR-2 would not be significantly affected as a result of the project due both to the retention of a significant portion of the existing landscaping and the eventual maturation of the new infill screening landscaping that would be installed. The shifting of on- and off-ramps to the west or east and/or widening of ramps would not result in changes that would obstruct views of the far-off mountains. The views of the far-off mountains are available from both east and west of the project area. The shifting of on- and off-ramps would not exclude a group of motorists from these views. Views of the project site could be acquired by only a small percentage of the residents due to topographic factors, varying street alignments, and mature trees. Given the less-than-pristine character of the current project setting, including the presence of the existing overpass, vacant unimproved land, asphalt road paving, and the high volume of traffic now seen at the juncture of SR-2 and Glendale Boulevard, such close-in and mid-range views would not be expected to change substantially.

Similarly, views of the downtown skyline from the Tommy Lasorda Field of Dreams would remain unchanged. The project would not encroach upon the park or build structures that would obstruct views to and from the park. The park lies outside the construction limits for the project.

None of the improvements proposed under the build alternatives would change views of the downtown skyline for the motorists, park users, residents, or pedestrians. Moreover, because the park is used primarily for team sports activities on weekends and weeknights, park users would have only a moderate level of sensitivity to the presence of the project and would be minimally affected by construction activities because park use and construction hours would generally not coincide.

No adverse direct or indirect impacts to potential historic resources would occur as a result of the project. Only one potential historic resource was identified—St. Teresa of Avila Church. However, the building lies outside the construction limits of the project, and improvements proposed under the build alternatives would not result in significant visual changes to the less-than-pristine physical/historic setting of the church.

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no adverse impacts on the existing visual setting and aesthetic conditions would occur.

#### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

Construction of Alternative A would not have a significant adverse effect on the visual environment. Alternative A would not result in the construction of new structures; it would retain the existing overpass and widen the on-ramp of SR-2 northbound from Glendale Boulevard. A majority of the existing vegetation would remain. However, improvements to the existing vegetation would include new street trees along the Tommy Lasorda Field of Dreams and new street trees along the northwest side of Glendale Boulevard, with a possible park expansion with grading in the northwest corner of the Tommy Lasorda Field of Dreams. The intersection of Glendale/Allesandro Street would be improved with a visual gateway with vertical accent trees and plaza, along with regrading and landscaping for the existing dirt area to the east of the SR-2 southbound exit ramp. Under Alternative A, there would be no change in the views from the residences other than the addition of the new trees along Glendale Boulevard. The views of the downtown skyline to the south and southeast and the mountains to the north and northwest would also remain unaltered. Construction of lighting and retaining walls would be similar to the original interchange.

#### **Alternative B (Realign Ramp East – Remove Flyover and Part of Overpass)**

Construction of Alternative B would not have a significant adverse effect on the visual environment. However, although temporary, a less than significant adverse effect/less than significant impact would occur as a result of the removal of some of the existing right-of-way landscaping until the replacement median and embankment landscaping matures. Alternative B would result in the realignment of the southbound and northbound entrance and exit ramps of SR-2 to and from Glendale Boulevard. Alternative B has the potential to create new community open space or a new landscaped area on that portion of the overpass to be retained. Alternative B would also enhance the pedestrian connectivity by adding crosswalks and paving at the intersections of Glendale/Fargo Street and Glendale/Allesandro Street. The green-space improvements to the overpass and flyover are considered benefits to the visual environment. The views of the downtown skyline to the south and southeast and the mountains to the north and

northwest would remain unchanged due to no structures being developed with the viewshed. Similar lighting would be installed along the new alignments of SR-2 and Glendale Boulevard; neither impacts to views of the mountains or downtown nor light and glare impacts are anticipated.

#### **Alternative C (Realign Ramps East – Remove Overpass)**

Construction of Alternative C would not have a significant adverse effect on the visual environment. However, although temporary, a less than significant adverse effect/less than significant impact would occur as a result of the removal of some of the existing right-of-way landscaping until the replacement median and embankment landscaping matures. Alternative C would result in the removal of the overpass and flyover and the realignment of the southbound exit lanes onto Glendale Boulevard. Alternative C has the potential to create new open space or a new landscaped area. A landscaped median/parkway treatment would be provided north and south of the terminus. An additional leg of crosswalk would be added at the Glendale/Waterloo/Fargo intersection and at the Glendale/Allesandro intersection to improve pedestrian access. The removal of the Glendale Boulevard overpass and flyover would positively contribute to the visual environment. The views of the downtown skyline to the south and southeast and the mountains to the north and northeast would remain unchanged or improve with the removal of the overpass. Also, similar lighting would be installed within the interchange; therefore, no new light and glare adverse effects would occur.

#### **Alternative D (Realign Ramps East – Maintain Overpass)**

Construction of Alternative D would not have a significant adverse effect on the visual environment. However, although temporary, a less than significant adverse effect/less than significant impact would occur as a result of the removal of some of the existing right-of-way landscaping until the replacement median and embankment landscaping matures. Alternative D would result in the Glendale Boulevard overpass being retained. The flyover structure from southbound SR-2 would be modified and reused as an ADA accessible ramp adjacent to the existing flyover. The “greening” and conversion of the Glendale Boulevard overpass and flyover for community open space would occur northeast of the intersection. The existing retaining wall and associated landscaping along Allesandro Street would remain unchanged. An additional leg of crosswalk would be added at the Glendale/Waterloo/Fargo intersection and at the Glendale/Allesandro intersection to improve pedestrian access. The addition of greening and the community open space from the Glendale Boulevard overpass and flyover reuse would contribute to the visual environment. The views of the downtown skyline to the south and southeast and the mountains to the north and northeast would remain unchanged with the improvements. Also, similar lighting would be installed within the interchange; therefore, no light and glare adverse effects would occur.

#### **Alternative E (Realign Ramps East, Retain Overpass and Flyover, Relocate Retaining Wall)**

Construction of Alternative E would not have a significant adverse effect on the visual environment and is very similar to Alternative D. Alternative E would result in the Glendale Boulevard overpass being retained. The flyover structure from southbound SR-2 would be modified and reused as an ADA accessible ramp adjacent to the existing flyover. The greening and conversion of the Glendale Boulevard overpass and flyover for community open space

would occur northeast of the intersection. The only difference between the Alternative D and E is that the retaining wall along the northbound entrance ramp to SR-2 from Glendale would be relocated farther east, toward Allesandro Street, thereby removing some existing landscaping and creating limited landscaping opportunities along Allesandro Street. An additional leg of crosswalk would be added at the Glendale/Waterloo/Fargo intersection and at the Glendale/Allesandro intersection to improve pedestrian access. As in Alternative D, the addition of greening and the community open space from the Glendale Boulevard overpass and flyover reuse would contribute to the visual environment. The views of the downtown skyline to the south and southeast and the mountains to the north and northeast would remain unchanged with the improvements. Also, similar lighting would be installed within the interchange; therefore, no light and glare adverse effects would occur.

### **Soundwall Construction**

Noise studies were recently completed documenting the potential for significant traffic noise impacts adjoining the project area. On the basis of that analysis, the construction of soundwalls is anticipated as part of the project to reduce noise impacts. The proposed soundwalls would be of concrete masonry unit construction and range in height from 6 to 16 feet tall from adjoining road grade. It is anticipated that the soundwalls would be planted with vines and further screened with trees to reduce their potential visual impact. Because of this planting and the additional landscape enhancements being proposed under the five alternatives, the current landscaped appearance of the SR-2 right-of-way would be enhanced once replacement and new landscape features mature. Adverse changes to visual quality as a result of the removal of some of the existing landscaping would be temporary—experienced primarily by motorists—and hence would not be substantial. In addition, no substantial adverse impacts on mid-range views would result from the soundwalls, and all far-off views of neighboring hills and ridgelines—views considered significant—would be preserved.

### **Avoidance, Minimization, and/or Mitigation Measures**

The project would have negative visual impacts that would be temporary and minimized through mitigation measures involving planting and aesthetic treatments. These improvements would include aesthetic treatments to retaining walls, gore paving, and overpass structures (i.e., vines; colored, textured paving; etc.). Additionally, the build alternatives would include extensive landscape screening of proposed soundwalls utilizing a combination of vines, replacement trees, and shrubbery. Additionally, it should be noted that the project would be designed in accordance with Caltrans' Highway Design Manual and the 2007 Project Development Manual and specific proposed SR-2 improvements would be designed to be in keeping with the local design context in which the work is proposed, with input from local governmental agencies.

## **2.1.11 Cultural Resources**

### **Regulatory Setting**

“Cultural Resources,” as used in this document, refers to all historic and archaeological resources regardless of significance. The term “historic property” refers to any cultural resources, regardless of significance. Laws and Regulations dealing with cultural resources include:

The National Historic Preservation Act of 1966, as amended, (NHPA) sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, FHWA, State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the Advisory Council’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Pilot Program (23 CFR 773) (July 1, 2007).

The Archaeological Resources Protection Act (ARPA) applies when a project may involve archaeological resources located on federal or tribal land. ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the “use” of land from historic properties.

Historical resources are considered under the California Environmental Quality Act (CEQA) as well as California Public Resources Code (PRC) Section 5024.1 which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires the Department to inventory state-owned structures in its right-of-way. 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

### **Affected Environment**

A Historic Property Survey Report (HPSR) was prepared for the proposed SR-2 project (printed under separate cover). The HPSR identified an Area of Potential Effects (APE) for the proposed project which was established in consultation with Claudia Harbert, Caltrans PQS, Principal

Architectural Historian and Javad Rahimzadeh, Caltrans Project Manager in District 7. The APE Maps can be found in Exhibit 3 in the Maps section attached to the Historic Property Survey Report. The APE Map was signed April 17, 2008.

The APE established as the direct Area of Potential Effects for the proposed project includes the maximum existing or proposed right-of-way for all alternatives currently under consideration, easements (temporary and permanent), and any area where ground may be disturbed by construction activities. The indirect APE includes all built environment properties subject to acquisition (partial and full), changes in access, or where visual or audible changes could affect their use. As part of the HPSR, the Native American Heritage Commission (NAHC) and 15 architectural, historical and preservation and governmental organizations, as well as individuals in these fields, were consulted.

According to the findings in the HPSR, within an approximately 0.5-mile radius of the project site, there are ten properties determined not eligible for the National Register as a result of the current study. There is one property, St. Theresa Catholic Church, located within the indirect APE, eligible for listing in the California Register of Historical Resources and is therefore considered a historical resource for the purposes of CEQA. On January 27, 2009, the California Office of Historic Preservation, Department of Parks and Recreation, concurred with these findings (see Appendix F for letter of concurrence).

In addition, a Phase I cultural resources reconnaissance conducted on the October 11, 2006 by ICF Jones & Stokes archaeologists located no archaeological sites in the project APE and no prehistoric or historical archaeological resources were observed within the project APE. Given that grading has already occurred in the proposed project area, the project area has a very low potential to encompass buried archaeological resources.

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Since the No-Build Alternative does not involve any construction, no modifications to existing structures or the land would occur; therefore, no construction-related impacts on historical or archaeological cultural resources would occur.

#### **Alternatives A to E**

The build alternative would include improvements to existing roadways and intersections at the SR-2 terminus, which could require temporary construction easements. These easements would be necessary only for the duration of construction and would not substantially interfere with the use of the affected parcels.

According to the HPSR, St. Theresa Catholic Church is eligible for listing in the California Register of Historical Resources and historically significant for the purposes of CEQA, and is located within the indirect APE. However, there would be no substantial adverse effects to this property due to project construction, which would be confined to the existing right-of-way. Additionally, any indirect impacts due to noise or dust generated by construction activities and diminished access due to temporary lane or ramp closures would be minor.

In addition, no known archaeological resources would be affected by the proposed project. Due to extensive historic period development and the disturbed nature of the project area, the potential for undiscovered buried cultural resources is considered low. No further archaeological survey work is necessary unless project plans change to include areas not surveyed, or if buried archaeological resources are found. Avoidance and minimization measures have been proposed to minimize impacts to cultural resources found during construction of the proposed alternative. No substantial adverse effects would occur.

### ***Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Since no changes would occur in the configuration of the SR-2 terminus under the No-Build Alternative, there would be no change to its current operation.

#### **Alternatives A to E**

No displacements or acquisitions of private property would occur as a result of the build alternatives. As such, there would be no adverse direct impacts to the St. Theresa Catholic Church property. Additionally, no substantial increases in noise levels would occur at the church property due to operation of the proposed build alternatives. In addition, archaeological resources would not be disturbed or adversely affected due to the operation of the proposed build alternatives. As such, the proposed build alternatives would not result in adverse effects to cultural resources in the project area.

### **Avoidance, Minimization, and/or Mitigation Measures**

While the potential to uncover buried cultural resources is considered low, buried archaeological resources could be encountered during construction of the proposed project. The following are proposed measures to minimize adverse effects to potential archaeological resources:

- A-1** If buried cultural resources are encountered during construction, work in that area must halt and all earth-moving activity within and around the immediate discovery area shall be diverted until a qualified archaeologist can evaluate the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the county coroner shall be contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify NAHC, which will then notify the Most Likely Descendent (MLD). The person

who discovered the remains shall contact the Department, District 7, Environmental Division, Cultural Studies Branch, and work with the MLD to determine the most respectful treatment of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.

## **2.2 Physical Environment**

### **2.2.1 Hydrology and Floodplains**

#### **Regulatory Setting**

EO 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 CFR 650 Subpart A.

In order to comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

#### **Affected Environment**

A Water Quality Technical Report (printed under separate cover) was prepared for the proposed project. According to the Water Quality Report, the proposed project site is located in the Los Angeles River watershed, which is one of the largest watersheds within the region and encompasses approximately 824 square miles. The Los Angeles River is approximately 55 miles long and begins in the Santa Monica, Santa Susana, and San Gabriel Mountains. The river passes through heavily developed industrial, commercial, and residential zones and is surrounded by freeways, railways, and major commercial and government buildings. The proposed project site is located approximately less than 1 mile south of the Los Angeles River, approximately 2 miles north of MacArthur Park Lake, and less than 0.5 mile east of the Ivanhoe and Silver Lake Reservoirs.

The City of Los Angeles’ stormwater drainage system is an extensive network of open channels and underground pipes designed to prevent flooding. The storm drain system is separate from the Los Angeles’ sewer system and receives no treatment or filtering prior to discharging to the ocean. Stormwater runoff from the project site is captured by the City’s stormwater drainage system and discharges into the Los Angeles River. A more detailed discussion of the City’s stormwater drainage system and impacts to stormwater runoff is provided in Section 2.2.2 (Water Quality and Stormwater Runoff).

According to the Federal Emergency Management Agency (FEMA) Flood Insurance rate Map (FIRM) and the U.S. Army Corps of Engineers (Corps) reservoir inundation maps, the project area is not within the 100-year floodplain or within the inundation zone of the Silver Lake Reservoir or the Echo Park Lake.

## **Environmental Consequences**

### ***Construction and Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Since no construction activities are proposed under the No-Build Alternative, no adverse effects would occur.

#### **Alternatives A to E**

The proposed build alternatives would not result in any modification to or encroachments into a floodplain during the construction period and would not be located within or near a 100-year flood hazard area. In addition, the proposed build alternatives would not redirect floodwater flows or expose people or structures to flood hazards or increased risks involving seiche, tsunami, or mudflow. Silver Lake Reservoir is located less than 0.5 mile west of the project. If the dam at the Silver Lake Reservoir were to fail, excess water would flow south, away from the proposed project location, and be directed to the City's storm drainage system (City of Los Angeles 2005). As a result, there would not be a considerable risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a dam during construction or operation of the proposed build alternative.

### **Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, and/or mitigation measures are required.

## **2.2.2 Water Quality and Stormwater Runoff**

### **Regulatory Setting**

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the Corps to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

The SWRCB has developed and issued a statewide NPDES permit to regulate storm water discharges from all Department activities on its highways and facilities. Department construction projects are regulated under the Statewide permit, and projects performed by other entities on Department right-of-way (encroachments) are regulated by the SWRCB's Statewide General Construction Permit. All construction projects over 1 acre require a Storm Water Pollution Prevention Plan (SWPPP) to be prepared and implemented during construction. Department activities less than 1 acre require a Water Pollution Control Program.

### **Affected Environment**

The proposed project site is located in a very urbanized region within the City of Los Angeles. The Los Angeles Regional Water Quality Control Board (LARWQCB) has jurisdiction over the proposed project site. There are no hydrological resources identified within the vicinity of the proposed project limits. The proposed project site is currently developed as a transportation facility with some residential, industrial, and commercial buildings located adjacent to the site. The nearest water body is the Los Angeles River located approximately less than a mile north of the proposed project site. At Reach 3 of the Los Angeles River, near the proposed project site, the Los Angeles River is listed as impaired by trash. A plan, or Total Maximum Daily Load (TMDL) to reverse this trash impairment was approved by the SWRCB on April 15, 2008. Two other water bodies are located within a 2-mile radius of the project site, which include the Silver Lake Reservoir and MacArthur Park Lake. However, these would not be affected by the proposed project.

The project site is located in the central subbasin of the Coastal Plain of the Los Angeles Groundwater Basin (Central Basin). Groundwater quality within the Los Angeles River watershed has been affected by hundreds of known leaking underground storage tanks, which have contaminated the soil and/or groundwater with petroleum hydrocarbons and volatile organic compounds. Several wells within the Central Basin have been closed due to high nitrate contamination; however, none of these sites are located near the proposed project location.

The City of Los Angeles' stormwater drainage system is an extensive network of open channels and underground pipes designed to prevent flooding. The storm drain system is separate from the Los Angeles' sewer system and receives no treatment or filtering prior to discharging to the ocean. Stormwater runoff from the project site is captured by the City's stormwater drainage system and discharges into the Los Angeles River. Preliminary research of the area's existing structures did not identify any existing treatment best management practices (BMPs).

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Since no construction activities would occur, there would be no adverse effects on water quality.

#### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

According to current estimates, Alternative A would result in a disturbed Soil Area (DSA) of 16,880 sf (0.39 acres) due to construction activities related to lane widening that would involve earth-disturbing activities. These activities, including grading and excavation, often expose disturbed and loosened soils to erosion from rainfall, runoff, and wind due to removal of protective vegetation and reduction of natural soil resistance. This results in the release of sediments into the local stormwater system. Sediments are considered a pollutant by the LARWQCB due to their potential to transport absorbed pollutants such as nutrients, hydrocarbons, metals, and typical hydrophobic contaminants (e.g., organo-chlorine pesticides). Although impacts from sedimentation are usually short-term and greatly diminish after revegetation of exposed areas, under certain hydrologic conditions, sediment and sediment-borne pollutants may remobilize. In addition, discharges of sediments and construction-related contaminants to the City's storm drain system could eventually enter surface waters with little or no treatment. As a result, construction activities could result in adverse effects to stormwater runoff and water quality in the project area. Mitigation measures have been proposed to minimize adverse effects.

#### **Alternative B (Realign Ramp East – Remove Flyover and Part of Overpass)**

Alternative B would result in a disturbed Soil Area (DSA) of 38,400 sf (0.88 acres). Construction related impacts from Alternative B would be similar to those of Alternative A, with the exception that a somewhat greater amount of sediments would potentially be discharged as a result of the demolition of part of the overpass. Discharges of sediments and construction-related contaminants to the City's storm drain system could eventually enter surface waters with little or no treatment. Thus, construction-related adverse effects could result from the proposed alternative. However, implementation of the mitigation measures listed below would minimize adverse effects.

### **Alternative C (Realign Ramps East – Remove Overpass)**

Alternative C would disturb 201,392 sf (4.62 acres) of soil area. Construction-related impacts from this alternative would be similar to Alternative B, except the overpass would be completely removed. Thus, a greater amount of sediments would potentially be discharged as a result of demolition of the overpass. Implementation of the mitigation measures listed below would minimize adverse effects.

### **Alternative D (Realign Ramps East – Maintain Overpass)**

Alternative D would disturb 72,200 sf (1.66 acres) of soil area. Construction related impacts from this alternative would be slightly less than those of Alternative C.

### **Alternative E (Realign Ramps East, Retain Overpass and Flyover, Relocate Retaining Wall)**

Alternative E would disturb 76,200 sf (1.75 acres) of soil area. Construction related impacts from this alternative would be slightly greater than those due of Alternative D due to the additional construction required to relocate the retaining wall along the northbound SR-2 ramps.

## ***Operational Impacts***

### **No-Build Alternative (Baseline Alternative)**

Since no operational changes would be made, the No-Build Alternative would not result in adverse effects on water quality.

### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

Adverse effects to water quality due to an increase in stormwater runoff may occur as a result of the operation of the proposed alternative. This alternative would result in an increase in impervious surfaces of 15,202 square feet (0.35 acres) due to widening of the existing exit ramps from two to three lanes. Thus, compared to existing conditions, an increase in surface water runoff from the project could result from this alternative. Increased runoff could potentially contribute to increased contaminant loading, trash, in particular, for the storm drain system and, thus, the Los Angeles River, which has been identified as being impaired by trash. Increased runoff would also increase oil deposits and emitted engine combustion byproducts from motorized vehicles that collect on paved surfaces.

According to the municipal stormwater discharge NPDES permit issued to the City of Los Angeles, redevelopment projects that would create more than 5,000 square feet of new impervious surfaces are considerable to a degree that mitigation of potential stormwater impacts is required. Thus, the proposed Alternative A could substantially increase stormwater runoff and degrade water quality in the vicinity of the project area. Implementation of the mitigation measures below, which address stormwater management through the life of the project, would minimize adverse effects due to the operation of the project.

### **Alternative B (Realign Ramp East – Remove Flyover and Part of Overpass)**

Alternative B would result in little change to the existing area of impervious surfaces at the project site. While the realignment of the entrance and exit ramps, enhanced pedestrian crosswalks, and new paving would create new impervious areas, the addition of permeable landscaping as part of this alternative would offset those areas. Thus, there would be only a slight change in total impervious area at the project site compared to existing conditions. In terms of contaminant loading in surface waters, the existing levels of contaminant loading from vehicle emissions would continue, but no additional contributions to downstream surface waters are expected. As a result, operational impacts from this alternative would be less than considerable.

### **Alternative C (Realign Ramps East – Remove Overpass)**

Similar to Alternative B, the proposed Alternative C would result in little change to the existing area of impervious surfaces at the project site. In addition, it is likely that the proposed project would increase permeable surfaces (i.e. landscaped medians) compared to the No Build Alternative. Thus, a reduction in the quantity of surface runoff could potentially result from operation of this alternative. Likewise, a minor reduction in contaminant loading in downstream surface waters could occur. As a result, operational impacts from this alternative would be minor.

### **Alternative D (Realign Ramps East – Maintain Overpass)**

Alternative D would result in an overall decrease in impervious surfaces due to an increased amount of landscaping as part of the alternative design. Realignment of the entrance and exit ramps would allow for increased vegetated areas, and landscaped medians between the traffic lanes would be included as well. These vegetated and permeable areas would reduce the amount of surface runoff generated by the project compared to the existing conditions. A minor reduction in contaminant loading in downstream surface waters may also result from operation of this alternative. As a result, no adverse operational impacts are expected to occur under this alternative.

### **Alternative E (Realign Ramps East, Retain Overpass and Flyover, Relocate Retaining Wall)**

Impacts from Alternative E would be similar to those of Alternative D.

## **Avoidance, Minimization, and/or Mitigation Measures**

The following measures shall be implemented to minimize potential water quality impacts from construction and operation of the proposed project.

**WQ-1** As part of compliance with conditions of the NPDES General Construction Permit, the City and/or its contractors shall implement a SWPPP to ensure no considerable impacts on water quality will occur during construction. The SWPPP will identify best BMPs to maintain water quality. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other nonpoint-source runoff. Measures range from source control, such as reduced surface disturbance, to treatment of polluted runoff, such as detention or retention basins. BMPs to be implemented as part of compliance with

conditions of the NPDES General Construction Permit may include but are not limited to the following measures:

- temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas;
- drainage facilities in downstream off-site areas will be protected from sediment using BMPs acceptable to the RWQCB; and
- grass or other vegetative cover will be established on the construction site as soon as possible after disturbance.

**WQ-2** The implementation of a Hazardous Spill Prevention and Control Program is required as part of compliance with the NPDES General Construction Permit. The City and/or its contractors shall develop and implement a spill prevention and control program to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities. The plan shall be completed before any construction activities begin and include provisions for preventing, containing, and reporting spills of hazardous materials.

**WQ-3** The implementation of measures to minimize water quality impacts on impaired water bodies, such as the Los Angeles River, are required as part of compliance with the Los Angeles County NPDES municipal stormwater permit. Because the project may be considered a redevelopment project, the City shall develop a Site-Specific Mitigation Plan. This mitigation plan shall follow Development Planning Program guidelines established in the *Manual for the Standard Urban Stormwater Mitigation Plan*. The Site-Specific Mitigation Plan shall be submitted to the City of Los Angeles Watershed Protection Division for approval. Incorporation of stormwater source control measures, site design principals, and treatment control measures shall be included in the design of the project. BMPs incorporated into the project design may include but are not limited to the following:

- storm drain system stenciling and signage at storm drain inlets;
- installation of devices to reduce the velocity or energy of water at storm drain outlets;
- reducing the width of sidewalks and incorporating landscaped buffer areas between sidewalks and streets;
- installation of a dry detention basin(s) to decrease runoff during storm events, prevent flooding, and allow for off-peak discharge;
- installation of an infiltration trench to decrease runoff during storm events, prevent flooding, and allow for off-peak discharge; and
- installation of vegetated strips, high infiltration substrates, and vegetated swales where feasible throughout the project site to reduce runoff and provide initial stormwater treatment.

**WQ-4** Because the proposed project would encroach into State right-of-way, the project proponent shall conduct the following:

- Construction-related water quality impacts shall be minimized according to the *Storm Water Quality Handbook: Project Planning and Design Guide (PPDG)*. The Project Engineer shall complete Appendix C (Selection of Construction Site BMPs) and Appendix F (Cost Estimate of the Construction Site BMPs). The Caltrans District 7 Construction Storm Water Coordinator would approve completion of the PPDG requirements.
- As described in the PPDG, the Project Engineer shall develop the Project Study Report (PSF), Project Report (PR), Project Scope Summary Report (PSSR), and other scoping documents during project planning. The primary objectives of these documents are to:
  - Identify potential storm water quality requirements and pollutants of concern for specific water bodies;
  - Ensure that the planned project includes sufficient right-of-way and budget for required storm water controls according to Appendix F, Section F.6 of the PPDG;
  - Identify project-specific permanent and temporary BMPs that may be required to mitigate impacts. Permanent BMPs (including design pollution prevention and treatment BMPs) must be implemented to the maximum extent practicable and to the extent that implementation is consistent with existing Caltrans policies;
- The Project Engineer shall comply with District 7 Directive No. DD31 And DD81 (Caltrans 2005a and 2005b, respectively); and
- The Project Engineer shall prepare a Storm Water Data Report (Caltrans 2007b) and provide a copy to the Caltrans District 7 Storm Water NPDES Coordinator for review and comment.

Alternative A is the most favorable for treatment BMPs because it does not widen Glendale Boulevard and thus does not require additional grading or walls to construct a treatment BMP in the area available on the western side of Glendale Boulevard north of Duane Street. The other two treatment areas require the same amount of grading and preparation for all five alternatives and thus no advantage exists for any specific alternative. Alternative C has an advantage over the other four since the proposed SR 2 center median could be utilized as a fourth treatment BMP with minimal cost and ensure that all of the water quality volume/flow is treated. The proposed locations of the treatment BMPs include three specific areas. The first treatment BMP area is located in the available space located on the western side of Glendale Boulevard north of Duane Street to the SR 2 on-ramp. The second treatment BMP area is located on the western side of SR 2 just south of Oak Glen Place. The third treatment BMP area is located on the eastern side of SR 2 just south of Oak Glen Place.

## **2.2.3 Geology/Soils/Seismicity/Topography**

### **Regulatory Setting**

This section discusses geology, soils, and seismic concerns as they relate to public safety and project design. The key federal law pertaining to geologic and topographic features is the Historic Sites Act of 1935, which established a national registry of natural landmarks and protected “outstanding examples of major geological features.” Topographic and geologic features are also protected under CEQA.

Earthquakes are prime considerations in the design and retrofit of structures. The Department’s Office of Earthquake Engineering is responsible for assessing seismic hazards for Department projects. The current policy is to use the Maximum Credible Earthquake (MCE) anticipated from young faults in and near California when assessing seismic hazards. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

#### ***Alquist-Priolo Earthquake Fault Zoning Act***

California’s Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (Public Resources Code Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce risks to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits most types of structures intended for human occupancy from being located across the traces of active faults and strictly regulates construction in corridors along active faults (referred to as “earthquake fault zones”). It defines criteria for identifying active faults, giving legal weight to terms such as “active,” and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. It also encourages and regulates seismic retrofits for some types of structures.

#### ***Seismic Hazards Mapping Act of 1990***

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690–2699.6) is intended to avoid or reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act (i.e., the State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped seismic hazard zones).

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

## **Surface Mining and Reclamation Act of 1975**

The principal piece of legislation concerning mineral resources in California is the Surface Mining and Reclamation Act of 1975 (Public Resources Code Sections 2710–2719), which was enacted in response to land use conflicts involving urban growth and essential mineral production. The stated purpose of this act is to provide a comprehensive surface mining and reclamation policy that encourages production and conservation of mineral resources while ensuring that adverse environmental effects of mining are prevented or minimized. It recommends that mined lands be reclaimed and residual hazards to public health and safety eliminated. It suggests that consideration be given to recreation, watershed, wildlife, aesthetic, and other related values. The Surface Mining and Reclamation Act provides guidelines for the evaluation of an area's mineral resources, using a system of mineral resource zone classifications that reflect the known or inferred presence and significance of a given mineral resource.

## **Affected Environment**

A preliminary geologic report and assessment of the local geologic conditions and their potential to affect the proposed SR-2 project site was prepared for the proposed project and is printed under separate cover. The preliminary geologic report and assessment focuses on the identification of specific geologic hazards (unstable slopes and landslide deposits, faulting and seismicity, expansive soil, and collapsible/compressible or corrosive soil) that may affect the construction planned for the proposed project site.

The proposed project site is located in the Echo Park District of Los Angeles, along the edge of a valley within the Elysian Park Hills. The existing topography at the proposed project site consists of gentle to moderate slopes that descend toward SR-2. Elevations range from approximately 460 feet to 515 feet. The proposed project site is underlain primarily by deep-marine sedimentary rocks of the upper Miocene Puente Formation, with interbedded/interfingered siltstone, siliceous shale, and sandstone, the latter of which underlies most of the area, with young alluvial fan deposits underlying the southeastern portion of the proposed project site. The Puente Formation sandstone (Tpna) consists of medium to light brown and light grey well-bedded sandstone, ranging from very fine to very coarse grained and, mostly, well cemented. The young alluvial fan deposits (Qyf) generally consist of unconsolidated gravel, sand, and silt deposited from flooding streams and debris flows. Artificial fill (Qaf) is also expected to underlie roads and buildings at the proposed project site. Due to the age of roads and buildings in the area, generally more than 50 years old, undocumented fill may be encountered during project construction.

## **Slope Stability**

A large portion of the proposed project site is below the surrounding grade. The eastern side of SR-2 is bracketed by vertical retaining walls, and the western side has slopes with a combination of retaining walls and natural vegetation, all underlain by the Puente Formation. No landslides or obvious slope stability issues were observed at the proposed project site.

## ***Faulting and Seismicity***

The seismicity of southern California is dominated by the intersection of the north-northwest trending San Andreas fault system and the east-west trending Transverse Ranges fault system. Active reverse or thrust faults<sup>16</sup> in the Transverse Ranges include blind thrust faults,<sup>17</sup> which were responsible for the 1987 Whittier Narrows earthquake and 1994 Northridge earthquake, and range-front faults,<sup>18</sup> responsible for uplift of the Santa Monica and San Gabriel Mountains. Range-front faults include the Malibu Coast, Santa Monica-Hollywood, Raymond, Verdugo, and San Fernando-Sierra Madre faults. Active right-lateral strike-slip faults<sup>19</sup> in the northern Los Angeles area include the San Andreas, Palos Verdes, Newport-Inglewood, and San Gabriel faults, all of which are associated with the San Andreas fault system. In addition, both the Transverse Ranges and northern Los Angeles area are characterized by numerous geologically young faults. These faults can be classified as *historically active*, *active*, *potentially active*, or *inactive*, and while it is difficult to quantify the probability of an earthquake occurring on a specific fault, this classification is based on the assumption that a fault that has moved during the Holocene epoch is likely to produce earthquakes in the future. Blind thrust faults do not intersect the ground surface, and thus they are not classified as active or potentially active in the same manner as faults that are present at the earth's surface. Blind thrust faults are seismogenic,<sup>20</sup> and thus the activity classification of these faults is based predominantly on historic earthquakes and microseismic activity along the faults.

The proposed project site does not cross any known active or potentially active faults, and it is not likely to experience surface fault rupture. However, the proposed project site is subject to ground shaking associated with earthquakes on the San Andreas and Transverse Ranges fault systems. The Modified Mercalli Scale for Earthquake Intensity is presented in Table 2-13, along with a range of approximate average peak accelerations associated with each intensity value. Faults in the project area are shown in Figure 2-14 – Regional Fault Map.

## ***Liquefaction***

Liquefaction is the phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of strong earthquake-induced ground shaking. The young alluvial fan deposits and artificial fill underlying portions of the proposed project site may meet the criteria for liquefaction if unconsolidated sandy deposits are present in areas of perched groundwater. In addition, shallow perched groundwater may occur in the young alluvial fan

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<sup>16</sup> A fault with predominantly vertical movement in which the upper block moves upward in relation to the lower block; a thrust fault is a low-angle reverse fault.

<sup>17</sup> Blind thrust faults are low-angled subterranean faults that have no surface expression.

<sup>18</sup> Faults in front of mountain ranges, which are responsible for the uplift of the mountains.

<sup>19</sup> Fault block movements in which the blocks have no rotational component, and parallel features remain so after movement.

<sup>20</sup> A geologic structure that has generated or is capable of generating an earthquake.

**Table 2-13: Active Faults in the Project Region**

<b>Name</b>	<b>Closest Distance to Project (miles)<sup>1</sup></b>	<b>Estimated Max. Earthquake Magnitude<sup>2, 3</sup></b>	<b>Fault Type and Dip Direction<sup>3</sup></b>	<b>Slip Rate (mm/yr)<sup>3,4</sup></b>
Upper Elysian Park	1.9	6.4	Blind thrust, 50° NE	1.3
Hollywood	3.0	6.4	Left-lateral reverse oblique, 70° N	1.0
Raymond	3.8	6.5	Left-lateral reverse oblique, 75° N	1.5
Puente Hills Blind Thrust	4.2	7.1	Blind thrust, 25° N	0.7
Verdugo	6.9	6.9	Reverse, 45° NE	0.5
Newport-Inglewood	8.4	7.1	Right-lateral strike slip, 90°	1.0
Santa Monica	9.8	6.6	Left-lateral reverse oblique, 75° N	1.0
Sierra Madre	11.2	6.7	Reverse, 45° S	2.0
San Fernando	15.0	6.7	No information available	n/a
Northridge	15.4	7.0	Blind thrust, 42° S	1.5
Whittier	15.7	6.8	Right-lateral strike slip, 90°	2.5
San Gabriel	15.8	7.2	Right-lateral strike slip, 90°	1.0
Clamshell-Sawpit	15.8	6.5	Reverse, 45° NW	0.5
Malibu Coast	16.2	6.7	Left-lateral reverse oblique, 75° N	0.3
Palos Verdes	19.1	7.3	Right-lateral strike slip, 90°	3.0
San Jose	21.7	6.4	Left-lateral reverse oblique, 75° NW	0.5
Santa Susana	22.0	6.7	Reverse, 55° N	5.0
Anacapa-Dume	26.3	7.5	Reverse left-lateral oblique, 45° N	3.0
Simi-Santa Rosa	29.2	7.0	Left-lateral reverse oblique, 60° N	1.0
Cucamonga	29.6	6.9	Reverse, 45° N	5.0
San Andreas	32.2	8.0	Right-lateral strike slip, 90°	34.0

**Notes:**

- 1) Fault distances obtained using the EQFault computer program (Blake 2000), based on digitized data adapted and modified from the 2002 CGS fault database.
- 2) Maximum Earthquake Magnitude = The maximum earthquake that appears capable of occurring under the presently known tectonic framework, using the Richter scale.
- 3) Fault parameters from the CGS Revised 2002 California Probabilistic Seismic Hazard Maps report, Appendix A – 2002 California Fault Parameters.
- 4) References to fault slip rates are traditionally presented in millimeters per year.

Source: Geotechnical Consultants, Inc., March 2008.

deposits and sandstone layers of the Puente Formation. Seismic hazard mapping, delineating areas of potential liquefaction and seismically induced landslides, has been conducted by the State of California for the Hollywood 7.5-minute quadrangle (California Geological Survey [CGS] 2002). A CGS mapped liquefaction hazard zone, generally correlating with the limits of the young alluvial fan deposits, is present within the southeastern portion of the project site, as shown in Figure 2-15 – Project Area Seismic Hazard Map.

Figure 2-14. Regional Fault Map

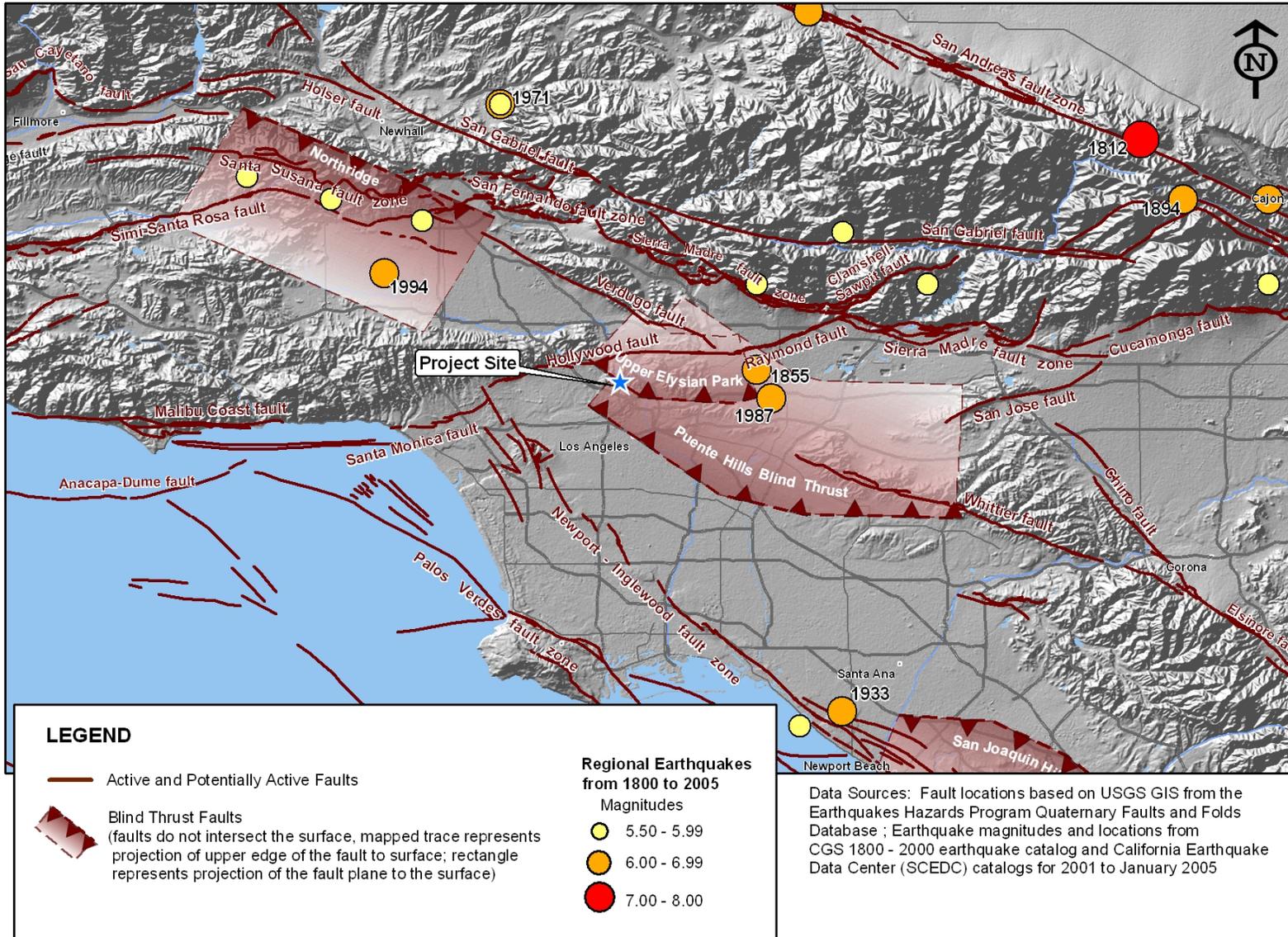


Figure 2-15. Project Area Seismic Hazard Map



Source: CGS, 2002, GIS files for the Official Map of Seismic Hazard Zones, Hollywood Quadrangle

### ***Seismic Slope Instability***

Other forms of seismically induced ground failures, which may affect the proposed project site, include ground cracking and landslides. Landslides triggered by earthquakes have been a significant cause of damage. In southern California, large earthquakes, such as the 1971 San Fernando earthquake and the 1994 Northridge earthquake, triggered landslides that were responsible for destroying or damaging numerous structures, blocking major transportation corridors, and damaging life-line infrastructure. Areas that are most susceptible to earthquake-induced landslides have steep slopes with poorly cemented or highly fractured rocks; are underlain by loose, weak soils; and lie on or adjacent to existing landslide deposits.

CGS seismic hazard mapping delineated areas where seismically induced landslides could occur near the proposed project site but not within the boundaries of the site (CGS 2002).

## **Environmental Consequences**

### ***Construction and Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no adverse effects due to geologic hazards would occur.

#### **Alternatives A to E**

The proposed project site is not located within a State of California Earthquake Fault Zone, and the probability of damage from surface fault rupture is low due to the lack of known active faults underlying the proposed project site or vicinity. Surface ground cracking related to shaking from distant events is not considered a major hazard. The improvements proposed under the build alternatives would not require construction methods with the potential to result in or trigger geologic hazards, such as subsidence, lateral spreading, or landslides. To minimize and control the erosion of soils disturbed and exposed by clearing, grubbing, and grading activities, BMPs would be implemented in compliance with NPDES permit requirements and the SWPPP.

The potential exists that proposed project structures could be adversely affected by liquefaction and ground shaking hazards from seismic events on earthquake faults in the region. To reduce the potential for adverse effects related to liquefaction or landslides in the vicinity of the proposed project site, BMPs and sound engineering would be employed in compliance with all applicable provisions and guidance from the Department. In addition, mitigation measures proposed as part of this project would minimize adverse effects related to geologic hazards including seismic ground shaking.

### **Avoidance, Minimization, and/or Mitigation Measures**

The mitigation measures listed below shall be implemented as part of proposed project to avoid and/or minimize potential adverse effects of the build alternatives.

- GEO-1** Geologic and seismic hazards shall be avoided or minimized by employing sound engineering practice in the design and construction of the proposed project.
- GEO-2** Because of the potential for distant seismic ground shaking and soil liquefaction, design and construction of the proposed project shall conform to all applicable provisions and guidelines set forth by the Department regarding earthquake safety design. With implementation of standard grading controls and structure design measures to address seismic and geologic conditions, project geologic and soil-related impacts will be mitigated. Appropriate geotechnical soil tests from project site assessment borings shall be performed and reviewed to evaluate whether potentially expansive and/or liquefaction soil conditions are present, in accordance with Table 18-1-B of the 2001 California Building Code (CBC). The applicant shall comply with all requirements of the CBC and the Department's building/design codes governing the proposed terminus improvements. A site grading plan shall be submitted for review and acceptance by the City before grading permits are issued. The grading plan shall be accompanied by a soils report prepared in accordance with the Guidelines for Geotechnical and Geological Reports in the City of Los Angeles and Department guidelines and signed by a California Registered Civil Engineer and/or a California Registered Geologist.
- GEO-3** Project alternatives that require relocation of retaining walls and/or regrading of slopes shall require a slope stability evaluation, which will include site-specific recommendations for mitigating potential slope stability issues.

Additionally, measures identified in Section 2.2.2, Water Quality and Stormwater Runoff, to comply with NPDES permit requirements will ensure that erosion impacts will be minimized.

## 2.2.4 Paleontology

### Regulatory Setting

Paleontology is the study of life in past geologic time based on fossilized plants and animals. Although there is no federal law that specifically protects natural or paleontological resources, there are a number of laws that have been interpreted to do so—the primary law being the Antiquities Act of 1906, which protects historic or prehistoric ruins or monuments and objects of antiquity. This act has been amended to specifically allow funding for paleontological mitigation. Under California law, paleontological resources are protected by CEQA; the California Administrative Code, Title 14, Section 4306 et seq.; and Public Resources Code Section 5097.5. The City of Los Angeles guidelines for the protection of paleontological resources are specified in Section 3 of the City of Los Angeles General Plan Conservation Element. The policy requires that the City's paleontological resources be protected for research and/or educational purposes. It mandates the identification and protection of significant paleontological sites and/or resources known to exist or that are identified during land development, demolition, or property modification activities.

### Affected Environment

The project area is located along the southwestern edge of the Elysian Park Hills and is primarily underlain by deep-marine sedimentary rocks of the upper Miocene Puente Formation, which consists of units of interbedded and interfingering siltstone, sandstone, and siliceous shale. The Puente Formation is folded and faulted and contains anticlines and synclines and the beds are cut by numerous old bedrock faults. Overlying the Puente Formation are Quaternary alluvial fan deposits of varying ages and pockets of artificial fill. Most of the project area is underlain by Puente Formation sandstone, with young alluvial fan deposits underlying the south-eastern portion of the project site (Geotechnical Consultants Inc., 2008). Units expected to be encountered during construction activities for the project are described below.

**Puente Formation, sandstone (Tpna).** Most of the project site is underlain by this unit, which consists of medium to light brown and light grey well-bedded sandstone. It ranges from very fine to very coarse grained and is mostly well cemented.

**Young Alluvial Fan Deposits (Qyf).** Young alluvial fan deposits will be encountered in the southeastern portions of the project site. The young alluvial fan deposits generally consist of unconsolidated gravel, sand, and silt that have been deposited primarily by flooding streams and debris flows. The surface may show slight soil development.

**Artificial Fill (Qaf).** Deposits of sand, silt, and gravel resulting from human construction activities; includes compacted engineered and noncompacted nonengineered fill. Although not mapped in the project area, local layers of artificial fill of varying thicknesses are expected to underlie roads and buildings in the project area. Due to the age of roads and structures in the area, generally greater than 50 years old, undocumented fill may be encountered during project construction.

## **Environmental Consequences**

### ***Construction and Operational Impacts***

#### **No-Build Alternative**

Under the No-Build Alternative, paleontological resources would not be affected.

#### **Alternatives A to E**

The proposed project area has been disturbed by grading in the past. Given that grading has already occurred in the proposed project area, the potential for discovery of paleontological resources during construction of the proposed project is low. Paleontologic resources are not known to occur on the proposed site. If paleontological resources are discovered during construction, mitigation as specified will occur.

No operational impacts to paleontological resources would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

The following measures are proposed to minimize impacts to any paleontological resources that may be encountered during construction.

- P-1** If project plans change to include unsurveyed areas or if buried paleontological resources are encountered during construction, work must halt until a qualified paleontologist can evaluate the nature and significance of the find. If required, recovery of significant paleontological deposits shall occur using standard paleontological techniques, including, but not limited to, manual or mechanical excavations, monitoring, soil testing, photography, mapping, or drawing to adequately recover the scientifically consequential information from and about the paleontological resource.

## 2.2.5 Hazardous Waste/Materials

### Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

## **Affected Environment**

An Initial Site Assessment (ISA) (March 2008) was completed by Geotechnical Consultants, Inc. for the proposed project area. The ISA provides information from various agency databases and meets the American Society for Testing and Materials (ASTM) standard E-1527 for federal and state government database research.

A phased approach was utilized to evaluate the potential for hazardous materials at the project site, beginning with a review of the previous ISA completed for the project by URS for Caltrans in 2001. A brief review of the historical land use and the existing conditions was conducted, consisting of review of aerial photographs and Sanborn Maps for the project area, to identify land use and to verify possible sources of hazardous materials. Additional work performed for this ISA included review of an Environmental Data Resource Inc. (EDR) database of records of federal, State, and local regulatory agencies that oversee the storage, handling, and/or unauthorized release of hazardous substances. A reconnaissance visit to the project site involved visual observation from public streets of the project area and adjacent parcels for evidence of hazardous materials storage or discharge.

The assembled data within the ISA, which is summarized within this section, was analyzed for indicators of environmental contamination with the objective of determining the potential impacts to the proposed project site and the need for additional environmental assessment.

The EDR database was reviewed for properties listed as hazardous materials users/generators and potential or known dischargers of hazardous materials. The database search included properties within a one-mile radius of an approximate center point for the proposed project site. Approximately 33 properties were identified within the one-mile search radius of the approximate center point of the proposed project site, with many of properties sites having multiple database listings and a number of the properties having duplicate listings under slightly differing names. Twenty properties listed as hazardous materials users/generators and potential or known dischargers of hazardous materials occur within the approximate limits of construction and a one quarter-mile buffer zone.

## **Environmental Consequences**

### ***Construction and Operational Impacts***

Physical improvements for the six above project alternatives are located in the same project area/footprint and only generally vary in orientation and design of project features such as ramps, overpasses, and retaining walls. Therefore the ISA analyzes the project site as the full potential project area of construction as covered by all of the alternatives.

### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, the project site would not be disturbed, and no effects involving hazardous materials would occur.

## **Alternatives A to E**

As stated above, 20 properties listed as hazardous materials users/generators and potential or known dischargers of hazardous materials occur within the approximate limits of construction and a one quarter-mile buffer zone. These properties were screened and no properties with a high or moderate potential to affect the proposed project site were identified. One property, Bert-Co Graphics Inc., which is located along the west side of Glendale Boulevard and is immediately adjacent to the south-southwest portion of the proposed project site, was identified as having a low potential to affect the proposed project site.

Aerially deposited lead due to exhaust emissions from leaded gasoline has been documented along major freeway routes. Aerially deposited lead is generally limited to the upper 2 feet of soil within unpaved shoulder and median areas. The presence and concentration of aerially deposited lead within the limits of the proposed project should be evaluated during the design phase. Soil sampling and laboratory testing are necessary to evaluate the requirements for excavating, reuse, or offsite disposal for this project.

Reconstruction and restriping of the SR-2 freeway terminus may require the removal of existing overpass structures and pavement. Based on the age of the SR-2 structures and overpasses, there is a potential that asbestos containing material (ACM) and lead-based paint may be present in the structures. Demolition of these structures could potentially result in exposure and mobilization of ACM and/or lead-based paint contaminants. Additionally, the yellow thermoplastic and painted stripes, and pavement markings may contain lead and chromium, and destruction of pavement surfaces containing these materials may result in mobilization of these contaminants into the environment.

## **Avoidance, Minimization, and/or Mitigation Measures**

The mitigation measure listed below would substantially reduce the potential adverse impacts related to hazardous materials and hazardous wastes encountered during construction of the proposed terminus project.

**HM-1 Low Potential Site.** Prior to project construction, a thorough review of current environmental records shall be conducted and a site-specific inspection shall be performed to verify the environmental status of the site. Results of the record review or visual inspection that indicate environmental contamination may be present at the property shall cause low potential sites to be reevaluated in further detail to confirm presence or absence of off-site contamination. Additionally, low potential sites shall be reevaluated if the location of potential ground disturbance varies from previous construction parameters and brings ground disturbance closer to hazardous material sites. A qualified and approved environmental consultant (California registered geologist, environmental assessor, or civil engineer experienced in environmental assessments acceptable to Metro/Caltrans) shall perform the review and evaluation, and the results reviewed and approved by the appropriate County Health Department or DTSC prior to construction.

Mitigation Measure HM-2 below was developed to address unknown contamination that may be encountered during project construction, which may have resulted from past or present on and/or offsite practices. This mitigation measure would provide an assessment of actual or potential site contamination, resulting in the development of appropriate safeguards and methods to reduce potential risk prior to and during construction.

**HM-2 Discovery of Unknown Contaminants.** During excavation and ground disturbance for project construction, the contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, the contractor shall stop work until the material is properly characterized and appropriate measures are taken to protect human health and the environment. The contractor shall comply with all local, State, and federal requirements for sampling and testing, and subsequent removal, transport, and disposal of hazardous materials. Additionally, In the event that evidence of contamination is observed, the contractor shall document the exact location of the contamination and shall immediately notify the Caltrans and/or the MTA, as appropriate, describing proposed actions.

**HM-3 Aerially Deposited Lead.** The presence of aerially deposited lead contaminated soil must be confirmed before or during the design phase of the project to develop proper plans to reuse the affected soil within the project limits. The aerial lead site investigation study and report must conform to the requirements of Caltrans and DTSC. The aerial lead study shall require subsurface soil sampling and laboratory testing using the DI-WET and Toxicity Characteristic Leaching Procedure (TCLP) methods for lead, soluble lead, and soil pH within existing unpaved areas that will be disturbed or regraded for the project.

**HM-4 Asbestos, Lead, and Chromium Containing Material.** A survey of buildings, structures, and pavement areas to be removed or demolished shall be conducted to assess the presence and extent of asbestos, lead, and chromium containing materials. This study should be conducted prior to final project design by a qualified and approved environmental specialist. The investigation shall include collecting samples for laboratory analysis and quantification of contaminant levels within the buildings and structures proposed for demolition, and in pavement disturbance areas. Based on these findings appropriate measures for handling, removal, and disposal of these materials can be developed. Regulatory agencies for the State of California and County of Los Angeles should be contacted to plan handling, treatment, and/or disposal options.

## 2.2.6 Air Quality

### Regulatory Setting

#### *Federal Requirements*

The Clean Air Act as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM), lead (Pb), and sulfur dioxide (SO<sub>2</sub>).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to State Implementation Plan (SIP) for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity in California is concerned with how well the region is meeting the standards set for ozone (O<sub>3</sub>), particulate matter (PM), and fine particulates (PM<sub>2.5</sub>). California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans (RTP) are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as South Coast Air Quality Management District for the South Coast Air Basin (Basin), and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the RTP is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

Conformity at the project-level also requires “hot spot” analysis if an area is “nonattainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter. A region is a “nonattainment” area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as nonattainment areas but have recently met the standard are called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA and CEQA purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the CO standard to be violated, and in “nonattainment” areas the project must not cause any increase in the number and severity of violations. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

## **Transportation Conformity**

The concept of transportation conformity was introduced in the 1977 federal CAA, which includes a provision to ensure that transportation investments conform to the SIP for meeting the national ambient air quality standards (NAAQS). Conformity requirements were made substantially more rigorous in the federal CAA amendments of 1990, and the transportation conformity regulation that details implementation of the conformity requirements was first issued in November 1993, though the requirements have been amended many times. The most recent complete set of amendments to the Transportation Conformity Rule is found at 40 Code of Federal Regulations (CFR) parts 51 and 93 (August 15, 1997). Additionally, on July 1, 2004, the U.S. Environmental Protection Agency (EPA) published a set of the Transportation Conformity Rule Amendments, amending the August 1997 regulations, in Federal Register (FR) Volume 69 No. 26. The new amendments provide regulations for the new 8-hour ozone and PM<sub>2.5</sub> NAAQS. Finally, on March 10, 2006, EPA published an amendment to 40 CFR part 93 in FR Volume 71 No. 47, which established the criteria for determining which transportation projects must be analyzed for local particulate emission impacts in PM<sub>2.5</sub> and PM<sub>10</sub> nonattainment and maintenance areas, creating new requirements for PM<sub>2.5</sub> and revising those for PM<sub>10</sub>.

## **Mobile Source Air Toxics (MSATs)**

The federal CAA identified 188 pollutants as being air toxics, which are also known as hazardous air pollutants (HAP). From this list, EPA identified a group of 21 as MSATs in its final rule, *Control of Emissions of Hazardous Air Pollutants from Mobile Sources* (66 FR 17235) in March 2001. From this list of 21 MSATs, EPA identified six priority MSATs: benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1,3-butadiene. To address emissions of MSATs, EPA has issued a number of regulations that will dramatically decrease MSATs through cleaner fuels and cleaner engines.

The area of air toxics analysis is a new and emerging issue and is a continuing area of research. Although much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques available for assessing project-specific health impacts from MSATs are limited. Given the emerging state of the science and of project-level analysis techniques, there are no established criteria for determining when MSAT emissions should be considered a significant issue in the NEPA context. FHWA is currently preparing guidance as to how mobile-source health risks should factor into project-level decision making under NEPA. In addition, EPA has not established regulatory concentration targets for the six relevant MSAT pollutants appropriate for use in the project development process. In light of the recent development regarding MSATs, FHWA has issued interim guidance for the assessment of MSATs in NEPA documents.

## **State Requirements**

Responsibility for achieving California's air quality standards (CAAQS), which are generally more health protective than federal standards, is placed on the California Air Resources Board (ARB) and local air pollution control districts. State standards are to be achieved through district-level air quality management plans that are incorporated into the SIP.

The California CAA requires local and regional air pollution control districts that are not attaining one or more of the CAAQS for ozone, CO, sulfur dioxide, or nitrogen dioxide to expeditiously adopt plans specifically designed to attain these standards. Each plan must be designed to achieve an annual 5% reduction in district-wide emissions of each nonattainment pollutant or its precursors.

Recently enacted amendments to the California CAA impose additional requirements that are designed to ensure an improvement in air quality within the next 5 years. More specifically, local districts with moderate air pollution that did not achieve “transitional nonattainment” status by December 31, 1997, must implement the more stringent measures applicable to districts with serious air pollution.

### ***Local and Regional Requirements***

The air quality management agencies of direct importance to the Basin portion of Los Angeles County include EPA, ARB, and the South Coast Air Quality Management District (SCAQMD). EPA has established federal AAQS for which ARB and the SCAQMD have primary implementation responsibility. ARB and the SCAQMD are also responsible for ensuring that state ambient air quality standards are met. SCAG develops the RTP in consultation with local air management districts. The RTP includes projects that strive to meet the goals and objectives of the NAAQS. The RTP is also in accord with EPA’s Transportation Conformity Rule as it pertains to air quality standards in Los Angeles County.

With regard to the proposed project, it is included in the SCAG 2008 RTP, which was found to be conforming by FHWA. The project is also included in the SCAG adopted 2008 RTIP (Project Number LA990351), which SCAG has determined to conform to the SIP for air quality. As such, it can be concluded that the project’s operational emissions (which include the ozone precursors ROG and [NO<sub>x</sub>]) meet the transportation conformity requirements imposed by the EPA and SCAQMD. Therefore, the project must undergo a project-level rather than a regional conformity-level air quality analysis.

### ***Federal and State Ambient Air Quality Standards***

Existing air quality conditions in the project area can be characterized in terms of the AAQS that the State of California and the federal government have established for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). Table 2-14 shows the state and federal standards for a variety of pollutants.

### ***California Environmental Quality Act***

Appendix G of the CEQA Guidelines presents guidance for making significance determinations. The guidelines also state that the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make determinations of significance under CEQA.

**Table 2-14. California and National Ambient Air Quality Standards**

Pollutant	Averaging Time	CAAQS <sup>a</sup>	NAAQS <sup>b</sup>
Ozone (O <sub>3</sub> )	1 hour	0.09 ppm <sup>c</sup>	--
	8 hour	0.070 ppm	0.075 ppm
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO <sub>2</sub> )	1 hour	0.18 ppm	--
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide (SO <sub>2</sub> )	1 hour	0.25 ppm	--
	24 hour	0.04 ppm	0.14 ppm
	Annual	--	0.030 ppm
Inhalable Particulate Matter (PM <sub>10</sub> )	24 hour	50 µg/m <sup>3c</sup>	150 µg/m <sup>3</sup>
	Annual	20 µg/m <sup>3</sup>	--
Fine Particulate Matter (PM <sub>2.5</sub> )	24 hour	--	35 µg/m <sup>3</sup>
	Annual	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>
Sulfates	24 hour	25 µg/m <sup>3</sup>	--
Lead (Pb)	30 day	1.5 µg/m <sup>3</sup>	--
	Calendar quarter	--	1.5 µg/m <sup>3</sup>
	Rolling 3-month average	0.15 µg/m <sup>3</sup>	--
Hydrogen Sulfide	1 hour	0.03 ppm	--
Vinyl Chloride	24 hour	0.01 ppm	--

**Notes:**

<sup>a</sup> The California ambient air quality standards for O<sub>3</sub>, CO, SO<sub>2</sub> (1-hour and 24-hour), NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are values not to be exceeded. All other California standards shown are values not to be equaled or exceeded.

<sup>b</sup> The national ambient air quality standards, other than O<sub>3</sub> and those based on annual averages, are not to be exceeded more than once a year. The O<sub>3</sub> standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

<sup>c</sup> ppm = parts per million by volume; µg/m<sup>3</sup> = micrograms per cubic meter.

Source: California Air Resources Board, November 17, 2008.

**Affected Environment**

Ambient air quality is affected by climatological conditions, topography, and the types and amounts of pollutants emitted. The following discussion describes relevant characteristics of the air basin and offers an overview of conditions affecting pollutant ambient air concentrations in the Basin.

**Topography and Climate**

The distinctive climate of the Basin is determined by its terrain, which includes a coastal plain with connecting broad valleys and low hills, and by its geographic location, bounded by the Pacific Ocean to the southwest and high mountains around the rest of its perimeter. 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 usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds (warm west winds blowing from east of Los Angeles).

Many of the same factors that make living in southern California so desirable also contribute to the worst smog problem in the nation. Gentle ocean breezes carry pollutants into the inland valleys where they are trapped by the surrounding mountains. Thermal inversions act like a lid over the Basin. Bright sunshine and warm temperatures cause some pollutants to react with each other, forming even more pollution.

The climate monitoring station located closest to the project is located within the City of Los Angeles, which is the same jurisdiction as the project site. At the Los Angeles Civic Center climate monitoring station (station number 045115), the average minimum and maximum December temperatures are 49 degrees and 68 degrees Fahrenheit, respectively, while in August the average minimum and maximum temperatures increase to 64 degrees and 83 degrees Fahrenheit, respectively. Los Angeles averages 3.4 inches of precipitation in February, the peak month. On an annual basis, Los Angeles averages 14.9 inches of rain, with virtually no rain during the months of May, June, July, August, September and October.

### ***Existing Air Quality Conditions***

The proposed project is located in central Los Angeles County (SCAQMD Source Receptor Area 1), which is served by the Los Angeles-North Main Street ambient air monitoring station (station number 70087) located at 1630 North Main Street in Los Angeles. The monitoring station is approximately 2.3 miles southeast of the project site, and monitors O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>. Recent monitoring data from the Los Angeles-North Main station is provided in Table 2-15.

As shown in Table 2-15, during the 3-year reporting period, the 1-hour O<sub>3</sub> concentrations periodically exceeded the state standard (i.e., 13 violations during the previous three years). The federal 8-hour O<sub>3</sub> concentrations were exceeded three times during the same period. CO, NO<sub>2</sub> and SO<sub>2</sub> concentrations have remained below state and federal standards during the three-year reporting period. PM<sub>10</sub> concentrations have exceeded the state standard seven times during the three-year reporting period, but have not exceeded the federal standard. PM<sub>2.5</sub> concentrations have exceeded federal standards two times during the three-year reporting period.

If a pollutant concentration is lower than the State or federal standard, the area is classified as being in attainment for that pollutant. If a pollutant violates the standard, the area is considered a nonattainment area. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated unclassified. The State of California has designated the Basin as nonattainment for ozone, PM<sub>2.5</sub> and PM<sub>10</sub>. As presented in Table 2-16, the federal EPA has designated the Basin as nonattainment for ozone (Severe-17 classification for the 8-hour standard), PM<sub>10</sub> (Serious Nonattainment); and PM<sub>2.5</sub> (Nonattainment).

**Table 2-15.** Ambient Air Quality Monitoring Data Collected from the Los Angeles-North Main Street (ARB Station No.70087) Monitoring Station

<b>Pollutant Standards</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Ozone (O<sub>3</sub>) (Los Angeles-North Main Street)</b>			
Maximum 1-hour concentration (ppm)	0.121	0.108	0.115
Maximum 8-hour concentration (ppm)	0.098	0.079	0.102
<b>Number of Days Standard Exceeded</b>			
CAAQS 1-hour (>0.09 ppm)	2	8	3
NAAQS 8-hour (>0.08 ppm)	1	0	2
<b>Carbon Monoxide (CO) (Los Angeles-North Main Street)</b>			
Maximum 8-hour concentration (ppm)	3.05	2.68	2.15
<b>Number of Days Standard Exceeded</b>			
NAAQS 8-hour (>9.0 ppm)	0	0	0
CAAQS 8-hour (>9.0 ppm)	0	0	0
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1-hour (>20 ppm)	0	0	0
<b>Nitrogen Dioxide (NO<sub>2</sub>) (Los Angeles-North Main Street)</b>			
Maximum 1-hour concentration (ppm)	0.126	0.111	0.104
State annual average concentration (>0.030 ppm)	0.027	0.029	0.030
<b>Number of Days Standard Exceeded</b>			
CAAQS 1-hour (>0.18 ppm)	0	0	0
<b>Sulfur Dioxide (SO<sub>2</sub>) (Los Angeles – North Main Street)</b>			
Maximum 24-hour concentration (ppm)	0.010	0.006	0.005
National annual average concentration (>0.030 ppm)	0.002	0.002	0.001
<b>Number of Days Standard Exceeded</b>			
CAAQS 24-hour (>0.04 ppm)	0	0	0
NAAQS 24-hour (>0.14 ppm)	0	0	0
<b>Inhalable Particulate Matter (PM<sub>10</sub>) (Los Angeles-North Main Street)</b>			
National maximum 24-hour concentration (µg/m <sup>3</sup> )	70.0	59.0	78.0
National second-highest 24-hour concentration (µg/m <sup>3</sup> )	68.0	55.0	77.0
State maximum 24-hour concentration (µg/m <sup>3</sup> )	69.0	58.0	77.0
State second-highest 24-hour concentration (µg/m <sup>3</sup> )	68.0	55.0	46.0
National annual average concentration (>50 µg/m <sup>3</sup> ) <sup>b</sup>	29.6	30.1	33.3
State <sup>c</sup> annual average concentration (>20 µg/m <sup>3</sup> )	29.2	30.1	NA
<b>Number of Days Standard Exceeded</b>			
CAAQS 24-hour (>50 µg/m <sup>3</sup> )	3	3	1
NAAQS 24-hour (>150 µg/m <sup>3</sup> )	0	0	0
<b>Fine Particulate Matter (PM<sub>2.5</sub>) (Los Angeles-North Main St.)</b>			
National maximum 24-hour concentration (µg/m <sup>3</sup> )	73.7	56.2	51.2
National second-highest 24-hour concentration (µg/m <sup>3</sup> )	67.5	45.7	47.0
National third-highest 24-hour concentration (µg/m <sup>3</sup> )	73.7	56.2	51.2
National fourth-highest 24-hour concentration (µg/m <sup>3</sup> )	67.5	45.7	47.0
National annual average concentration (>15 µg/m <sup>3</sup> ) <sup>b</sup>	17.8	15.6	NA
State <sup>c</sup> annual average concentration (>12 µg/m <sup>3</sup> )	17.8	16.0	NA
<b>Number of Days Standard Exceeded</b>			
NAAQS 24-hour (>35 µg/m <sup>3</sup> ) <sup>d</sup>	2	0	0

Notes:

CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; NA = Insufficient data available to determine the value.

<sup>a</sup> Measurements usually collected every 6 days.

<sup>b</sup> National annual average based on arithmetic mean.

<sup>c</sup> State annual average based on geometric mean.

<sup>d</sup> Based on an estimate of how many days concentrations would have been greater than the standard.

Sources: California Air Resources Board, compiled by ICF Jones & Stokes, June 2008.

**Table 2-16.** Attainment Status for the South Coast Air Basin

Pollutants	Status	
	Federal	State
Ozone (O <sub>3</sub> )	1-hour: Not Applicable 8-hour: Nonattainment, Severe-17	1-hour: Nonattainment 8-hour: Not Applicable
Carbon Monoxide (CO)	Attainment/Maintenance	Attainment
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment/Maintenance	Attainment
Sulfur Dioxide (SO <sub>2</sub> )	Attainment	Attainment
Particulates (PM <sub>10</sub> )	Nonattainment, Serious	Nonattainment
Fine Particulates (PM <sub>2.5</sub> )	Nonattainment	Nonattainment
Lead (Pb)	Attainment	Attainment

Source: California Air Resources Board, 2007.

## Environmental Consequences

### *Construction Impacts*

#### **No-Build Alternative (Baseline Alternative)**

The No-Build Alternative is used to compare the relative impacts and benefits of the proposed project improvements. Under this alternative, no improvements, modifications, or changes would be made to the project limits of SR-2. As such, there would be no construction-period emissions.

#### **Alternatives A to E**

##### Criteria Pollutant Emissions

Construction activities including demolition and grading and use of construction equipment and vehicles would generate criteria pollutants including PM<sub>10</sub>, PM<sub>2.5</sub>, and NO<sub>x</sub>. However, construction activities lasting five years or less are considered temporary impacts under the EPA transportation conformity rule and are exempt. It is expected that this project would be completed in less than two years. As such, with respect to the proposed project, conformity requirements apply only to emissions after completion of a project; they do not apply to construction impacts.

##### Diesel Particulate-Related Health Risk during Construction

SCAQMD does not consider diesel-related cancer risks from construction equipment to be an issue due to the short-term nature of construction activities. Construction activities associated with the proposed project would be sporadic, transitory, and short term in nature (less than 2 years). The assessment of cancer risk is typically based on a 70-year exposure period. Because exposure to diesel exhaust would be well below the 70-year exposure period, construction of the proposed project is not anticipated to result in an elevated cancer risk to exposed persons due to the short-term nature of construction. Consequently, the estimation of diesel risks associated with construction activities would have no effect on humans.

##### Exposure Risk to Naturally Occurring Asbestos (NOA) during Construction

Though not required for a project-level air quality analysis, it is routine and an established local practice in the Department's District 7 region to include a discussion pertaining to NOA. This discussion is limited to NOA consistent with the methodology detailed in the memorandum

*Addressing Naturally Occurring Asbestos in CEQA Documents* (Governor's Office of Planning and Research, August 2007). Discussions relating to all other types of asbestos are deferred to the Department's hazardous waste or other environmental reports.

The purpose of the discussion is to ascertain the potential impact of NOA entrainment during construction. The two most common sources of NQA in California are serpentinite and ultramafic rock. Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. While Los Angeles County is included amongst the 44 counties known to have serpentinite and/or ultramafic rock, such rock formations are limited to Catalina Island. As such, there is no potential for impacts related to NOA during project construction.

### ***Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

The No-Build Alternative is used to compare the relative impacts and benefits of the proposed project improvements. Under this alternative, no improvements, modifications, or changes would be made to the project limits of SR-2. As such, there would be no change in operations-period regional emissions, localized emissions, or MSAT emissions. Under the No-Build Alternative, no air quality effects would occur.

#### **Alternatives A to E**

#### Regional and Localized Emissions Analysis

The proposed project can demonstrate conformity by meeting both of the following criteria:

- Regional conformity is met if the project comes from a currently conforming RTP and RTIP and the project has not been altered in design and scope; and
- Local conformity is met if the project does not cause or contribute to any new localized CO or PM violations or increase the frequency or severity of any existing violations in nonattainment or maintenance areas.

#### Regional Conformity Assessment

The federal CAA Amendments of 1990 require that projects conform to the SIP and that direct and indirect emissions resulting from federal actions or funding do not produce new air quality violations or worsen existing violations. The federal CCA specifically instructs the EPA to develop guidelines for identifying when vehicle-related projects can increase local concentrations of CO and PM<sub>10</sub> by altering traffic patterns. Conformity requirements apply only to emissions after completion of a project; they do not apply to construction impacts.

The federal EPA issued two sets of conformity procedure rules in November 1993. Transportation conformity procedures generally apply to highway and transit development and require that transportation plans, programs, and projects that are funded or approved under Title 23 United States Code (USC) or the Federal Transit Act conform to state or federal air

quality plans. General conformity procedures apply to all other types of development. Transportation conformity procedures require more detailed analysis for transportation projects than those required for nontransportation projects receiving federal funds or approval. The SCAQMD adopted the EPA's conformity rules as its own in its Regulation XIX.

In addition to 1) demonstrating that a proposed project has been identified in an approved RTIP and incorporated in an EPA-approved SIP or 2) demonstrating that a proposed project is exempt from conformity requirements, agencies constructing transportation projects must demonstrate that they do not exacerbate an existing violation of an NAAQS or create a new exceedance.

With respect to the first criterion, the proposed project is included in the SCAG 2008 RTP (Project Number LA990351), which was found to be conforming by FHWA. The project is also included in the SCAG adopted 2008 RTIP (Project Number LA990351), which FHWA determined to conform to the SIP for air quality on November 17, 2008. As such, it can be concluded that the project's operational emissions (which include the ozone precursors ROG and [NO<sub>x</sub>]) meet the transportation conformity requirements imposed by the EPA and SCAQMD.

Although the proposed project is a conforming project for regional emissions, it requires both a CO and PM<sub>2.5</sub>/PM<sub>10</sub> hot-spot analysis to determine any localized emissions effects. The potential for adverse local impacts for both pollutants is assessed below.

#### Localized CO Hot-Spot Evaluation

The project was evaluated using the CO analysis protocol, which was described earlier. The CO protocol includes two flowcharts that illustrate when a detailed CO analysis needs to be prepared. The first flowchart is used to ascertain the CO modeling requirements for new projects. The questions (shown in the first flowchart) relevant to the project, and the answers to those questions, are as follows:

##### **3.1.1: Is the project exempt from all emissions analyses?**

**Response:** No, the project does not qualify for an exemption. As shown in Table 1 of the CO protocol, the proposed project does not fall into a project category that is exempt from all emissions analysis (proceed to 3.1.2).

##### **3.1.2: Is the project exempt from regional emissions analyses?**

**Response:** No, the project is not exempt from a regional emissions analysis. As shown in Table 2 of the CO protocol, the proposed project does not meet the criteria of any of the project categories identified as exempt from regional emissions analysis (proceed to 3.1.3).

##### **3.1.3: Is the project locally defined as regionally significant?**

**Response:** Yes, the City and County define the project as regionally significant (proceed to 3.1.4).

### **3.1.4: Is the project in a federal attainment area?**

**Response:** No, the project is located in the Basin, which is designated as federal nonattainment areas for ozone and particulate matters (PM<sub>10</sub> and PM<sub>2.5</sub>). As such, the proposed project is subject to a regional conformity determination (proceed to 3.1.5).

### **3.1.5: Is there a currently conforming RTP and TIP?**

**Response:** Yes, SCAG's 2008 RTP and 2008 RTIP were both found to be conforming by FHWA on June 5, 2008, and November 17, 2008, respectively (proceed to 3.1.6).

### **3.1.6: Is the project included in the regional emissions analysis supporting the currently conforming RTP and TIP?**

**Response:** Yes, the proposed project is included in both the SCAG 2008 RTP and 2008 TIP as project ID No. LA990351 (proceed to 3.1.7).

### **3.1.7: Has the project design concept and/or scope changed significantly from that in the regional analysis?**

**Response:** No, neither the project design concept nor scope has changed significantly from that in the regional analysis (proceed to 3.1.9).

### **3.1.9: The conclusion from this series of questions and answers is that the project needs to be examined for its local air impacts (proceed to Section 4, Figure 3 of CO protocol).**

On the basis of the answers to the first flowchart, a second flowchart is used to determine the level of local CO impact analysis required for the project.

The questions applicable to the project in the second flowchart and the answers to those questions are as follows.

#### **Level 1: Is the project in a CO nonattainment area?**

**Response:** No, as shown previously in Table 2-16, the South Coast Air Basin is classified as an attainment/maintenance area for the federal CO standards. A summary of the most recent 3 years of monitored CO data is presented in Table 2-15. The table is based on monitoring data collected at the Los Angeles-North Main Street ambient air monitoring station (ARB Station No. 70087)

#### **Level 1 - Was the area redesignated as "attainment" after the 1990 Clean Air Act?**

**Response:** Yes, the South Coast Air Basin was reclassified to attainment/maintenance from serious nonattainment, effective June 11, 2007 when a CO Maintenance Plan was approved.

**Level 1 - Has “continued attainment” been verified with the local Air District, if appropriate?**

**Response:** Yes. Based on ambient air monitoring data collected by the South Coast Air Quality Management District, the South Coast Air Basin has continually met the federal ambient air quality standards for CO since the year 2002. However, the re-designation is so recent that an annual review of monitoring data by the ARB has not yet occurred (Proceed to Level 7).

**Level 7 - Does the project worsen air quality? (See section 4.7.1)**

**Response:** Yes. According to Section 4.7.1 of the CO protocol, the following criteria should be used to determine whether a project is likely to worsen air quality for the area substantially affected by the project:

- a. **The project significantly increases the percentage of vehicles operating in cold start mode. Increasing the number of vehicles operating in cold start mode by as little as 2% should be considered potentially significant.** Given the nature of the project, which is to improve an existing freeway terminus, the project would have no effect on the percentage of vehicles operating in the cold start mode.
- b. **The project significantly increases traffic volumes. Increases in traffic volumes in excess of 5% should be considered potentially significant. Increasing traffic volume by less than 5% may still be potentially significant if there is also a reduction in average speeds.** The proposed project does not add capacity, and as such, would not significantly increase traffic volumes.
- c. **The project worsens traffic flow. For uninterrupted roadway segments, a reduction in average speeds (within a range of 3 to 50 mph) should be regarded as worsening traffic flow. For intersection segments, a reduction in average speed or an increase in average delay should be considered as worsening traffic flow.** Based on the traffic study prepared for the proposed project (Fehr & Peers/Kaku Associates, September 2008), proposed project improvements would result in no changes in intersection delay for 18 of the 21 study intersections. Table 7 from the project traffic report details future LOS conditions at all study-area intersection locations. Table 8A from the project traffic report focuses on the 3 study intersections that would experience a change in operating conditions in comparison to No Build; and details the following:
  - Node 1 (Glendale BI/SR-2 Off-ramp-Fargo St-Waterloo St) would experience improved operating conditions during both the AM and PM peak demand periods.
  - Node 2 (Glendale BI/Allesandro St) would experience improved operating conditions during both the AM and PM peak demand periods.
  - Node 3 (Glendale BI/Aaron St) – During the AM peak demand period, Alternative A would experience the same delay as under the No Build condition, but Alternatives B through E would experience improved operating conditions. During the PM peak demand period, Alternative A would experience improved operating conditions, while Alternatives B through E would experience degraded operating conditions in comparison to No Build.

- Node 21 (Glendale BI/SR-2 On-ramp and/or Off-ramps) – Alternative A would experience operating conditions that are similar to No Build conditions during both the AM and PM peak demand periods; thus, Alternatives B through E would experience degraded conditions in comparison to No Build.

Since all intersection locations would not experience improved operating conditions under all proposed project alternatives when compared to No Build, the proposed project has the potential to worsen air quality.

**Level 7: Is the project suspected of resulting in higher CO concentrations than those existing within the region at the time of attainment demonstration?**

**Response:** Yes, According to Section 4.7.2 of the CO protocol, project sponsors are encouraged to use the following criteria to determine the potential for the project to result in higher CO concentrations than those existing within the region at the time of attainment demonstration:

- The receptors at the location under study are at the same distance or farther from the traveled roadway than the receptors at the location where attainment has been demonstrated.*

A receptor distance of 3 meters from the traveled roadway was used in the CO attainment demonstration prepared for the 2003 air quality management plan (AQMP). With respect to the proposed project, all sensitive receptors are located more than 3 meters from the traveled roadway.

- The roadway geometry of the two locations is not significantly different. An example of a significant difference would be a larger number of lanes at the location under study compared to the location where attainment has been demonstrated.*

In the CO attainment demonstration prepared for the 2003 AQMP, 4 approach lanes in all directions were used to model the intersections at Wilshire/Veteran and La Cienega/Century; while 3 approach lanes in all directions were used to model the intersections at Sunset/Highland and Long Beach/Imperial. With respect to the proposed project, there would be 3 or less approach lanes under each proposed build alternative.

It is worth noting that in the CO attainment demonstration, all modeled intersections were 4-leg intersections, which differs from the proposed project Build Alternative A, which would be 5-leg. The intersection configurations proposed under Build Alternatives B through E would all be 4-leg.

In comparing the total number of intersection approach lanes; however, the attainment demonstration intersections had 12 to 16 approach lanes each, compared to just 7 to 10 approach lanes for proposed project build alternatives.

- Expected worse-case meteorology at the location under study is the same or better than the worst-case meteorology at the location where attainment has been demonstrated. Relevant meteorological variables include: wind speed, wind direction, temperature and stability class.*

In the CO attainment demonstration prepared for the 2003 AQMP, a wind speed of 1 meter per second, stability class D, and worst-case wind angle were used as modeling assumptions. These assumptions are considered worst-case; and as such, the expected

worst-case meteorology at the location under study would be the same or better. In addition, there is no meaningful difference in temperature between the attainment demonstration intersection locations and the proposed project intersection location.

- d. *Traffic lane volumes at the location under study are the same or lower than those at the location where attainment has been demonstrated.*

A comparison of the traffic volumes per lane used for modeling in the attainment plan demonstration and volumes per lane projected to occur at study intersection locations is provided Table 2-17 and Table 2-18, respectively.

**Table 2-17. Peak-Hour Traffic Volumes Used in the 2003 AQMP**

Location	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound AM/PM)	Northbound (AM/PM)
Wilshire – Veteran	1,238/517	458/829	180/350	140/233
Sunset – Highland	472/588	447/513	768/611	517/746
La Cienega – Century	635/561	473/682	346/507	205/419
Long Beach – Imperial	406/673	587/467	160/315	252/383

Source: SCAQMD, 2003 Air Quality Management Plan.

**Table 2-18. Proposed Project Peak-Hour Approach Lane Volumes**

Alternative/Roadway Intersection	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)
<b>Future (Year 2033) Alternative A</b>				
Glendale BI & SR-2 SB Off-Ramp/Fargo St/Waterloo St. <sup>a</sup>				
Lanes: 2 EB, 3 WB, 2 SB, 3 NB	43/62	463/99	569/315	131/194
Glendale BI & SR-2 NB On-Ramp				
Lanes: 0 EB, 0 WB, 2 SB, 4 NB	--	--	1,117/343	566/1008
<b>Future (Year 2033) Alternative B</b>				
Glendale BI & SR-2 SB Off-Ramp/Fargo St/Waterloo St. <sup>a</sup>				
Lanes: 2 EB, 0 WB, 2 SB, 3 NB	43/62	--	569/315	200/268
Glendale BI/SR-2 SB Off-Ramp & Allesandro St				
Lanes: 0 EB, 3 WB, 4 SB, 3 NB	--	115/103	1,029/665	727/1,327
Glendale BI & SR-2 NB On-Ramp				
Lanes: 0 EB, 0 WB, 6 SB, 4 NB	--	--	704/469	566/1,008
<b>Future (Year 2033) Alternatives C, D, and E</b>				
Glendale BI & SR-2 SB Off-Ramp/Fargo St/Waterloo St. <sup>a</sup>				
Lanes: 2 EB, 0 WB, 2 SB, 3 NB	43/62	--	569/315	200/268
Glendale BI/SR-2 SB Off-Ramp & Allesandro St				
Lanes: 0 EB, 3 WB, 4 SB, 3 NB	--	115/103	1,029/665	727/1,327
Glendale BI & SR-2 NB On-Ramp				
Lanes: 0 EB, 0 WB, 7 SB, 4 NB	--	--	603/402	566/1,008

Notes:

<sup>a</sup> Eastbound traffic calculated by adding volumes for Fargo St. and Waterloo St.

Source: Traffic Study for the State Route 2 Glendale Freeway Terminus Improvement Project (September 2008).

As shown above in Table 2-17 and Table 2-18, future year 2033 approach lane traffic volumes during the PM peak-hour for northbound traffic under Build Alternatives B through E at the intersection of Glendale Boulevard/SR-2 Southbound Off-Ramp and Allesandro Street would be higher than those at all intersection locations where attainment has been demonstrated. The PM peak-hour lane volumes of 1,327 would exceed the highest attainment demonstration lane volumes of 1,238 by 89 vehicles (7.2%).

- e. *Percentage of vehicles operating in cold start mode at the location under study is the same or lower than the percentage at the location where attainment has been demonstrated.*

Both the attainment-area demonstration intersection locations (Table 2-17 above) and project-area intersection locations (Table 2-18 above) are all located along urban arterial roadways within the South Coast Air Basin. As such, vehicles operating in the cold start mode are expected to be similar at all intersection locations.

- f. *Percentage of heavy duty gas trucks at the location under study is the same or lower than the percentage at the location where attainment has been demonstrated.*

Both the attainment-area demonstration intersection locations (Table 2-17 above) and project-area intersection locations (Table 2-18 above) are all located along urban arterial roadways (that contain a similar mix of urban land uses) within the South Coast Air Basin. As such, the percentage of heavy duty gas trucks comprising the vehicular fleet mix is expected to be similar at all intersection locations.

- g. *For projects involving intersections, average delay and queue length for each approach is the same or smaller for the intersection under study compared to those found in the intersection where attainment has been demonstrated.*

As shown above in Table 2-17 and Table 2-18, future year 2033 approach lane traffic volumes during the PM peak-hour for northbound traffic under Build Alternatives B through E at the intersection of Glendale Boulevard/SR-2 Southbound Off-Ramp and Allesandro Street would be higher than those at all intersection locations where attainment has been demonstrated. As such, there is a possibility that average delay and queue length for said approach lanes may be longer for the intersection under study when compared to those found in the intersections where attainment has been demonstrated.

- h. *Background concentration at the location under study is the same or lower than the background concentration at the location where attainment has been demonstrated.*

As shown earlier in Table 2-15, background CO concentrations in the project area have ranged from 2.15 ppm to 3.05 ppm during the past few years for the 8-hour averaging period. This compares to an 8-hour average maximum background concentration of 7.8 ppm (year 2005) used for the 2003 AQMP attainment demonstration.

On the basis of the CO protocol screening criteria under Section 4.7.2 of said protocol, the intersection of Glendale Boulevard/SR-2 Southbound Off-Ramp and Allesandro Street under Build Alternatives B through E has potential to cause project-area CO concentrations to exceed

those existing within the region at the time of attainment demonstration, and as such, must move forward along the Protocol flowchart. All other intersection locations can be screened out at this juncture, and do not require further analysis. The CO protocol analysis that follows applies to PM peak-hour traffic volumes at the intersection of Glendale Boulevard/SR-2 Southbound Off-Ramp and Allesandro Street under Build Alternatives B through E only.

**Level 7: Does project involve a signalized intersection at LOS E or F?**

**Response:** Yes, as detailed in Table 2-12 above, subject intersection would operate at LOS F during the PM peak-hour.

Based on the answers to the Level 7 questions above, the protocol flowchart calls for a “Level 4” screening analysis; however, Caltrans District 7 has abandoned the Level 4 screening approach, and recommends that a “Level 5” analysis (i.e., dispersion modeling) be performed.

Localized CO concentrations were predicted using the CALINE4 line-source dispersion model with EMFAC 2007 emissions factors. All dispersion modeling input assumptions are consistent with CO Protocol recommendations, with four receptor locations were placed at 3 meters from each corner location. CO concentrations were predicted for both the 1-hour and 8-hour averaging periods at opening year 2013 and horizon year 2033. Worst-case ambient background CO concentrations of 5.08 parts per million and 3.05 parts per million for the 1-hour and 8-hour averaging periods, respectively, were used in the analysis.<sup>21</sup> The intersection worst-case predicted 1-hour and 8-hour CO concentrations are provided below in Table 2-19. As shown therein, the project would not have a significant impact upon 1-hour or 8-hour local CO concentrations due to mobile source emissions.

**Table 2-19.** Estimate of Worst-case Opening Year 2013 and Horizon Year 2033 PM Peak-hour Localized Carbon Monoxide Concentrations

Intersection	Analysis Year	Maximum 1-Hour CO Concentration in ppm	Exceed 1-hour Standard of 20 ppm?	Maximum 8-Hour CO Concentration in ppm	Exceed 8-hour Standard of 9.0 ppm?
Glendale Bl/SR-2 SB Off-Ramp and Allesandro St	2013	8.3	No	5.8	No
	2033	5.7	No	4.0	No

Notes:  
 CALINE4 dispersion model output sheets and Emfac2007 emission factors are provided in the Air Quality Report.  
 ppm = parts per million

Source: ICF Jones & Stokes, February 2009.

<sup>21</sup> Background CO concentrations based on highest measured concentrations measured at the Los Angeles North Main station during the previous three year period.

Because project implementation would not result in CO concentrations that exceed the 1-hour or 8-hour ambient air quality standard, on the basis of CO protocol analysis methodology, no further analysis is needed. Potential impacts would not be adverse under NEPA and would be less than significant under CEQA.

#### Localized PM<sub>2.5</sub> and PM<sub>10</sub> Hot-Spot Evaluation

While most projects create particulate emissions during construction, construction activities lasting five years or less are considered temporary impacts under the EPA transportation conformity rule and are exempt. It is expected that this project would be completed in less than two years. As such, hot-spot review is therefore limited to operational impacts.

The EPA has not specified a quantitative method for analyzing localized PM<sub>2.5</sub> or PM<sub>10</sub> concentrations from operational traffic but released a qualitative guidance document titled *Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in PM<sub>2.5</sub> and PM<sub>10</sub> Nonattainment and Maintenance Areas* in March 2006. A qualitative PM<sub>2.5</sub> and PM<sub>10</sub> conformity review based on this most-recent EPA guidance is provided below.

EPA specifies in 40 CFR 93.123(b)(1) that only “projects of air quality concern” are required to undergo a PM<sub>2.5</sub> and PM<sub>10</sub> hot-spot analysis. EPA defines projects of air quality concern as certain highway and transit projects that involve significant levels of diesel traffic or any other project that is identified by the PM<sub>2.5</sub> SIP as a localized air quality concern. A discussion of the proposed project compared to projects of air quality concern, as defined by 40 CFR 93.123(b)(1), is provided below.

**New or expanded highway projects that have a significant number of or significant increase in diesel vehicles.** The project proposes to reconstruct the southern terminus of SR-2, as detailed in Chapter 1 of this document. None of the project alternatives would add any capacity to the main-line segment of SR-2 within the project limits (i.e., PM 12.5/15.0). Based on Caltrans traffic counts, diesel-fueled vehicles currently comprise approximately 3.7 percent of the traffic volumes along the project area limits of SR-2.<sup>22</sup> In future years, diesel-fueled vehicles, as a percentage of overall traffic volumes along said freeway main-line segment is expected to remain constant at 3.7 percent through horizon year 2033. As such, no increase in diesel-fueled vehicle traffic volumes along the project area limits of SR-2 is anticipated to occur as a result of the proposed project.

**Projects affecting intersections that are at level of service (LOS) D, E, or F with a significant number of diesel vehicles or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.** The project traffic report identified 20 intersections likely to be affected by the proposed project. Of these 20 intersections, 18 intersections would experience no change in LOS as a result of project development, and two intersections would experience an improvement in LOS. In addition, the project would have no effect on diesel vehicle traffic volumes along the project limits of SR-2, or along any other roadway segment.

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<sup>22</sup> Caltrans Traffic Data Branch website. Available: <http://traffic-counts.dot.ca.gov/>. Accessed: June 2, 2008.

**New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.** The proposed project has no bus or rail terminal component, nor would it alter travel patterns to/from any existing bus or rail terminal.

**Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.** The proposed project would not expand any bus terminal, rail terminal, or related transfer point that would increase the number of diesel vehicles congregating at any single location.

**Projects in or affecting locations, areas, or categories of sites that are identified in the PM<sub>2.5</sub>- or PM<sub>10</sub>-applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.** The project site is not in or affecting an area or location identified in any PM<sub>10</sub> or PM<sub>2.5</sub> implementation plan. The immediate project area is not considered to be a site of violation or possible violation.

The discussion provided above indicates that the proposed project would not be considered a Project of Air Quality Concern, as defined by 40 CFR 93.123(b)(1). Therefore, PM<sub>2.5</sub> and PM<sub>10</sub> hot-spot evaluations are not required. It is unlikely that the proposed project would generate new air quality violations, worsen existing violations, or delay attainment of national AAQS for PM<sub>2.5</sub> and PM<sub>10</sub>. The SCAG Transportation Conformity Working Group concurred with this determination in December 2008. Clean Air Act, 40 CFR Part 93.116 requirements are met without any explicit hot-spot analysis; and as such, the proposed project can be screened from further analysis.

#### Supplemental Analysis of Re-entrained Fugitive Dust

Fugitive dust emissions from vehicle travel on paved roads (i.e., re-entrained dust) can be calculated using the emission factor equation provided in the Fifth Edition of EPA's AP-42 emissions factor compilation document.<sup>23</sup> The specific equation can be found in Section 13.2.1 of the AP-42 document. The emissions factor equation requires the input of several site-specific variables such as particle size multiplier, roadway silt loading factor, average vehicle weight, and rainfall correlation factor. The variables used in the analysis for the proposed project were obtained based on research conducted by Midwest Research Institute while they were performing California silt loading measurements.<sup>24</sup>

Based on the EPA's AP-42 emission factor equation, re-entrained roadway emissions of PM<sub>10</sub> and PM<sub>2.5</sub> along the project limits of SR-2 (PM 13.5 to PM 15.0) would be 0.04 tons per year and 0.01 tons per year, respectively, for both the Build and No-Build project alternatives. Emissions would be the same under both Build alternatives, as well as under the No-Build alternative, because AADT (and related VMT) would be the same under all project alternatives. The emissions calculation worksheet is provided in the Air Quality Study printed under separate cover.

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<sup>23</sup> U.S. Environmental Protection Agency. Compilation of Air Pollutant Emission Factors, AP 42, Fifth Edition, Volume I, Chapter 13: Miscellaneous Sources, Section 13.2.1 Paved Roads, December 2003.

<sup>24</sup> Muleski, Greg. Improvement of Specific Emission Factors (BACM Project No. 1), Final Report. Midwest Research Institute. March 29, 1996.

Because project implementation would not result in higher emissions, and related concentrations, of re-entrained fugitive dust than under the No-Build Alternative, no further analysis is needed.

### Evaluation of Health Effects Related to Mobile Source Air Toxics

FHWA has issued interim guidance on how mobile source air toxics (MSAT) should be addressed in NEPA documents for highway projects and has developed a tiered approach for analyzing MSATs in NEPA documents. Depending on the specific project circumstances, FHWA has identified three levels of analysis:

- 1) no analysis for exempt projects or projects with no potential for meaningful MSAT effects,
- 2) qualitative analysis for projects with low-potential MSAT effects, or
- 3) quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

With respect to the proposed project, as shown below in Table 2-20 the projected annual average daily traffic (AADT) volumes at opening year 2013 of 76,122 and horizon year 2033 of 92,883 would be well below the 140,000 to 150,000 AADT criterion established by FHWA for projects considered to have higher potential for MSAT effects.<sup>25</sup> Furthermore, project improvements would not add any capacity or re-route existing traffic volumes out of the existing project limits right-of-way. Project improvements would have no meaningful impacts on traffic volumes or vehicle mix. The percentage of AADT volumes comprised of heavy-truck traffic is anticipated to remain constant at 3.7%, from existing conditions through horizon year 2033. As such, the proposed project is considered a project with low-no potential for meaningful MSAT effects (i.e., level 2 [qualitative level of analysis]).

The purpose of this project is to better manage traffic flow at the terminus and enhance mobility and safety in the vicinity of the SR-2 terminus by a combination (dependant on build alternative) of widening and/or minor shifting of existing ramps; and installation of new traffic signals. This project will not result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the no-build alternative. As such, FHWA has determined that this project will generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. Consequently, this effort is exempt from analysis for MSATs.

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<sup>25</sup> Year 2013 and 2033 traffic volumes forecasted by growing the year 2006 traffic volume of 71,000 by an annual growth factor of 1 percent.

**Table 2-20.** Annual Average Daily Traffic and Truck Percentage

Year	AADT <sup>a</sup>	% Diesel <sup>b</sup>	AADT - Diesel	AADT - Passenger
2006	71,000	3.7%	2,627	68,373
2013	76,122	3.7%	2,817	73,305
2033	92,883	3.7%	3,437	89,446

Notes:

<sup>a</sup> Year 2013 and 2033 traffic volumes forecasted by growing the year 2006 traffic volume of 71,000 by an annual growth factor of 1 percent.

<sup>b</sup> Caltrans Traffic Data Branch website. Available: <http://traffic-counts.dot.ca.gov/>. Accessed: June 2, 2008.

Source: Caltrans, ICF Jones & Stokes, 2008.

Moreover, EPA regulations for vehicle engines and fuels will cause overall MSATs to decline significantly over the next 20 years. Even after accounting for a 64 percent increase in VMT, FHWA predicts MSATs will decline in the range of 57 percent to 87 percent, from 2000 to 2020, based on regulations now in effect, even with a projected 64 percent increase in VMT. This will both reduce the background level of MSATs as well as the possibility of even minor MSAT emissions from this project.

### **Avoidance, Minimization, and/or Mitigation Measures**

The following measures should be implemented to avoid or minimize potential adverse impacts on air quality.

#### ***Construction Exhaust Emissions***

**AQ-1** The project shall conform to the Department's construction requirements, as specified in the Department's Standard Specifications, Section 7-1.01F (Air Pollution Control): "The contractor shall comply with all air pollution control ordinances and statutes that apply to any work performed pursuant to the contract, including any air pollution control rules, regulations, ordinances, and statutes specified in Section 11017 of the Government Code." Implementation of said control measures would avoid and/or minimize any construction exhaust emissions-related impacts on air quality.

#### ***Construction-Activity Fugitive Dust Emissions***

SCAQMD adopted Rule 403 (Fugitive Dust Control), the purpose of which is to ensure that state and federal ambient air quality standards for PM<sub>10</sub> are not exceeded due to man-made sources of fugitive dust within the Basin and implement the control measures contained in the Basin federal PM<sub>10</sub> attainment plan.

**AQ-2** The owner or operator of any construction/demolition equipment shall

- use periodic watering for short-term stabilization of disturbed surface areas to minimize visible fugitive dust emissions. For purposes of this rule, use of a water truck to moisten disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance;
- take actions sufficient to prevent project-related trackout onto paved surfaces;
- cover loaded haul vehicles while operating on publicly maintained paved surfaces;
- stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than 30 days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions;
- clean up project-related trackout or spills on publicly maintained paved surfaces within 24 hours; and
- reduce nonessential earth-moving activity under high wind conditions. For purposes of this rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.

The proposed project would be required to implement control measures for each source of PM<sub>10</sub> emissions, as specified in the rule. Implementation of said fugitive dust emission-control measures would avoid and/or minimize any construction fugitive dust-related impacts on air quality.

## 2.2.7 Noise

### Regulatory Setting

NEPA and CEQA provide a broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and foster a healthy environment. However, the requirements for noise analysis, as well as consideration of noise abatement and/or mitigation, differ between NEPA and CEQA.

#### ***California Environmental Quality Act***

CEQA requires a strictly no-build versus build analysis to assess whether a project would have a noise impact. If a project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

#### ***National Environmental Policy Act and 23 CFR 772***

For highway transportation projects with FHWA involvement (and the Department, as assigned), the Federal Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations contain noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the criterion for residences (67 decibels, adjusted [dBA]) is lower than the criterion for commercial areas (72 dBA). The following table lists the NAC for use in NEPA and 23 CFR 772 analyses, and Figure 2-16 lists the noise levels of common activities so the reader can compare the actual and predicted highway noise levels discussed in this section.

In accordance with the Department's *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects*, October 1998, a noise impact occurs when the future noise level with a project results in a substantial increase in the noise level (defined as an increase of 12 dBA or more) or when the future noise level with a project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC. These definitions remain the same in the August 2006 version of the protocol.

If it is determined that a project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be "reasonable and feasible" at the time of final design are incorporated into the project's plans and specifications. This document discusses noise abatement measures that are likely to be incorporated into the proposed project.

**Table 2-21. Noise Abatement Criteria**

Activity Category	NAC (hourly A-weighted noise level [dBA $L_{eq}(h)$ ])	Descriptions
A	57 exterior	Lands on which serenity and quiet have extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 exterior	Picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 exterior	Developed lands and properties or activities not included in Categories A or B above.
D	—	Undeveloped lands.
E	52 interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Notes:

$L_{eq}(h)$  = hourly noise level equivalent.

Source: FHWA, Procedures for Abatement of Highway Traffic and Construction Noise, 1995.

The Department's traffic noise analysis protocol sets forth the criteria for determining when an abatement measure is "reasonable and feasible." Feasibility of noise abatement is basically an engineering concern. A minimum 5 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. The reasonableness determination is a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure would be reasonable include residents' acceptance, the absolute noise level, build versus existing noise, environmental impacts of abatement, public and local agencies' input, newly constructed development versus development pre-dating 1978, and the cost per benefited residence.

## Affected Environment

The project area is urbanized and fully developed. The proposed project would be situated between residences, Silver Lake Reservoir, and the Tommy Lasorda Field of Dreams to the northwest; residences and Elysian Park to the southeast; commercial land uses to the south; and the Los Angeles River and Interstate 5 to the north. Terrain in the project vicinity is quite hilly, with steep residential side streets adjacent to both the northwest and southwest sides of the proposed project.

**Figure 2-16. Noise Levels of Common Activities**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
<u>Jet Fly-over at 300m (1000 ft)</u>	<b>110</b>	<u>Rock Band</u>
<u>Gas Lawn Mower at 1 m (3 ft)</u>	<b>100</b>	
<u>Diesel Truck at 15 m (50 ft), at 80 km (50 mph)</u>	<b>90</b>	<u>Food Blender at 1 m (3 ft)</u>
<u>Noisy Urban Area, Daytime</u>	<b>80</b>	<u>Garbage Disposal at 1 m (3 ft)</u>
<u>Gas Lawn Mower, 30 m (100 ft)</u>	<b>70</b>	<u>Vacuum Cleaner at 3 m (10 ft)</u>
<u>Commercial Area</u>		<u>Normal Speech at 1 m (3 ft)</u>
<u>Heavy Traffic at 90 m (300 ft)</u>	<b>60</b>	<u>Large Business Office</u>
<u>Quiet Urban Daytime</u>	<b>50</b>	<u>Dishwasher Next Room</u>
<u>Quiet Urban Nighttime</u>	<b>40</b>	<u>Theater, Large Conference Room (Background)</u>
<u>Quiet Suburban Nighttime</u>		<u>Library</u>
<u>Quiet Rural Nighttime</u>	<b>30</b>	<u>Bedroom at Night, Concert Hall (Background)</u>
	<b>20</b>	<u>Broadcast/Recording Studio</u>
	<b>10</b>	
<u>Lowest Threshold of Human Hearing</u>	<b>0</b>	<u>Lowest Threshold of Human Hearing</u>

Source: California Department of Transportation. State Environmental Reference.  
Available: <<http://www.dot.ca.gov/ser/>>. Accessed June 22, 2007.

## **Existing Noise Levels**

Ambient noise levels were measured May 24 and May 25, 2006, and September 26, 2007, at representative noise-sensitive land uses adjacent to the project alignment, as shown in Figure 2-17. The noise measurement methodology was consistent with the guidelines in the Technical Noise Supplement (TeNS), October 1998. Short-term (less than 1 hour in duration) noise measurements were taken at 10 sites. One of the measurement sites was used for collecting background noise data; therefore, the site was located a sufficient distance from the project to assess the community noise level without the influence of SR-2/Glendale Boulevard. One long-term (24 hours or more in duration) noise measurement was taken and used to calculate the existing peak-noise-hour noise levels for the short-term measurement sites. Short-term noise measurement data are presented in Table 2-22, and Table 2-23 summarizes the long-term noise monitoring results.

Short-term measurements were adjusted to reflect peak-noise-hour traffic noise levels by use of contemporaneous data from the long-term noise measurement data. As shown in Table 2-22, the adjusted exterior short-term (ST) peak-noise-hour noise levels in the vicinity of the proposed project ranged from 63 to 70 dBA  $L_{eq}(h)$ ,<sup>26</sup> while the measured long-term (LT) peak-noise-hour noise level was 67 dBA  $L_{eq}(h)$  at LT-1. The measured 24-hour noise level at LT-1 was 67 dBA community noise equivalent level (CNEL). Peak noise levels occurred in the morning hours (6:00–9:00 a.m.) and again in the afternoon/early evening hours (2:00–6:00 p.m.). Background noise measurements of 51 to 52 dBA  $L_{eq}(h)$  (ST-8) indicate that background noise levels would be at least 10 decibels (dB) below noise levels that would be expected with the proposed project; therefore, background noise levels would not have an influence on ambient noise levels in the vicinity of the project.

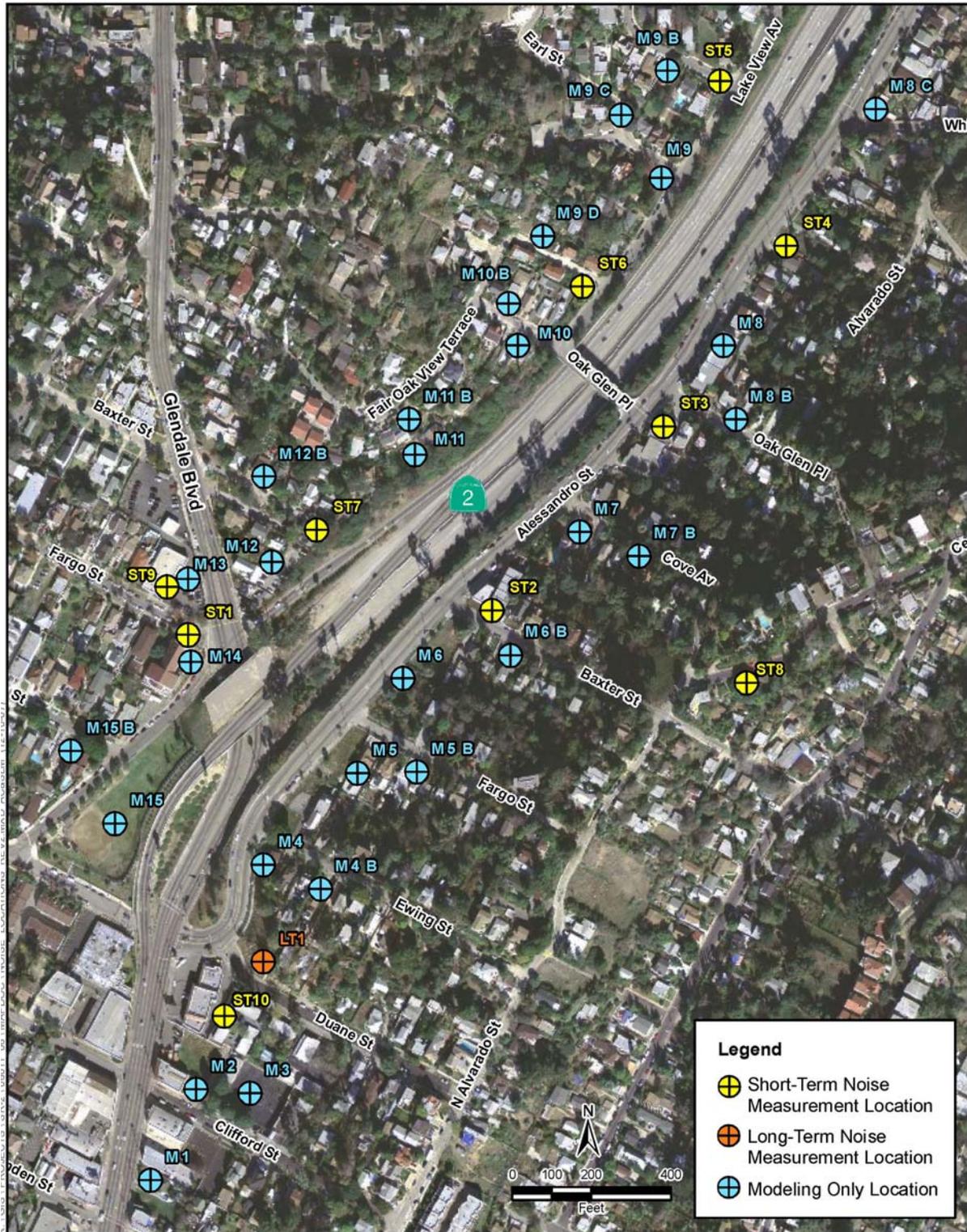
## **Future Predicted Noise Levels**

Traffic noise level predictions were made with FHWA's Traffic Noise Model<sup>®</sup> (TNM<sup>®</sup>), version 2.5 (FHWA 2004). The model uses national reference mean emission levels for several types of vehicles—automobiles, medium trucks, heavy trucks, buses, and motorcycles—to compute hourly noise levels. Predicted project noise levels were compared with existing ambient noise levels by using the proposed project's traffic volumes, speeds, roadway alignments, and cross sections to assess potential noise effects. Future predicted noise levels were computed for project sites where noise was measured as well as 28 additional “modeling-only” (M) receptor locations to characterize the existing and future noise environment more completely. These modeling-only locations are shown in Figure 2-17.

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<sup>26</sup>  $L_{eq}$  is the constant sound level that for a given situation and period (e.g., 1 hour or 24 hours) contains the same amount of sound energy as the actual time-varying sound. To assess potential noise impacts and determine necessary abatement measures for roadway noise, the Department and FHWA use the 1-hour  $L_{eq}$  during the peak hour for traffic noise.

Figure 2-17. Project Site and Noise Measurement/Modeling Locations



**Table 2-22. Short-Term Noise Measurement Data**

Site ID	Measurement Location/Land Use Type (activity category) <sup>2</sup>	Measurement Period			Noise Sources	Measurement Results (dBA)						Adjusted <sup>1</sup> Peak-Noise-Hour Level, L <sub>eq</sub> (h) dBA
		Date	Start Time	Duration (mm:ss)		L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>90</sub>	L <sub>50</sub>	L <sub>10</sub>	
ST-1A and ST-1B	St. Teresa of Avila Church and Rectory/institutional and residential (Activity Category B)	05/24/06	12:25	15:00	Traffic, school, distant children playing, distant dogs barking, birds	61.0	77.9	50.7	55.0	58.2	63.0	65
		05/24/06	12:50	15:00		62.9	76.4	52.7	56.2	59.9	65.7	
ST-2A and ST-2B	2147 Baxter/residential (Activity Category B)	05/24/06	14:45	15:00	Traffic, distant aircraft, distant dogs barking, birds	63.1	80.0	52.0	57.0	60.5	64.8	67
		05/24/06	15:05	15:00		63.6	75.4	54.6	58.4	61.7	66.9	
ST-3A and ST-3B	Oak Glen Place/residential (Activity Category B)	05/24/06	15:45	15:00	Traffic, birds	66.6	83.1	58.6	62.0	64.5	68.2	67
		05/24/06	16:00	15:00		66.0	75.9	58.3	62.4	65.0	67.9	
ST-4A and ST-4B	2256 Alessandro/residential (Activity Category B)	05/24/06	16:45	15:00	Traffic, birds	66.7	77.9	58.7	63.5	66.2	68.2	70
		05/24/06	17:05	15:00		66.4	74.6	58.5	63.4	66.0	68.3	
ST-5A and ST-5B	Silver Place and Alessandro Way/residential (Activity Category B)	05/25/06	14:50	15:00	Traffic, distant aircraft, birds	65.5	71.7	58.5	62.9	65.1	67.4	67
		05/25/06	15:06	15:00		65.8	71.4	55.0	62.9	65.5	67.8	
ST-6A and ST-6B	Alessandro Way and Loma Vista/residential (Activity Category B)	05/25/06	15:40	15:00	Traffic, distant aircraft, rustling leaves, distant dogs barking	65.4	76.1	56.4	61.7	64.9	67.5	66
		05/25/06	16:00	15:00		65.1	75.9	55.8	61.0	64.8	67.0	
ST-7A and ST-7B	2219 Baxter/residential (Activity Category B)	05/25/06	16:30	15:00	Traffic, distant construction noise	66.6	74.9	58.2	63.2	66.4	68.4	68
		05/25/06	16:47	15:00		67.0	74.0	59.0	63.9	66.7	68.7	
ST-8A and ST-8B	2088 Cerro Gordo <sup>3</sup> (background noise measurement)/residential (Activity Category B)	09/26/07	11:10	15:00	Local traffic, distant aircraft, distant construction noise	51.8	71.6	39.0	41.0	42.3	54.0	55
		09/26/07	11:29	15:00		50.9	70.1	38.4	40.7	42.3	53.6	
ST-9A and ST-9B	St. Teresa of Avila School in front of classrooms facing SR-2 and Glendale Blvd./school recreational (Activity Category B)	09/26/07	14:19	15:00	Traffic, distant aircraft, heating, ventilation, air-conditioning (HVAC) units	62.3	73.7	57.1	58.6	60.6	64.7	63
		09/26/07	14:36	15:00		62.8	74.4	56.4	59.1	61.1	65.2	
ST-9A Indoors and ST-9B Indoors	St. Teresa of Avila School in classroom, windows closed; St. Teresa of Avila School in classroom, windows open /school (Activity Category E)	09/26/07	14:19	15:00	Traffic, distant children playing	46.9	60.2	41.5	42.6	44.5	49.9	47 (windows closed) 54 (windows open)
		09/26/07	14:36	15:00		53.6	65.2	48.2	49.5	52.0	56.6	

Site ID	Measurement Location/Land Use Type (activity category) <sup>2</sup>	Measurement Period			Noise Sources	Measurement Results (dBA)						Adjusted <sup>1</sup> Peak-Noise-Hour Level, L <sub>eq</sub> (h) dBA
		Date	Start Time	Duration (mm:ss)		L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>90</sub>	L <sub>50</sub>	L <sub>10</sub>	
ST-10	Clifford Street Elementary in front of classroom facing SR-2/Glendale Blvd./school (Activity Category B)	09/26/07	15:35	15:00	Traffic, distant aircraft	61.3	71.1	56.7	55.3	61.0	62.8	64
ST-10 Indoors	Clifford Street Elementary in classroom #6, windows closed <sup>4</sup> / school (Activity Category E)	09/26/07	15:35	15:00	Traffic	44.2	66.3	39.5	41.0	42.3	44.5	47

Notes:

1. Measurements adjusted to peak-noise-hour noise levels by comparison with concurrent long-term noise measurement data.
2. Please see Table 2-21 for activity category definitions.
3. Background noise measurement location was approximately 800 feet east of project alignment and shielded from SR-2 traffic by virtue of being on the opposite side of a steep slope.
4. According to the instructor, the windows and doors are kept shut during classes since the HVAC system is adequate; therefore, noise measurements were conducted with windows and doors closed

Source: ICF Jones & Stokes, 2007.

**Table 2-23.** Long-Term Noise Measurement Data Summary

Site Number	Location/ Land Use Type (activity category)	Date	Start Time	End Time	Peak-Noise-Hour L <sub>eq</sub> (dBA) and Time	Quietest-Hour L <sub>eq</sub> (dBA) and Time	24-Hour Average CNEL (dBA)
LT1	2147 Duane Street/ residential (Activity Category B)	5/24/06 – 5/25/06	11:45	17:15	67 (2:00 p.m. on 5/24/06; 4:00 p.m. on 5/25/06)	54 3:00 a.m.	67

Source: ICF Jones & Stokes, 2008.

Future predicted noise levels were computed for the 2030 no-build condition as well as five build alternatives (Alternatives A, B, C, D, and E). The projected traffic volumes and travel speeds came from the traffic study for the project (Fehr & Peers/Kaku Associates 2007).

## Environmental Consequences

The following analysis considers only receptor locations within the construction limits that still require noise abatement, as identified in the noise impact analysis report.

### Construction Impacts

#### No-Build Alternative (Baseline Alternative)

Under the No-Build Alternative, noise levels would not be affected.

#### Alternatives A to E

Noise from activities associated with construction of the proposed project would occur over a period of approximately 18 months, which vary to some extent based on the alternative. Project construction would be accomplished in several phases, including demolition, grading, paving, and finishing. Many of these activities involve intermittent periods of high noise generation; however, these periods would generally be localized and transitory. Construction activities and associated noise would move along the right-of-way as construction activities proceed down the length of the corridor. With implementation of standard noise-reduction practices, no adverse effects from construction noise are anticipated. Recommended construction noise control measures are provided below.

Noise levels for equipment that might be used for excavation and construction of the proposed project are presented in Table 2-24. The noise levels are at a reference distance of 50 feet. The construction equipment noise levels decrease at a rate of approximately 6 dBA per doubling of distance. Therefore, at 100 feet, the noise levels would be about 6 dBA less than the noise levels at 50 feet. Intervening structures or topography can act as a noise barrier and reduce noise levels further.

**Table 2-24.** Noise Level Ranges of Typical Construction Equipment

<b>Equipment</b>	<b>Levels in dBA at 50 feet<sup>a</sup></b>
Front Loader	73–86
Trucks	82–95
Cranes (moveable)	75–88
Cranes (derrick)	86–89
Vibrator	68–82
Saws	72–82
Pneumatic Impact Equipment	83–88
Jackhammer	81–98
Pumps	68–72
Generators	71–83
Compressors	75–87
Concrete Mixers	75–88
Concrete Pumps	81–85
Backhoe	73–95
Pile Driving (peaks)	95–107
Tractor	77–98
Scraper/Grader	80–93
Paver	85–88

Notes:  
Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of emissions as those shown in this table.

Source: EPA, 1971.

### ***Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the future No-Build Alternative, peak-noise-hour traffic noise levels are predicted to range from approximately 59 dBA  $L_{eq}(h)$  (at receptors M3 and M15B) to 72 dBA  $L_{eq}(h)$  (at receptor M8). Traffic noise levels would increase 0 to 1 dB (rounded to whole decibels) compared with existing conditions; thus, there would be no substantial (12 dBA or greater) noise increases. Under this alternative, traffic noise levels would exceed the Activity Category B NAC at 18 of the 36 modeled representative receptors, corresponding to an estimated 49 affected residential units.

### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

Under Alternative A, peak-noise-hour traffic noise levels are predicted to range from approximately 59 dBA  $L_{eq}(h)$  (at receptors M3 and M15B) to 72 dBA  $L_{eq}(h)$  (at receptors M7 and M8). Traffic noise levels would increase 0 to 2 dB (rounded to whole decibels) compared with existing conditions; thus, there would be no substantial noise increases. Under this alternative, traffic noise levels would exceed the Activity Category B NAC at 19 of the 36 modeled representative receptors, corresponding to an estimated 55 affected residential units.

### **Alternative B (Realign Ramp East – Remove Flyover and Part of Overpass)**

Under Alternative B, peak-noise-hour traffic noise levels are predicted to range from approximately 58 dBA  $L_{eq}(h)$  (at receptor M3) to 72 dBA  $L_{eq}(h)$  (at receptor M8). Traffic noise levels would decrease by as much as 3 dB at several locations but would increase 0 to 2 dB (rounded to whole decibels) at most locations compared with existing conditions; there would be no substantial noise increases under Alternative B. Under this alternative, traffic noise levels would exceed the Activity Category B NAC at 13 of the 36 modeled representative receptors, corresponding to an estimated 42 affected residential units.

### **Alternative C (Realign Ramps East – Remove Overpass)**

Under Alternative C, peak-noise-hour traffic noise levels are predicted to range from approximately 57 dBA  $L_{eq}(h)$  (at receptor M3) to 72 dBA  $L_{eq}(h)$  (at receptor M8). Traffic noise levels would decrease by as much as 3 dB at one location (ST-7) but would increase 0 to 2 dB (rounded to whole decibels) at most locations compared with existing conditions; there would be no substantial noise increases under Alternative C. Under this alternative, traffic noise levels would exceed the Activity Category B NAC at 13 of the 36 modeled representative receptors, corresponding to an estimated 42 affected residential units.

### **Alternative D (Realign Ramps East – Maintain Overpass)**

Under Alternative D, peak-noise-hour traffic noise levels are predicted to range from approximately 58 dBA  $L_{eq}(h)$  (at receptor M3) to 72 dBA  $L_{eq}(h)$  (at receptor M8). Traffic noise levels would decrease by as much as 3 dB at several locations but would increase 0 to 2 dB (rounded to whole decibels) at most locations compared with existing conditions; there would be no substantial noise increases under Alternative D. Under this alternative, traffic noise levels would exceed the Activity Category B NAC at 13 of the 36 modeled representative receptors, corresponding to an estimated 42 affected residential units.

### **Alternative E (Realign Ramps East, Retain Overpass and Flyover, Relocate Retaining Wall)**

Under Alternative E, peak-noise-hour traffic noise levels are predicted to range from approximately 58 dBA  $L_{eq}(h)$  (at receptor M3) to 72 dBA  $L_{eq}(h)$  (at receptor M8). Traffic noise levels would decrease by as much as 3 dB at several locations but would increase 0 to 2 dB (rounded to whole decibels) at most locations compared with existing conditions; there would be no substantial noise increases under Alternative E. Under this alternative, traffic noise levels would exceed the Activity Category B NAC at 13 of the 36 modeled representative receptors, corresponding to an estimated 42 affected residential units.

## **Avoidance, Abatement, Minimization, and/or Mitigation Measures**

### ***Construction***

To reduce construction noise levels to the extent technically feasible and avoid unnecessary annoyance, the following construction noise control measures shall be implemented:

- N-1** The contractor shall comply with all appropriate provisions of the City of Los Angeles Municipal Code, including restrictions on hours of operation (i.e., 7:00 a.m. to 9:00 p.m. on weekdays, 8:00 a.m. to 6:00 p.m. on Saturdays, and at no time on Sundays). In the event it becomes necessary for construction activities to occur outside these hours, a variance shall be obtained.
- N-2** Maintenance yards, batch plants, haul roads, and other construction-oriented operations shall be placed at locations that would be the least disruptive to the community.
- N-3** Community meetings should be held to explain the construction work, the time involved, and the control measures being taken to reduce impacts.
- N-4** The timing and duration of construction activities shall be scheduled to minimize noise impacts at noise-sensitive locations.
- N-5** As practicable, noise-attenuating “jackets” or portable noise screens shall be used to provide shielding for pavement breaking, jack hammering, or similar activities when work is close to noise-sensitive areas.
- N-6** The contractor shall comply with the Department’s Standard Specifications 7-1.011 (July 1999), *Sound Control Requirements*. The contractor shall comply with all local sound-control and noise-level rules, regulations, and ordinances, which apply to any work performed pursuant to the contract. Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler.

### ***Operations***

In accordance with 23 CFR 772, noise abatement is considered in areas where noise impacts are predicted. Such areas are used frequently by people and would benefit from a lower noise level. The potential noise abatement measures identified in the Department’s traffic noise analysis protocol include the following:

- avoiding the impact by using design alternatives, such as altering the horizontal and vertical alignment of the project;
- constructing noise barriers;
- acquiring property to serve as a buffer zone;
- using traffic management measures to regulate the types of vehicles and their speeds; and
- acoustically insulating public-use or nonprofit institutional structures.

Because of the configuration and location of the proposed project, noise barriers are the only form of noise abatement evaluated in this report. Due to site geometry (with affected receptors generally located well above the roadway grade), the only location at which an effective noise barrier could be constructed would be along the right-of-way, which also generally coincides with top-of-slope. For each of the five build alternatives, the TNM<sup>®</sup> noise model was used to determine the insertion loss (noise reduction) provided by soundwalls at the right-of-way, ranging in height from 6 feet to 16 feet. TNM<sup>®</sup> was also used to determine the “break line-of-sight” height required for the barrier. The results of these analyses are summarized below by alternative.

Based on the studies completed to date, the Department intends to incorporate noise abatement in the form of soundwalls as described below. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision of the noise abatement will be made upon completion of the project design and the public involvement processes.

### **Alternative A**

Noise abatement would be feasible at 14 modeled representative receptors. Figures 2-18a through 2-18c present the feasible soundwall locations and range of barrier heights. As shown, four soundwalls could be constructed under Alternative A:

- Barrier northbound (NB) 1 Alternative A would be constructed adjacent to the northbound side of SR-2 from Ewing Street to Oak Glen Place. The range of feasible barrier heights would be from 14 to 16 feet, benefiting an estimated three or four residential units.
- Barrier NB 2 Alternative A would be constructed adjacent to the northbound side of SR-2 from Oak Glen Place to approximately 175 feet north of Walcott Way. The range of feasible barrier heights would be from 14 to 16 feet, benefiting an estimated nine to 11 residential units.
- Barrier southbound (SB) 1 Alternative A would be constructed at the right-of-way/top-of-slope adjacent to the southbound side of SR-2 from approximately 300 feet north of Lake View Avenue to Oak Glen Place. The range of feasible barrier heights would be from 6 to 8 feet, benefiting an estimated nine to 13 residential units.
- Barrier SB 2 Alternative A would be constructed at the right-of-way/top-of-slope adjacent to the southbound side of SR-2 from Oak Glen Place to Glendale Boulevard. The range of feasible barrier heights would be from 8 to 12 feet, benefiting an estimated three to 12 residential units.

### **Alternative B**

Noise abatement would be feasible at 12 modeled representative receptors. Figures 2-19a through 2-19c present the feasible soundwall locations and range of barrier heights. As shown, four soundwalls could be constructed under Alternative B:

- Barrier NB 1 Alternative B would be constructed at the right-of-way/top-of-slope adjacent to the northbound side of SR-2 from approximately 200 feet north of Fargo Street to Oak Glen Place. The range of feasible barrier heights would be from 12 to 16 feet, benefiting an estimated one to three residential units.
- Barrier NB 2 Alternative B would be constructed at the right-of-way/top-of-slope adjacent to the northbound side of SR-2 from Oak Glen Place to approximately 175 feet north of Walcott Way. The range of feasible barrier heights would be from 14 to 16 feet, benefiting an estimated nine to 11 residential units.
- Barrier SB 1 Alternative B would be constructed at the right-of-way/top-of-slope adjacent to the southbound side of SR-2 from approximately 300 north of Lake View Avenue to Oak Glen Place. The range of feasible barrier heights would be from 6 to 10 feet, benefiting an estimated nine to 13 residential units.
- Barrier SB 2 Alternative B would be constructed at the right-of-way/top-of-slope adjacent to the southbound side of SR-2 from Oak Glen Place to Glendale Boulevard. The range of feasible barrier heights would be from 8 to 12 feet, benefiting an estimated three to 13 residential units.

### **Alternative C**

Noise abatement would be feasible at 11 modeled representative receptors. Figures 2-20a through 2-20c present the feasible soundwall locations and range of barrier heights. As shown, four soundwalls could be constructed under Alternative C:

- Barrier NB 1 Alternative C would be constructed at the right-of-way/top-of-slope adjacent to the northbound side of SR-2 from approximately 200 feet north of Fargo Street to Oak Glen Place. The range of feasible barrier heights would be from 12 to 14 feet, benefiting an estimated one residential unit.
- Barrier NB 2 Alternative C would be constructed at the right-of-way/top-of-slope adjacent to the northbound side of SR-2 from Oak Glen Place to approximately 175 feet north of Walcott Way. The range of feasible barrier heights would be 14 to 16 feet, benefiting an estimated nine residential units.
- Barrier SB 1 Alternative C would be constructed at the right-of-way/top-of-slope adjacent to the southbound side of SR-2 from approximately 300 north of Lake View Avenue to Oak Glen Place. The range of feasible barrier heights would be from 6 to 10 feet, benefiting an estimated nine to 13 residential units.
- Barrier SB 2 Alternative C would be constructed at the right-of-way/top-of-slope adjacent to the southbound side of SR-2 from Oak Glen Place to Glendale Boulevard. The range of feasible barrier heights would be from 8 to 12 feet, benefiting an estimated three to 12 residential units.

## **Alternative D**

Noise abatement would be feasible at 11 modeled representative receptors. Figures 2-21a through 2-21c present the feasible soundwall locations and range of barrier heights. As shown, four soundwalls could be constructed under Alternative D:

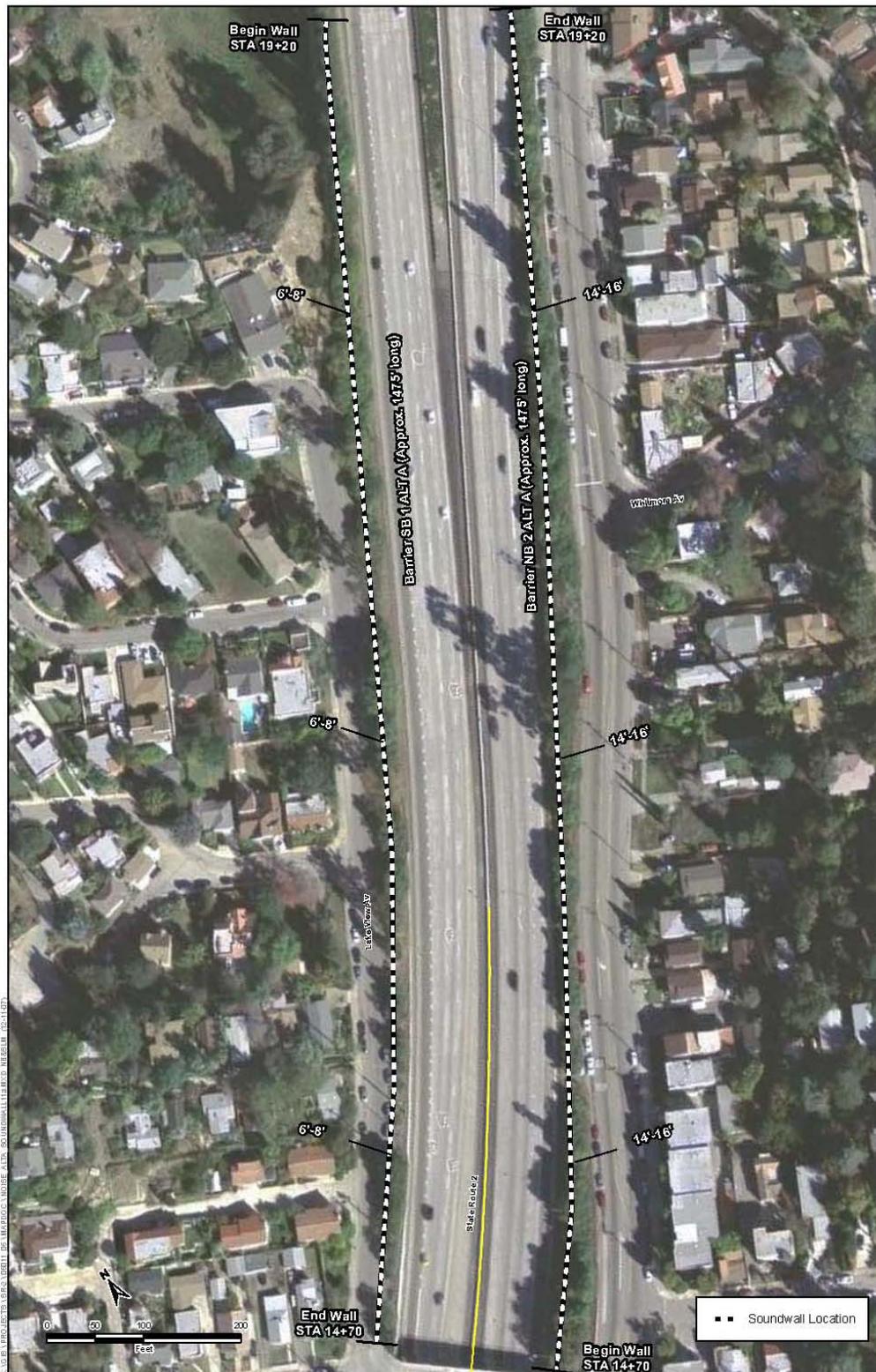
- Barrier NB 1 Alternative D would be constructed at the right-of-way/top-of-slope adjacent to the northbound side of SR-2 from approximately 200 feet north of Fargo Street to Oak Glen Place. The range of feasible barrier heights would be from 12 to 14 feet, benefiting an estimated one residential unit.
- Barrier NB 2 Alternative D would be constructed at the right-of-way/top-of-slope adjacent to the northbound side of SR-2 from Oak Glen Place to approximately 175 feet north of Walcott Way. The range of feasible barrier heights would be from 14 to 16 feet, benefiting an estimated nine to 11 residential units.
- Barrier SB 1 Alternative D would be constructed at the right-of-way/top-of-slope adjacent to the southbound side of SR-2 from approximately 300 north of Lake View Avenue to Oak Glen Place. The range of feasible barrier heights would be from 6 to 10 feet, benefiting an estimated nine to 13 residential units.
- Barrier SB 2 Alternative D would be constructed at the right-of-way/top-of-slope adjacent to the southbound side of SR-2 from Oak Glen Place to Glendale Boulevard. The range of feasible barrier heights would be from 8 to 12 feet, benefiting an estimated three to nine residential units.

## **Alternative E**

Noise abatement would be feasible at 12 modeled representative receptors. Figures 2-22a through 2-22c present the feasible soundwall locations and range of barrier heights. As shown, four soundwalls could be constructed under Alternative E:

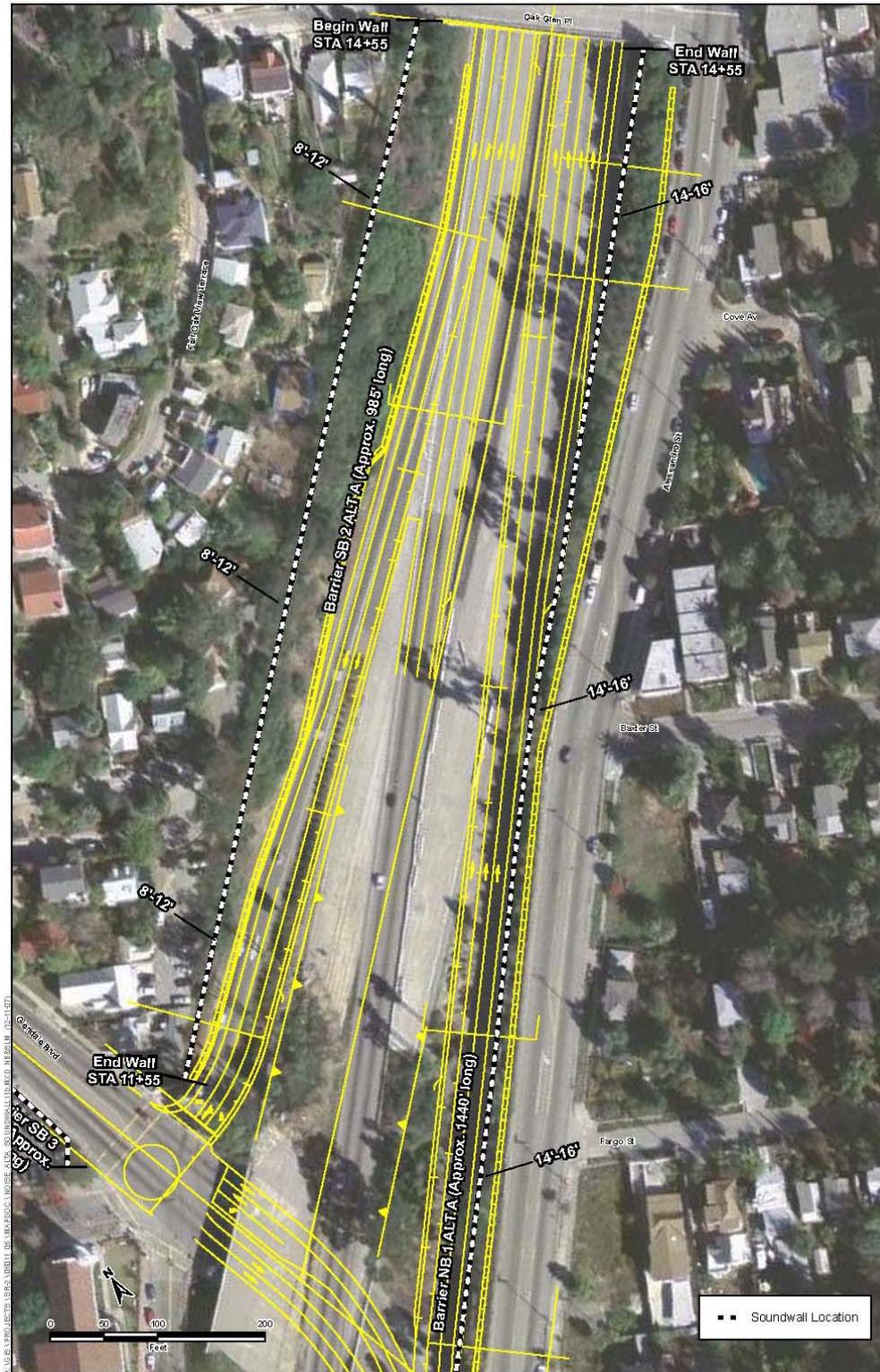
- Barrier NB 1 Alternative E would be constructed at the right-of-way/top-of-slope adjacent to the northbound side of SR-2 from approximately 200 feet north of Fargo Street to Oak Glen Place. The range of feasible barrier heights would be from 12 to 14 feet, benefiting an estimated one residential unit.
- Barrier NB 2 Alternative E would be constructed at the right-of-way/top-of-slope adjacent to the northbound side of SR-2 from Oak Glen Place to approximately 175 feet north of Walcott Way. The range of feasible barrier heights would be from 14 to 16 feet, benefiting an estimated nine to 11 residential units.
- Barrier SB 1 Alternative E would be constructed at the right-of-way/top-of-slope adjacent to the southbound side of SR-2 from approximately 300 north of Lake View Avenue to Oak Glen Place. The range of feasible barrier heights would be from 6 to 10 feet, benefiting an estimated nine to 13 residential units.
- Barrier SB 2 Alternative E would be constructed at the right-of-way/top-of-slope adjacent to the southbound side of SR-2 from Oak Glen Place to Glendale Boulevard. The range of feasible barrier heights would be from 8 to 12 feet, benefiting an estimated three to 13 residential units.

Figure 2-18a. Soundwall Locations, Lengths, and Range of Feasible Heights—Alternative A



Source: USGS UrbanArea (0.5 m).

Figure 2-18b



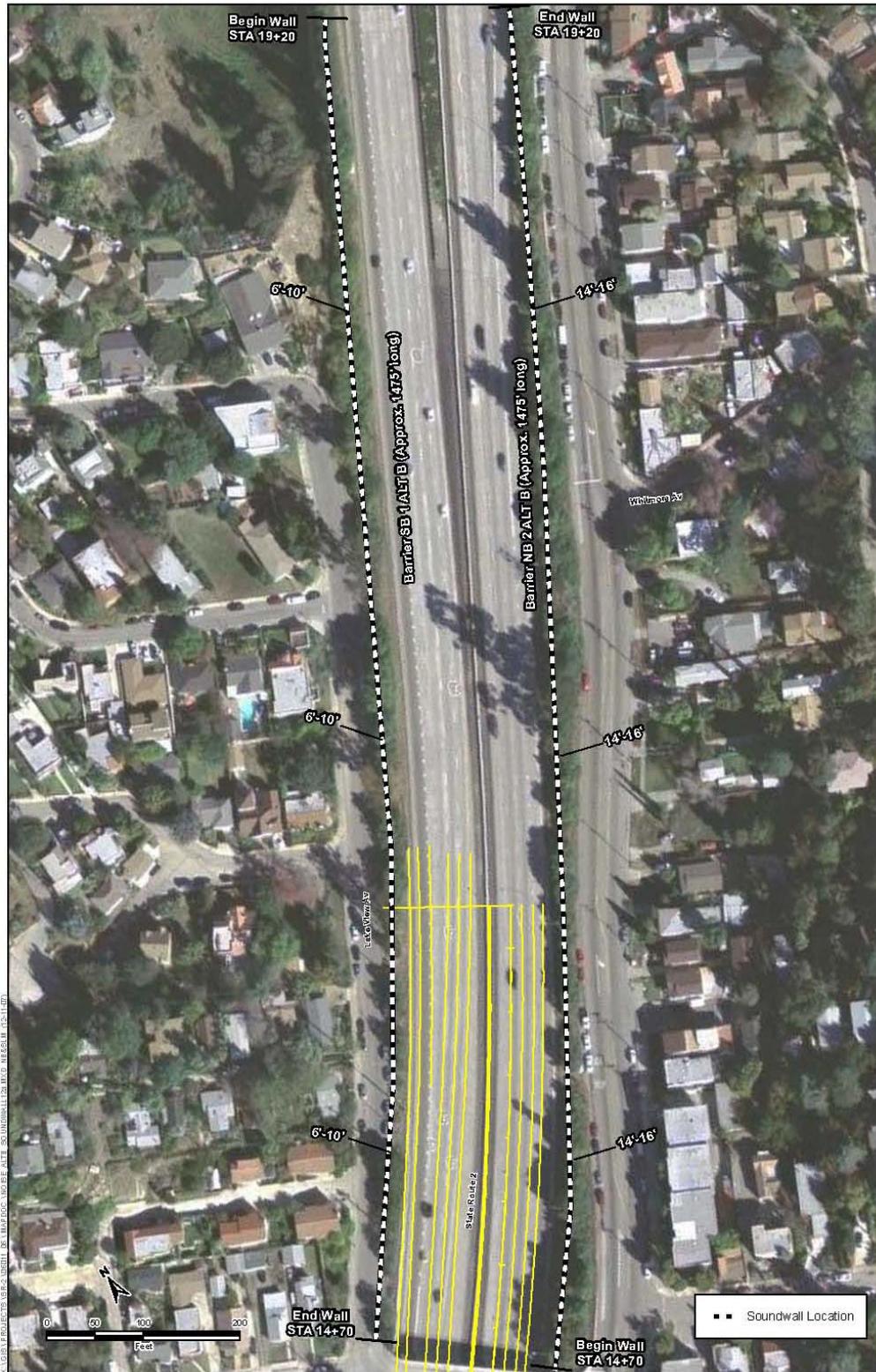
Source: USGS UrbanArea (0.5 m).

Figure 2-18c



Source: USGS UrbanArea (0.5 m).

Figure 2-19a. Soundwall Locations, Lengths, and Range of Feasible Heights—Alternative B



Source: USGS UrbanArea (0.5 m).

Figure 2-19b.



Source: USGS UrbanArea (0.5 m)

Figure 2-19c.



Source: USGS UrbanArea (0.5 m).



Figure 2-20b.



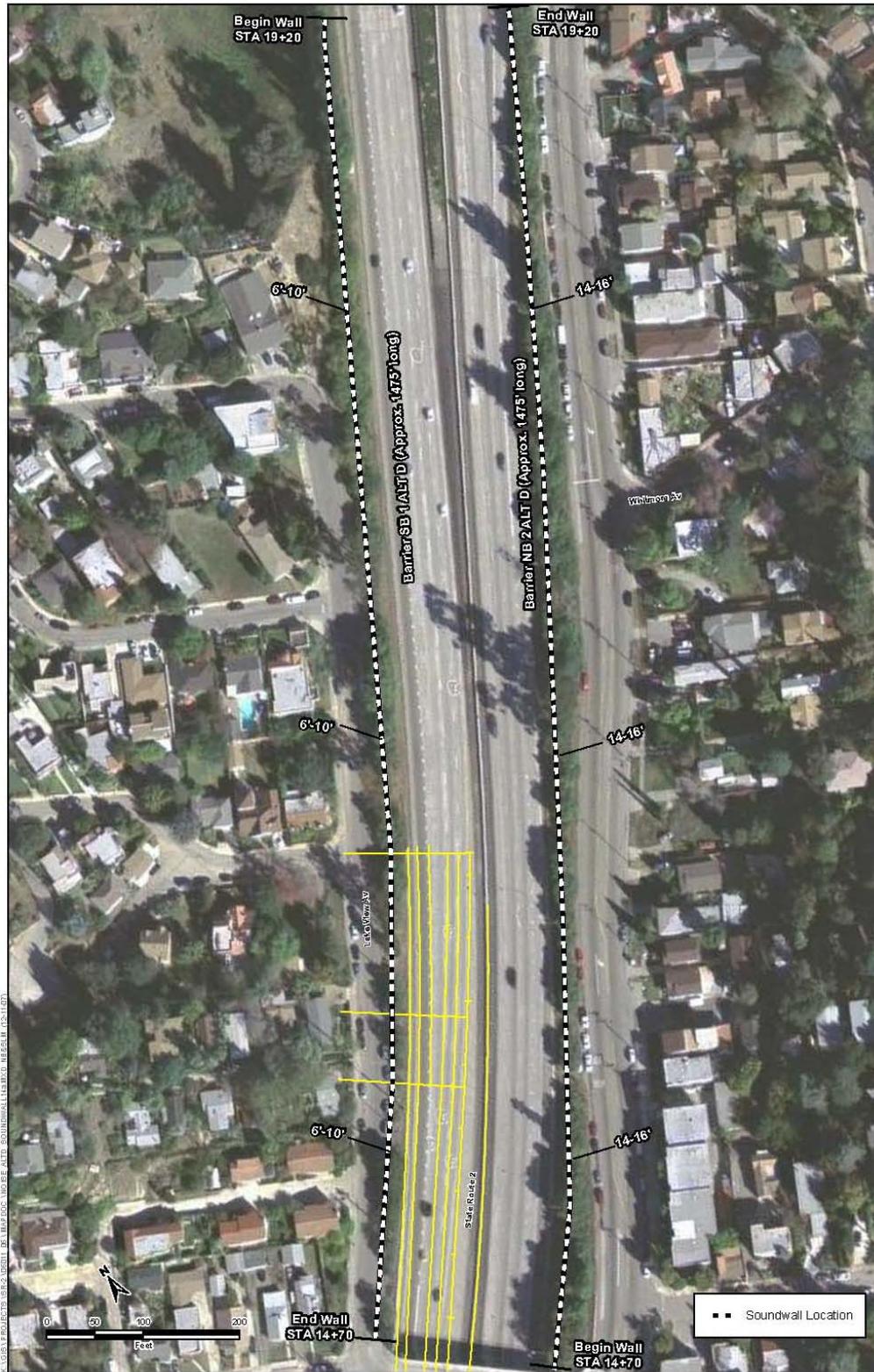
Source: USGS UrbanArea (0.5 m).

Figure 2-20c.



Source: USGS UrbanArea (0.5 m).

Figure 2-21a. Soundwall Locations, Lengths, and Range of Feasible Heights—Alternative D



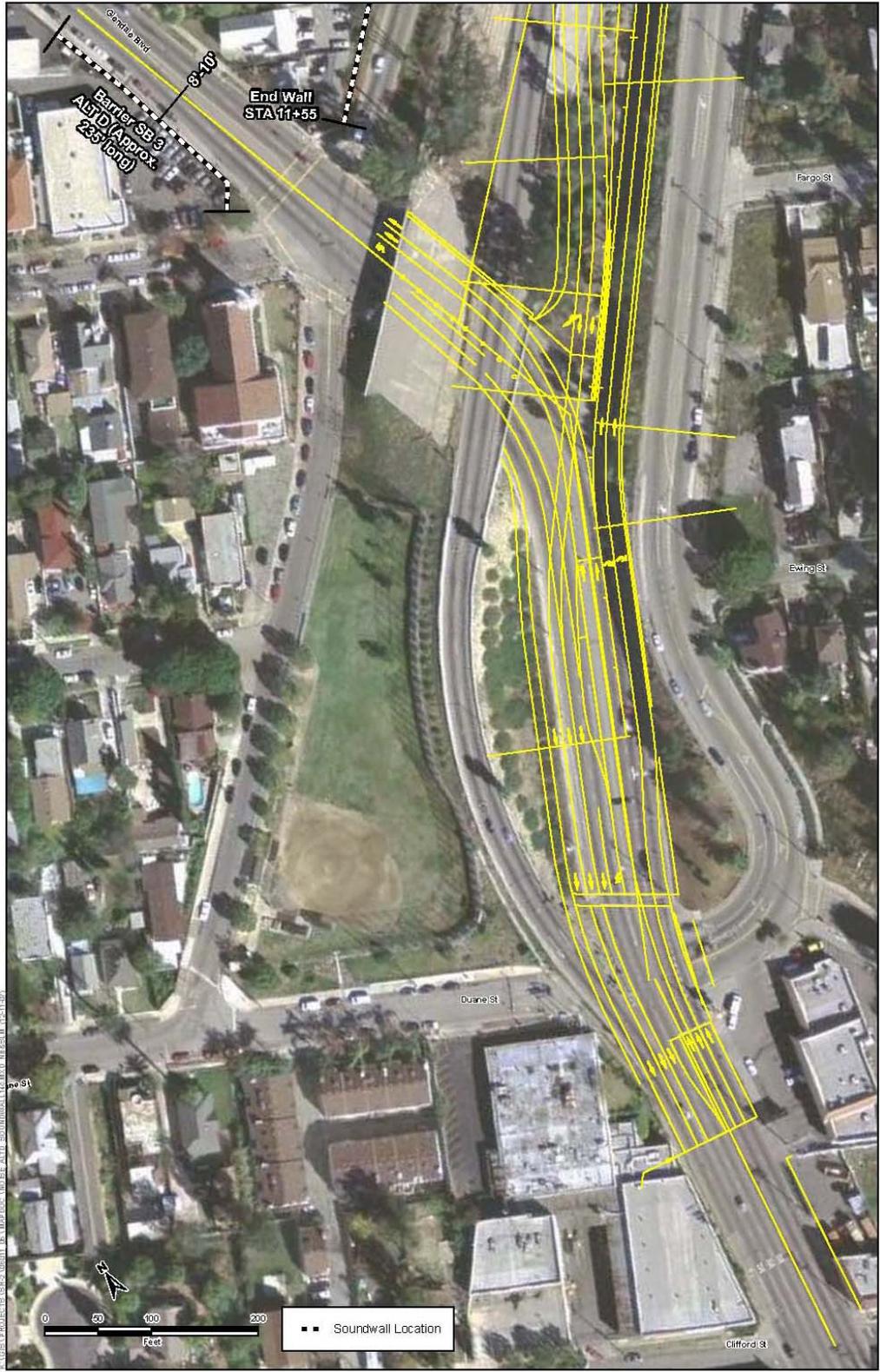
Source: USGS UrbanArea (0.5 m)

Figure 2-21b.



Source: USGS UrbanArea (0.5 m).

Figure 2-21c.



Source: USGS UrbanArea (0.5 m)

Figure 2-22a. Soundwall Locations, Lengths, and Range of Feasible Heights—Alternative E



Source: USGS UrbanArea (0.5 m).

Figure 2-22b.



Source: USGS UrbanArea (0.5 m).

Figure 2-22c.



Source: USGS UrbanArea (0.5 m).

## **2.3 Biological Environment**

The description of the biological environment and project impacts below are summarized from the Natural Environment Study (NES) prepared for the proposed project (printed under separate cover).

The biological study area (BSA) for the NES for the proposed project includes the right-of-way between Aaron Street, to the south, and the Los Angeles River, to the north. The location of the project site is shown on the Hollywood, California, U.S. Geological Survey (USGS) 7.5-minute quadrangle map.

### **2.3.1 Natural Communities**

This section of the document discusses natural communities of concern. The focus is on biological communities, not individual plant or animal species. The Natural Communities section also includes information on wildlife corridors and habitat fragmentation.

Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value. Habitat areas that have been designated as critical habitat under the federal Endangered Species Act (ESA) are discussed in Section 2.3.5, Threatened and Endangered Species. Wetlands and other waters are discussed in Section 2.3.2.

### **Regulatory Setting**

There is no specific regulatory setting for natural communities, apart from CEQA and NEPA.

### **Affected Environment**

The terminus of SR-2 is located between the communities of Silver Lake, to the west, and Echo Park, to the east, in the City of Los Angeles. The BSA and adjoining properties are situated in an extensively urbanized setting. Development within the BSA and surrounding areas consists of single- and multifamily residences and commercial and light industrial structures. The project site is located in a broad valley; elevations along SR-2 range from 470 feet above mean sea level (amsl) at Duane Street to 500 feet amsl at Oak Glen Place. The elevation of SR-2 gradually decreases north of Oak Glen Place.

Natural communities of special concern are those managed for the maintenance or recovery of protected species. A query of the California Native Plant Society (CNPS) database and California Natural Diversity Database (CNDDDB) for the Hollywood, Los Angeles, Burbank, and Pasadena USGS 7.5-minute quadrangles identified five sensitive natural communities that have occurred historically in the vicinity of the BSA. These include California walnut woodland, southern coast live oak riparian forest, southern cottonwood willow riparian forest, southern

sycamore alder riparian woodland, and the walnut forest. However, none of these sensitive natural communities were observed in the BSA. Further, no natural vegetative communities are supported on or adjacent to the BSA. Existing vegetation within the BSA consists of ornamental trees, shrubs, and ground cover and ruderal (disturbance-adapted) vegetation within landscaped and fallow areas. Unbroken patches of vegetation within the BSA are generally limited to the sides of SR-2. The Tommy Lasorda Field of Dreams, located adjacent to the proposed project site, consists of a baseball field, maintained lawns, and ornamental trees and shrubs.

Open space in the vicinity of the BSA is limited to fragmented parks and fallow lots surrounded by extensive urban development. The channelized Los Angeles River is located adjacent to the BSA and east of the proposed project site (approximately 0.90 mile), and the following open space areas are located in the vicinity: Silver Lake Reservoir (approximately 0.31 mile west), Elysian Park (approximately 0.83 mile east), Echo Park (approximately 1.0 mile southeast), and Griffith Park (approximately 2.3 miles west-northwest). No wildlife linkages to surrounding parks exist from the BSA except for the adjacent Los Angeles River. As such, the proposed project site is concluded not to function as a corridor for wildlife movement.

## **Environmental Consequences**

### ***Construction and Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

The No-Build Alternative would result in no alterations to the existing SR-2 terminus. Thus, no adverse effects on natural communities would occur.

#### **Alternatives A to E**

No natural communities are supported within the BSA. While the build alternatives would result in alterations to the existing roadway configuration and operational changes to the terminus, construction or operation of the proposed build alternatives would not result in adverse effects on natural communities.

### **Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, or mitigation measures would be required.

## **2.3.2 Wetlands and Other Waters**

### **Regulatory Setting**

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 USC 1344) is the primary law regulating wetlands and other waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that looks at hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

At the State level, wetlands and waters are regulated primarily by CDFG and the regional water quality control boards (RWQCBs). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved.

#### ***Section 404 of the Federal Clean Water Act***

Section 404 of the federal Clean Water Act, which is administered by the U.S. Army Corps of Engineers (Corps), regulates the discharge of dredged or fill material into waters of the United States. The Corps has established a series of nationwide permits that authorize certain activities in waters of the United States, provided that a proposed activity can demonstrate compliance with standard permit conditions. Normally, the Corps requires an individual permit for activities affecting an area equal to or in excess of 0.5 acre of waters of the United States. Projects affecting less than 0.5 acre of waters of the United States can normally be conducted pursuant to one of the nationwide permits, if consistent with standard permit conditions.

#### ***Section 401 of the Federal Clean Water Act***

Stormwater discharges associated with construction activity, including clearing, grading, excavation, reconstruction, and dredge or fill activities resulting in the disturbance of 1 acre or more, are required to demonstrate compliance with the General Construction Activity Stormwater Permit pursuant to the NPDES permit regulated by the RWQCB and Section 402 of the federal Clean Water Act. Construction activities associated with the proposed project must be consistent with the requirements of the General Construction Activity Stormwater Permit.

Section 401 water quality certification may not be necessary for this project since a federal license or permit may not be required. The Department will contact the RWQCB about additional requirements regarding impacts on waters of the state.

## **Affected Environment**

Open space in the vicinity of the BSA is limited to fragmented parks and fallow lots surrounded by extensive urban development. The channelized Los Angeles River abuts the northern end of the BSA but is located approximately 0.90 mile east of the proposed project site. From the Tommy Lasorda Field of Dreams, Silver Lake Reservoir is located approximately 0.31 mile west, Elysian Park is approximately 0.83 mile east, Echo Park is approximately 1.0 mile southeast, and Griffith Park is approximately 2.3 miles west-northwest.

The USFWS Wetlands Online Mapper database does not identify wetlands in the BSA. Further, nearly all soils examined during fieldwork appeared to be placed or altered materials and dominated by moderately light-colored silty to loamy soils. No evidence of hydric soils or substantial clays was detected. As such, there is no evidence of existing wetlands in the BSA.

One small surface drainage feature is located near the southeast corner of the Tommy Lasorda Field of Dreams. Current engineering designs indicate that approximately 9 square feet of this drainage would be rerouted underground. This area consists of a concrete-lined roadside ditch with a small extent of deposited soil and some rooted, nonnative and ruderal native herbaceous vegetation. The Corps has been consulted regarding this feature (Hall pers. comm.).

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no construction work would occur at the proposed project site. As such, no adverse effects on wetlands and other waters would occur.

#### **Alternatives A to E**

No wetlands were identified at the proposed project site. One small area (approximately 9 square feet) that is a potential jurisdictional drainage feature is located within the proposed project footprint near the southeast corner of the Tommy Lasorda Field of Dreams. However, given the extremely limited extent and heavily disturbed condition of this drainage feature, it is anticipated that the Corps would waive permit requirements (regarding wetlands or waters of the United States). Hence, the build alternatives would not result in adverse effects on wetlands or jurisdictional waters during the construction period.

### ***Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, the existing facilities would not be altered. As such, the BSA would not be affected, and no adverse effects on wetlands and other waters would occur.

### **Alternatives A to E**

No wetlands were identified at the proposed project site. One small area (approximately 9 square feet) that is a potential jurisdictional drainage feature is located within the proposed project footprint near the southeast corner of the Tommy Lasorda Field of Dreams. Given the extremely limited extent and heavily disturbed condition of this drainage feature, it is anticipated that the Corps would waive permit requirements (regarding wetlands or waters of the United States). Similarly, the proposed project would not result in a substantial alteration of or encroachment on any state streambed; thus, a Streambed Alteration Agreement would not be required. No other jurisdictional features are located within the proposed project footprint. As such, no adverse operational effects would result from build Alternatives A through E.

### **Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, and/or mitigation measures would be required.

### 2.3.3 Plant Species

#### Regulatory Setting

CDFG and USFWS share regulatory responsibility for the protection of special-status plant species. Special-status species are identified by the agencies for protection because they are rare and/or subject to population and habitat declines. “Special status” is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the federal ESA and/or the California Endangered Species Act (CESA). Section 2.3.5, Threatened and Endangered Species, includes detailed information regarding these species.

This section discusses plant species that are not threatened or endangered, including CDFG fully protected species and species of special concern, USFWS candidate species, and nonlisted CNPS rare and endangered plants.

The regulatory requirements for the federal ESA can be found at USC 16 Section 1531 et seq. (see also 50 CFR, Part 402). The regulatory requirements for CESA can be found at California Fish and Game Code Section 2050 et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code Sections 1900–1913 and within CEQA, Public Resources Code Sections 2100–21177.

#### Affected Environment

This section summarizes the results of the NES (March 2008) prepared for the proposed project (printed under separate cover). Prior to fieldwork, a query of the CNDDDB and CNPS was made to identify special-status plant species reported as occurring in the vicinity of the BSA (Hollywood, Los Angeles, Burbank, and Pasadena USGS quadrangles). Plant (and animal) species are considered to have special status if they have been listed as such on maintained lists with explicit criteria by federal or state agencies or one or more special interest groups, such as CNPS. This generally excludes species not concluded to be currently under threat or endangerment (e.g., those simply on “watch” lists or for which further information is solicited). CDFG publishes separate comprehensive lists for plants and animals through the CNDDDB. The results of the database query are summarized in Table 2-25 below (see Section 2.3.5 for a list of threatened or endangered species). No special-status plant species were observed during the site visit, and no potentially suitable habitat for these species occurs within the BSA.

The BSA is an extensively urbanized setting. The vegetation supported in the BSA consisted primarily of nonnative trees, shrubs, grasses, and ground cover. Tree species encountered frequently during the site visit included Peruvian peppertree (*Schinus molle*), Brazilian peppertree (*Schinus terebinthifolius*), Tasmanian blue gum (*Eucalyptus globulus*), ornamental pines (*Pinus* sp.), Mexican fan palm (*Washingtonia robusta*), and tree of heaven (*Ailanthus altissima*). Common shrub species included oleander (*Nerium oleander*) and cape plumbago (*Plumbago auriculata*). Frequently observed herbaceous plants included white amaranth (*Amaranthus albus*), short-pod mustard (*Hirschfeldia incana*), telegraph weed (*Conyza*

*canadensis*), red-stemmed filaree (*Erodium cicutarium*), and castor-bean (*Ricinus communis*). Common grass species included Bermuda grass (*Cynodon dactylon*), foxtail chess (*Bromus madritensis*), annual bluegrass (*Poa annua*), and fountain grass (*Pennisetum setaceum*). In addition, sea figs (*Carpobrotus chilensis* and *C. edulis*) were observed throughout the BSA.

**Table 2-25. Plant Species of Special Concern Identified by CNPS and CNDDB**

<b>Common Name</b>	<b>Potential for Occurrence</b>
<b>Scientific Name</b>	
Greata's aster ( <i>Aster greatae</i> )	Not expected
Ventura marsh milk-vetch ( <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i> )	Not expected
Davidson's saltscale ( <i>Atriplex serenana</i> var. <i> davidsonii</i> )	Not expected
Slender Mariposa Lily ( <i>Calochortus clavatus</i> var. <i>gracilis</i> )	Not expected
Plummer's mariposa lily ( <i>Calochortus plummerae</i> )	Not expected
Santa Barbara morning-glory ( <i>Calystegia sepium</i> ssp. <i>binghamiae</i> )	Not expected
Southern tarplant ( <i>Centromadia parryi</i> ssp. <i>australis</i> )	Not expected
Many-stemmed Dudleya ( <i>Dudleya multicaulis</i> )	Not expected
Round-leaved filaree ( <i>Erodium macrophyllum</i> )	Not expected
Los Angeles sunflower ( <i>Helianthus nuttallii</i> ssp. <i>Parishii</i> )	Not expected
Mesa horkelia ( <i>Horkelia cuneata</i> ssp. <i>puberula</i> )	Not expected
Coulter's goldfields ( <i>Lasthenia glabrata</i> ssp. <i>coulteri</i> )	Not expected
San Gabriel linanthus ( <i>Linanthus concinnus</i> )	Not expected
Orcutt's linanthus ( <i>Linanthus orcuttii</i> )	Not expected
Davidson's bush mallow ( <i>Malacothamnus davidsonii</i> )	Not expected
Gambel's watercress ( <i>Nasturtium gambelii</i> )	Not expected
Prostrate navarretia ( <i>Navarretia prostrata</i> )	Not expected
San Bernardino aster ( <i>Symphiotrichum defoliatum</i> )	Not expected

Source: CNDDB, CNNP, ICF Jones & Stokes, 2007.

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

The No-Build Alternative would result in no alterations to the existing SR-2 terminus. Thus, no construction activities would be required, and no adverse effects on special-status plant species would occur.

#### **Alternatives A to E**

Construction activities would require limited removal of vegetation, including trees and shrubs. The number of trees and shrubs removed would vary depending on the alternative with Alternative A (Widen Existing Ramps) and Alternative E (Realign Ramps East – Retain Flyover and Overpass – Relocate Retaining Wall) resulting in the greatest impacts. Because very few native trees are present and many of the nonnative trees are invasive species, and because of the lack of potential for those trees present to provide habitat for special-status species, impacts to trees under this project would not result in any loss of value or habitat to any native plants or wildlife.

While no special-status plant species were identified in the BSA, any trees removed during construction would be properly replaced as required by the local Los Angeles City Tree Ordinance. According to City of Los Angeles policies (City of Los Angeles 1972) and ordinance 177404, all removed trees must be replaced, whether native or not. While impacts on trees under this project would not result in any loss of value or habitat for any native plants or wildlife, measures are proposed to address and comply with relevant city policies and ordinances. With implementation of the suggested minimization measures, the proposed build alternatives would not result in adverse effects on special-status species or trees protected under the Los Angeles City Tree Ordinance (1972 policy and recent ordinance 177404).

### ***Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

The No-Build Alternative would result in no alterations to the existing SR-2 terminus. Thus, the existing SR-2 terminus would continue to operate as is. No special-status plant species were identified in the BSA. Thus, operation of the No-Build Alternative would not adversely affect special-status plant species in the BSA.

#### **Alternatives A to E**

No special-status plant species were identified in the BSA. Consequently, no operational impacts on special-status plant species would occur.

### **Avoidance, Minimization, and/or Mitigation Measures**

The minimization measures listed below shall be implemented to reduce the impacts due to removal of trees.

**PS-1** All trees within City jurisdiction or that are removed shall be replaced by the project proponent, Metro, in accordance with applicable City regulations and guidelines as follows:

- Mark and replace all native trees with greater than a 1-inch diameter at breast height (dbh) (4.5 feet above surrounding grade) with the same species at a 2:1 ratio. Source materials should be of the same subspecies and/or variety locally present and from seeds or cuttings gathered within coastal southern California to ensure local provenance.
- Mark and replace all nonnative trees with greater than a 1-inch dbh (4.5 feet above surrounding grade) with native trees of appropriate local climate tolerance at a 2:1 ratio. Source materials should be from seeds or cuttings gathered within coastal southern California to ensure local provenance.
- All removed trees greater than 20 feet in height or 8 inches dbh (4.5 feet above surrounding grade) should be replaced with the same species (if native) or a suitable native tree of appropriate local climate tolerance on a 2:1 basis. Source materials should be from seeds or cuttings gathered within coastal southern California to ensure local provenance.
- Trees within the Caltrans right-of-way that are removed during construction, shall be replaced in accordance with Caltrans regulations and guidelines as listed in the Landscape Architect PS&E Guide of 2008.

## 2.3.4 Animal Species

### Regulatory Setting

Many state and federal laws regulate impacts on wildlife. USFWS, the National Marine Fisheries Service (NMFS), and CDFG are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with wildlife not listed or proposed for listing under the federal ESA or CESA. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5, below. All other special-status animal species are discussed here, including CDFG fully protected species and species of special concern and USFWS or NMFS candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- NEPA,
- the Migratory Bird Treaty Act,
- the Fish and Wildlife Coordination Act, and
- the federal Endangered Species Act.

State laws and regulations pertaining to wildlife include the following:

- CEQA,
- the California Endangered Species Act,
- Sections 1601–1603 of the California Fish and Game Code, and
- Sections 4150 and 4152 of the California Fish and Game Code.

USFWS, NMFS, and CDFG are responsible for implementing these laws.

### Affected Environment

A query of the CNDDDB identified 12 special-status wildlife species that have been reported as occurring in the vicinity of the BSA (Hollywood, Los Angeles, Burbank, and Pasadena USGS quadrangles) (see Table 2-26). No special-status wildlife species were observed during the site visit. The only species for which potentially suitable habitat occurs within the BSA are Cooper's hawk, sharp-shinned hawk, and California gull. All of these are state species of special concern that tolerate considerable human presence and use urban and residential areas as well as parks to some degree during the nonbreeding season. If present, all would occur only as occasional visitors during the nonbreeding season.

Twenty-five species of vertebrate animals were detected during the site visit. These comprised 20 bird species and five mammal species. Several bird species typically associated with open water or riparian settings, such as American wigeon (*Anas americana*), mallard (*Anas platyrhynchos*), great blue heron (*Ardea herodias*), and double-crested cormorant (*Phalacrocorax auritus*), were observed in proximity to the Los Angeles River and/or Silver Lake Reservoir. All of the animal species detected are fairly common in urban settings and tolerant of human presence. In addition, numerous trees and shrubs within the BSA provide suitable nesting and roosting habitat for native bird species, including raptors, protected under the Migratory Bird Treaty Act (MBTA). Most of these bird species are also covered under similar protective statutes found in the California Fish and Game Code.

**Table 2-26. Wildlife Species of Special Concern Identified by CNDDDB**

<b>Common Name</b>	<b>Potential for Occurrence</b>
<b>Scientific Name</b>	
Coast Range California newt ( <i>Taricha torosa torosa</i> )	Not expected
Southwestern pond turtle ( <i>Clemmys marmorata pallida</i> )	Not expected
San Diego coast horned lizard ( <i>Phrynosoma coronatum blainvillei</i> )	Not expected
Cooper's hawk ( <i>Accipiter cooperi</i> )	Not expected
Sharp-shinned hawk ( <i>Accipiter striatus</i> )	Not expected
California gull ( <i>Larus californicus</i> )	Not expected
Burrowing owl ( <i>Athene cunicularia</i> )	Not expected
Coastal California gnatcatcher ( <i>Polioptila californica californica</i> )	Not expected
Big free-tailed bat ( <i>Nyctinomops [Tadarida] macrotis</i> )	Not expected
Southern grasshopper mouse ( <i>Onychomys torridus ramona</i> )	Not expected
South coast marsh vole ( <i>Microtus californicus stephensi</i> )	Not expected
American badger ( <i>Taxidea taxus</i> )	Not expected

Source: CNDDDB, ICF Jones & Stokes, 2007.

## **Environmental Consequences**

### ***Construction Impacts***

#### **No-Build Alternative (Baseline Alternative)**

The No-Build Alternative would not result in adverse effects on wildlife in the BSA.

#### **Alternative A (Widen Existing Ramps – Maintain Overpass)**

No species of special concern were identified in the BSA, and it is unlikely that the build alternatives would result in construction impacts on special-status animal species. However, the build alternatives would require the removal and replacement of numerous trees and shrubs within the BSA that provide suitable nesting and roosting habitat for native bird species, including raptors, protected under the MBTA and the California Fish and Game Code. This would be an adverse but mitigable effect. See below for recommended measures to avoid or minimize impacts.

### ***Operational Impacts***

#### **No-Build Alternative (Baseline Alternative)**

The No-Build Alternative does not include any physical or operational changes to the terminus. Consequently, no impacts would occur to wildlife resources under this alternative.

#### **Alternatives A to E**

No species of special concern were identified in the BSA. Additionally, operation of the reconfigured terminus would not result in new impacts to wildlife. Therefore, the build alternatives would not result in operational impacts on special-status animal species or other wildlife.

#### **Avoidance, Minimization, and/or Mitigation Measures**

The following minimization measures are proposed to avoid adverse effects on nesting birds protected under the MBTA and the California Fish and Game Code:

- AS-1** To avoid impacts on birds prohibited under the MBTA and similar state statutes, one of the following measures shall be implemented by the City: (1) No ground disturbance, site clearing, or removal of any potential nesting habitat shall take place within the typical breeding/nesting season for birds (February 15 to August 30) or (2) prior to any ground-disturbing activities, a qualified biologist shall conduct surveys for nesting birds (including raptors). The surveys shall occur a minimum of 3 days prior to the clearing, removal, or trimming of any vegetation. Surveys shall include areas within 200 feet of the edge of the project boundary (as legally accessible) and the entire project site. If active nests are found, a 150-foot (minimum) temporary fence barrier shall be erected around the nest site. A 500-foot barrier shall be required for any raptor nesting site. No habitat removal or any other work shall be allowed to occur within the fenced nest zone until a qualified biologist confirms that nesting is no longer active and/or the young have fledged and left the nest.

## 2.3.5 Threatened and Endangered Species

### Regulatory Setting

The primary federal law protecting threatened and endangered species is the federal ESA (USC Section 1531 et seq.; see also 50 CFR, Part 402). This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of the federal ESA, federal agencies, such as FHWA, are required to consult with USFWS and NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. “Critical habitat” is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a biological opinion or an incidental take permit. The incidental take permit is the result of a Section 2080.1 consistency determination or a 2080(b) incidental take permit application process under CESA. Section 3 of the federal ESA defines take as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or any attempt at such conduct.” In addition, the MBTA implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the act provides that it is unlawful to kill or possess migratory birds.

California has enacted a similar law at the state level, CESA (California Fish and Game Code Section 2050 et seq.) CESA emphasizes early consultation to avoid potential impacts on rare, endangered, or threatened species and appropriate planning to offset project-caused losses of listed species’ populations and essential habitats. CDFG is the agency responsible for implementing CESA. Section 2081 of the California Fish and Game Code prohibits the take of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as “to hunt, pursue, catch, capture, or kill or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by CDFG. For projects requiring a biological opinion under Section 7 of the federal ESA, CDFG may also authorize impacts on CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

### Affected Environment

An NES (March 2008) was prepared (printed under separate cover) for the proposed project to evaluate impacts on biological resources, including the threatened and endangered plant and animal species. A query of the CNPS database and CNDDDB for the Hollywood, Los Angeles, Burbank, and Pasadena USGS 7.5-minute quadrangles identified eight threatened or endangered plant and animal species that have occurred historically in the vicinity of the BSA. Table 2-27 provides a full list of threatened or endangered animal species identified from the database query and a determination of the likelihood of occurrence for each species within the BSA. As shown in the table, no threatened or endangered species are expected to be present in the BSA.

**Table 2-27. Threatened or Endangered Species**

Scientific Name	Common Name	Potential for Occurrence	Status
<b>Plants</b>			
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	Not expected	FE
<i>Berberis nevinii</i>	Nevin's barberry	Confirmed absent	FE, SE
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	San Fernando Valley spineflower	Not expected	FC, SE
<i>Dodecahema leptoceras</i>	Slender-horned spineflower	Not expected	FE, SE
<b>Wildlife</b>			
<i>Rana muscosa</i>	Mountain yellow-legged frog	Not expected	FE, SSC
<i>Falco peregrinus anatum</i>	American peregrine falcon	Not expected	SE, CFP
<i>Empidonax traillii extimus</i>	Southwestern willow flycatcher	Not expected	FE, SE
<i>Polioptila californica californica</i>	Coastal California gnatcatcher	Not expected	FT, SSC

**Notes:**

California Endangered Species Act (CESA) Listing Codes:

SE = state list, endangered

SSC = state special species of concern

ST = state list, threatened

SCE = state candidate for listing as endangered

Endangered Species Act (ESA) Listing Codes:

FE = federal list, endangered

FSC = federal special-concern species

FT = federal list, threatened

DEL = delisted (species considered fully recovered)

Source: CNPS, CNDDDB, ICF Jones & Stokes, 2007.

## Environmental Consequences

### **Construction Impacts**

#### **No-Build Alternative (Baseline Alternative)**

The No-Build Alternative would not result in adverse effects on threatened and endangered species in the BSA.

#### **Alternatives A to E**

None of the threatened and endangered species identified from the database query and listed in Table 2-27 were observed during the site visit, and none of the other threatened or endangered species are expected to provide any regulatory constraint to the project given the lack of suitable habitat and extensive urbanization of the BSA. Therefore, it is unlikely that construction activities would result in any form of impact (i.e., direct, indirect, permanent, temporary, or cumulative) on threatened and endangered species.

### **Operational Impacts**

#### **No-Build Alternative (Baseline Alternative)**

The No-Build Alternative would not result in adverse effects on wildlife in the BSA.

### **Alternatives A to E**

No threatened or endangered species were observed or are expected to be present in the BSA. No threatened or endangered species are expected to provide any regulatory constraint to the project given the lack of suitable habitat and extensive urbanization of the BSA. Thus, the build alternatives A to E would not result in any form of impact (i.e., direct, indirect, permanent, temporary, or cumulative) to threatened and endangered species.

### **Avoidance, Minimization, and/or Mitigation Measures**

No impacts on threatened or endangered species have been identified; therefore, mitigation is not required.

## 2.3.6 Invasive Species

### Regulatory Setting

An invasive species is defined as a species that is (1) nonnative (or alien) to the ecosystem under consideration and (2) likely to cause economic or environmental harm or harm to human health as a result of its introduction. For a complete list of invasive plants of California, see the following web page: <http://www.cal-ipc.org/ip/management/ipcw/index.php>.

Executive Order (EO) 13112 directs federal agencies to expand and coordinate their efforts to combat the introduction and spread of nonnative plants and animals in the United States. FHWA has developed guidance to implement the EO. This guidance provides a framework designed to prevent and control the introduction and spread of invasive plant species on highway rights-of-way. Under the EO, federal agencies cannot authorize, fund, or carry out actions that they believe are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize harm have been analyzed and considered. Furthermore, federal-aid and Federal Highway Program funds cannot be used for construction, revegetation, or landscaping activities that purposely include the use of known invasive species.

### Affected Environment

Numerous noxious weeds were observed within the BSA. Noxious weed species include those designated as federal noxious weeds by the U.S. Department of Agriculture, species listed by the California Department of Food and Agriculture (CDFA), and other exotic pest plants designated by the California Invasive Plant Council (Cal-IPC). Table 2-28 identifies the noxious weed species found within the BSA.

**Table 2-28.** Noxious Weed Species Observed within the Biological Study Area

Scientific Name	English Name	California Department of Food and Agriculture Code <sup>1</sup>	California Invasive Plant Council <sup>2</sup>
<i>Ailanthus altissima</i>	Tree of heaven	None	Moderate
<i>Avena fatua</i>	Wild oat	None	Moderate
<i>Brassica nigra</i>	Black mustard	None	Moderate
<i>Bromus madritensis</i>	Spanish brome	None	High
<i>Carduus pycnocephalus</i>	Italian thistle	C	Moderate
<i>Carpobrotus chilensis</i>	Sea fig	None	Moderate
<i>Carpobrotus edulis</i>	Hottentot fig	None	High
<i>Cortaderia selloana</i>	Pampass grass	None	High
<i>Cotoneaster pannosa</i>	Woolly cotoneaster	None	Moderate
<i>Cynodon dactylon</i>	Bermuda grass	C	Moderate
<i>Eucalyptus globulus</i>	Tasmanian blue gum	None	Moderate
<i>Gazania linearis</i>	Treasureflower	None	None
<i>Hirschfeldia incana</i>	Short-pod mustard	None	Moderate
<i>Nerium oleander</i>	Oleander	None	None

Scientific Name	English Name	California Department of	California Invasive Plant
		Food and Agriculture Code <sup>1</sup>	Council <sup>2</sup>
<i>Nicotiana glauca</i>	Tree tobacco	None	Moderate
<i>Olea europaea</i>	European olive	None	Limited
<i>Pennisetum clandestinum</i>	Kikuyu grass	C	Limited
<i>Pennisetum setaceum</i>	Fountain grass	None	Moderate
<i>Picris echioides</i>	Bristly ox tongue	None	Limited
<i>Piptatherum miliaceum</i>	Smilo grass	None	Limited
<i>Ricinus communis</i>	Castor-bean	None	Limited
<i>Robinia pseudoacacia</i>	Black locust	None	Limited
<i>Schinus molle</i>	Peruvian peppertree	None	Limited
<i>Schinus terebinthifolius</i>	Brazilian peppertree	None	Limited
<i>Sorghum halepense</i>	Johnson grass	C	None
<i>Vinca major</i>	Greater periwinkle	None	Moderate

Notes:

<sup>1</sup>Codes (California Department of Food and Agriculture 2006).

C = State-endorsed holding action and eradication only when found in a nursery. Action to retard spread outside of nurseries at the discretion of the commissioner; reject only when found in a crop seed for planning or at the discretion of the commissioner.

<sup>2</sup>Codes (California Invasive Plant Council 2006).

Source: ICF Jones & Stokes, 2007.

## Environmental Consequences

### *Construction and Operational Impacts*

#### **No-Build Alternative (Baseline Alternative)**

Under the No-Build Alternative, no effects involving invasive species would occur.

#### **Alternatives A to E**

Numerous nonnative plants deemed noxious by the U.S. Department of Agriculture, CDFA, and Cal-IPC were observed within the BSA. Roads, highways, and related construction projects are some of the principal dispersal vectors for noxious weeds. The introduction and spread of exotic pest plants adversely affect natural plant communities and displace native plant species that provide shelter and foraging habitat for wildlife species. The build alternatives would disturb the ground and, therefore, may remove both nonnative vegetation and small amounts of native vegetation that could be spread to other areas. In compliance with the EO on invasive species, EO 13112, and subsequent guidance from FHWA, duffing or landscaping associated with the project would not use any species listed as noxious weeds. Further, reasonable and prudent measures would be implemented to prevent or minimize the spread of invasive species in the project area during construction and operation of the proposed project. These measures are outlined below. With the implementation of these minimization measures, the proposed build alternatives would not result in considerable adverse effects during construction or operation.

## **Avoidance, Minimization, and/or Mitigation Measures**

To ensure that the proposed project does not promote the introduction or spread of invasive species, the following minimization measures shall apply:

- IS-1** Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential for spreading noxious weeds before arriving at the site and before leaving the site during the course of construction.
- IS-2** All targeted vegetative material will be immediately removed from the project area. This includes small cuttings, leaves, branches, leaves, seeds, and vegetative litter.
- IS-3** Trucks with loads carrying vegetation shall be covered, and vegetative material removed from the site shall be disposed of in accordance with applicable laws and regulations.
- IS-4** All disturbed ground that remains as open space post-construction will be hydroseeded with a seed mix restricted to local natives to promote recolonization and reduce the risk of providing optimal conditions for invasive species. Any landscaping within the BSA will use native species.

## **2.4 Cumulative Impacts**

### **2.4.1 Regulatory Setting**

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts, under NEPA, can be found in 40 CFR, Section 1508.7 of the CEQ Regulations.

### **2.4.2 Environmental Consequences**

Table 2-29 provides a list of proposed, planned, and recently approved projects within the immediate vicinity of the proposed project. As shown in the table, 33 related projects were identified within a 2-mile radius of the project. Most of these project are small residential projects with some commercial and industrial development. No major transportation projects are proposed in the general vicinity of the proposed project. The related projects listed below and other cumulative growth and development, in combination with the proposed project, could result in cumulative impacts.

The discussion below focuses on the project-related effects identified in the previous sections of this chapter that could contribute to cumulative impacts resulting from the related projects and cumulative growth and development.

**Table 2-29. Related Projects**

<b>Map No.</b>	<b>Address</b>	<b>Project Description</b>
1	444 N Coronado Terrace	Parcel map for 3-unit Multi-Family Housing
2	2404 W Sunset Blvd	Parcel for 4-unit Residential Condominium Conversion
3	659 N Imogen Ave	Parcel for 4-unit Residential Condominium Conversion
4	1753 N Silver Lake Blvd	Parcel map for 8-unit Residential Condominium Conversion
5	663 N Imogen Ave	Parcel map to convert 4-unit Apartment Building to 4 residential Condominium
6	2005 W Elmoran Street	Zone Change and Small Lot Subdivision to allow for construction 15 Single Family units
7	422 N Alvarado Street	Affordable Incentives and Density Bonus for 60 unit apartment with 4,900 sf commercial including Adult Day Care
8	1855 N Glendale Blvd	Tentative Tract for 65 Condos with 160 parking spaces on 143 gross acres
9	2404 W Sunset Blvd	Parcel for 4-unit Residential Condominium Conversion
10	1144 W Sunset Blvd	Parcel map for 4 joint live/work units
11	1478 Sunset Blvd	Tentative Tract map for 6-unit residential condominiums
12	950 Edgecliffe Dr	Tentative Tract map for 12-unit residential condominiums
13	1016 Sanborn Ave	Tentative Tract map for 7-unit residential condominiums
14	3221 W Temple St	Federally/ State Funded Affordable Housing Project
15	3201 W Temple St	Federally/ State Funded Affordable Housing Project
16	2523 W Temple St	Zoning Administrator Changes for height and FAR for permitting mixed use building
17	949 White Knoll Dr	Tentative Tract map for 10-unit residential condominiums
18	2223 W Sunset Blvd	Tentative Tract map for 20 residential condominium live-work units, 4,355 sf retail and 63 parking spaces
19	1320 E Echo Park Ave	Tentative Tract map for construction of 5 new condominiums and 11 parking spaces
20	2333 Scout Way	Zone variance to demolish existing Boy Scouts Headquarter and construct 15,000 sf of new headquarter

<b>Map No.</b>	<b>Address</b>	<b>Project Description</b>
21	1243 W Temple Street	Zone change to permit Light garment Manufacturing in a C.5 Zone
22	1900 N Silver Lake Blvd	Tentative Tract map for 15-unit residential condominiums conversion
23	1755 N Glendale Blvd	Zoning Administrator Changes to permit adaptive reuse for 22 units in CM zone
24	1615 N Lucile Ave	General plan Amendment/ Zone change from Low-medium residential to Neighborhood Commercial
25	2943 Gleneden St	General plan Amendment/ Zone change from Parking Buffer to Commercial Manufacturing
26	3201 W Temple St	Construction of 117 units including 19 affordable housing units
27	1755 N Glendale Blvd	Vesting Tentative Tract-Adaptive Reuse of 28-unit residential condominium
28	2400 Allesandro Ave	Vesting Tentative Tract map for 14 single-family units
29	2846 W Rowena Ave	Vesting Tentative Tract map for 11 residential condos and 1 commercial condo with 25 parking spaces
30	2529 W temple Street	Height and Density Adjustments to allow for a 3-story, 8-units apartment building
31	1516 N Echo Park Ave	Tentative Tract map for 8-unit residential condominiums
32	1104 N Kensington Rd	Parcel map for 3-unit residential condos
33	1516 N Echo Park Ave	Tentative Tract map for 8-unit new residential condominium

Source: City of Los Angeles City Planning Department, ICF Jones & Stokes, 2007.

There are several areas where the project would result in no operational impacts and no or negligible construction impacts and consequently would not contribute to cumulatively considerable impacts in these areas. These impacts are discussed in their respective sections of this document and are listed below:

- Existing and Future Land Use (Section 2.1.1)
- Consistency with State, Regional, and Local Plans and Programs (Section 2.1.2)
- Parks and Recreation (Section 2.1.3)
- Growth (Section 2.1.4)
- Farmlands (Section 2.1.5)
- Relocations (Section 2.1.7)
- Environmental Justice (Section 2.1.8)

- Visual/Aesthetics (Section 2.1.11)
- Cultural Resources (Section 2.1.12)
- Hydrology and Floodplains (Section 2.2.1)
- Geology/Soils/Seismic/Topography (Section 2.2.3)
- Hazardous Waste/Materials (Section 2.2.4)
- Natural Communities (Section 2.3.1)
- Wetlands and Other Waters (Section 2.3.2)
- Animal Species (Section 2.3.4)
- Threatened and Endangered Species (Section 2.3.5)

The proposed project could result in adverse impacts in the following areas that may contribute to cumulatively considerable impacts:

- Community Impacts (Section 2.1.6)
- Utilities/Emergency Services (Section 2.1.9)
- Traffic and Transportation/Pedestrian and Bicycle Facilities (Section 2.1.10)
- Water Quality and Stormwater Runoff (Section 2.2.3)
- Air Quality (Section 2.2.5)
- Noise (Section 2.2.6)
- Plant Species (Section 2.2.3)
- Invasive Species (Section 2.3.6)

However, avoidance, minimization, or mitigation measures have been identified for each of the impacts. The discussion

- Community Impacts and Emergency Services: The study area for cumulative community impacts would include those areas served by the community facilities and services that serve the project site. Construction of the related projects could result in temporary lane or road closures depending on the location and extent of construction activities associated with those projects. The proposed project build alternatives could also result in temporary lane and ramp closures at the SR-2 terminus during the construction period, which could cumulatively diminish community and emergency vehicle access if construction of the proposed project occurs concurrently with other construction projects in the immediate area. To minimize disruptions to traffic and community access, a Traffic Management Plan will be prepared for the proposed project to prevent unreasonable delays and impacts. With implementation of the Traffic Management Plan and given lane or ramp closures would be temporary, lasting not more than the construction period, the proposed project would not result in cumulatively considerable impacts on the local community.

- Traffic and Transportation/Pedestrian and Bicycle Facilities: The study area for cumulative traffic impacts consists of the 21 study intersections identified in Section 2.1.10 of this chapter. The related projects listed in Table 2-29 above and other cumulative growth and development in the area would cumulatively increase traffic on local streets and highways. Section 2.1.10 includes a discussion of existing future no-build levels of service (LOS) at the study intersections. As identified in Section 2.1.10, six of the 21 intersections currently (year 2006) operate at LOS E or F in one or both the peak hours. Under future no-build conditions, eight of the 21 intersections would operate at LOS E or F in the peak hours, though all intersections would experience increased congestion and deteriorated operating conditions compared to existing conditions. The proposed project includes no new development that would generate trips and consequently it would not cumulatively contribute to the increases in the number of trips in the project or study area. However, the proposed build alternatives propose modifications to the configuration of the roadways at the SR-2 terminus that could affect traffic flow and safety. As shown in Section 2.1.10, some of the four intersections in the immediate vicinity of the SR-2 terminus would experience improved traffic flow and reduced delay due to the proposed build alternatives and others would experience increased delay. Alternative A, widening of the existing SR-2 terminus ramps, would result in overall improvements in traffic flow compared to the no-build conditions but this alternative would not eliminate the flyover, which results in safety hazards due to vehicles traveling on the flyover merging at high speed with traffic traveling southbound on Glendale Boulevard. Under Alternatives B to E, increased delay of up to 2 minutes, compared to the no-build condition, would occur for traffic traveling southbound on SR-2 in the AM peak hour and 20 seconds for traffic traveling northbound on Glendale Boulevard to SR-2 in the PM peak hour. While these delays would occur, Alternatives B to E would nevertheless meet the projects objective of improving pedestrian and vehicular safety at the SR-2 Terminus.
- Water Quality and Stormwater Runoff: The study area for cumulative water quality impacts includes the water bodies that could be affected by runoff from the project site, most notably the Los Angeles River. Both construction and operation of the related projects, and other cumulative growth and development, could result in the release of sediments or other pollutants in the local stormwater system adversely affecting water quality of local water resources. Construction and operation of the proposed build alternatives could also generate and release additional pollutants contributing to cumulative adverse water quality effects. However, all construction projects disturbing more than 1 acre, which includes the proposed build alternatives, would be required to comply with NPDES permit requirements and prepare a Stormwater Pollution Prevention Plan to minimize water quality impacts. Additionally, the proposed project would include a Site-Specific Mitigation Plan, in compliance with the Los Angeles County NPDES municipal stormwater permit, to minimize the release of sediments and pollutants from operation of the proposed facilities. With implementation of these measures, the proposed project is not expected to result in cumulatively considerable water quality impacts.
- Air Quality: See the discussion of climate change in Section 2.5 below.

- Noise: The study area for cumulative noise impacts includes the noise-sensitive receptors in the immediate vicinity of the improvements that would be implemented under the proposed build alternatives. The related projects and other cumulative growth and development in the area would increase traffic on local streets and highways, which would in turn increase community noise levels. Although the proposed build alternatives would not generate or increase traffic volumes, they would reconfigure the ramps and intersections at the SR-2 terminus. As a consequence, some traffic lanes would be moved closer to nearby noise-sensitive land uses such as single- and multi-family residences, further increasing noise levels at those sensitive receptors. However, as discussed in Section 2.2.6, soundwalls would be constructed as part of the proposed build alternatives to reduce noise levels at affected sensitive receptors. Consequently, the proposed project would not contribute to cumulatively considerable adverse noise impacts.
- Plant Species: The cumulative impacts study area for impacts to plant species would consist of related projects and cumulative growth and development in the City of Los Angeles that would contribute to the cumulative loss of trees protected under the City's Tree Ordinance. The proposed build alternatives would also result in the removal of trees protected by the City's ordinance. However, in compliance with the ordinance, all protected trees will be replaced. It is expected that other related projects subject to the ordinance would also replace protected trees. Consequently, the proposed project would not contribute to cumulatively considerable impacts on plant species.
- Invasive Species: The BSA defined in the NES would be considered the resource study area for the cumulative impacts of invasive species. Several noxious weed species have been identified within the BSA. The proposed project, in conjunction with the related projects, could result in the introduction of invasive species and noxious weeds in the BSA. However, with the implementation of the avoidance, minimization, and/or mitigation measures identified in Section 2.3.6 for the construction of related projects, the cumulative impacts would not be adverse.

## **2.5 Climate Change (CEQA)**

### **2.5.1 Regulatory Setting**

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires ARB to develop and implement regulations to reduce automobile and light-truck GHG emissions; these regulations will apply to automobiles and light trucks beginning with the 2009 model year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80 percent below the 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that ARB create a plan that includes market mechanisms and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted that specifically address GHG emissions reductions and climate change.

### **2.5.2 Affected Environment**

According to a recent white paper by the Association of Environmental Professionals, "an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases."

The Department and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emissions reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human-made GHG emissions are from transportation, the Department has created and is implementing the Climate Action Program (December 2006). One of the main strategies in the Department's Climate Action Program to reduce GHG emissions is to make California's transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0 to 25 mph) and speeds over 55 mph. Relieving congestion by enhancing operations and improving travel times in high-congestion travel corridors will lead to an overall reduction in GHG emissions.

The TMP developed during the construction period would ensure that excessive traffic delays would be avoided during construction. Operationally, the project would not result in additional traffic, VMT, or delay times, but it would have a beneficial effect on traffic and transportation by better managing traffic flow at the terminus and enhancing mobility and safety. Thus, the project would not lead to an increase in carbon dioxide emissions.

The Department recognizes the concern that carbon dioxide emissions raise for climate change. However, modeling and gauging the impacts associated with an increase in GHG emissions levels, including carbon dioxide, at the project level is not currently possible. No federal, state, or regional regulatory agency has provided methodology or criteria for GHG emissions and climate change impact analysis. Therefore, the Department is unable to provide a scientific or regulatory-based conclusion regarding whether the project's contribution to climate change is cumulatively considerable.

The Department continues to be actively involved on the governor's Climate Action Team as ARB works to implement AB 1493 and AB 32. As part of the Climate Action Program (December 2006), the Department is supporting efforts to reduce VMT by planning and implementing smart land use strategies, such as encouraging job/housing proximity, developing transit-oriented communities, and building high-density housing along transit corridors. The Department is working closely with local jurisdictions on planning activities; however, the Department does not have local land use planning authority. The Department is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars and light- and heavy-duty trucks. However, it is important to note that control of fuel economy standards is held by EPA and ARB. Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at the University of California, Davis.



# Chapter 3. Comments and Coordination

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Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of methods, including Project Development Team meetings and interagency coordination meetings.

Consultation with the resource agencies and soliciting public input for this project started in the early stages of planning for the SR-2 Terminus Project. The proposed project alternatives were developed using Context Sensitive Design (CSD). The FHWA defines a CSD as “. . . a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility. CSD is an approach that considers the total context within which a transportation improvement project will exist.” In the course of preparing project related studies and analyses and the development of project alternatives, the Project Development Team met with community organizations and stakeholders, elected officials, and public agencies on a regular and continuous basis to gain input, insight and to assist refine the improvement program. The following information on coordination and public participation activities summarizes the documentation published in previous public outreach reports.

## 3.1 Consultation and Coordination with Public Agencies

A Notice of Intent to hold public scoping meetings to begin the environmental process for the proposed project was published in the Los Angeles Times on April 2, 2006. Additionally, postcard notices announcing the three scoping meetings for the project were mailed to elected officials and local, state, and federal agencies having jurisdiction or discretionary approval within the project corridor, as well as other interested organizations and individuals. Information on the project was also posted on the project website at “www.metro.net.”

Consultation with several agencies occurred in conjunction with preparation of the technical reports and initial study/environmental assessment for the proposed project. The agencies are identified in the various technical reports and include those listed below.

### **Local**

Department of Recreation and Parks

### **State**

California Department of Fish and Game

### **Regional**

SCAG

### **Federal**

U.S. Fish and Wildlife Service

U.S. Army Corps of Engineers

Coordination with the City of Los Angeles Departments of Transportation and Recreation and Parks is a continuous ongoing process and it started with the planning process for all phases of the proposed SR-2 Freeway Terminus Improvement Project. Coordination addressed issues such as planning, design, environmental consequences, and cooperative agreements. Members of these agencies are part of the Project Development Team.

### **3.2 Public Participation**

Metro, in conjunction with the Los Angeles Department of Transportation (LADOT), California Department of Transportation (Caltrans), and its consultant team headed by ICF Jones & Stokes, developed a community outreach program for the SR-2 Freeway Terminus Improvement Project. The goals of the public outreach program are to share project information with the community, identify the issues and concerns regarding the study, and, to the extent feasible, integrate public feedback into the project planning process. Public meetings and other outreach efforts conducted to inform the public about the proposed project and solicit their input included public scoping and community meetings and workshops:

The following three scoping meetings were held in 2006 to present the history and status of the project, the environmental process, and gather public comment on the project.

- Community Meeting on April 11, 2006, from 6:00 to 8:00 p.m. at the Saint Teresa of Avila Church (2215 Fargo Street).
- Community Meeting on April 19, 2006, from 2:00 to 4:00 p.m. in the Windsor Room of Metro Headquarters (1 Gateway Plaza).
- Community Meeting on April 20, 2006, from 6:00 to 8:00 p.m. in Williams Hall of Barlow Hospital (2000 Stadium Way).

In addition, the following community meetings were held in the project area during the public scoping and alternatives development process in 2006.

- A design workshop was held on Wednesday June 28, 2006, from 6:30 to 8:30 p.m. at Mayberry Elementary (2414 Mayberry Street). The objective of the workshop was to present the history and status of the project, the environmental process, the existing traffic conditions and the urban design.
- A focus group meeting was held on Monday, October 23, 2006, from 5:30 to 8:00 p.m. at Mayberry Elementary (2414 Mayberry Street). The objective of the focus group was to present the project purpose, schedule, and funding.
- A focus group meeting was held on Wednesday, December 13, 2006, from 6:30 to 8:00 p.m. at Mayberry Elementary (2414 Mayberry Street). The objective of the focus group was to present the project purpose, schedule, and funding.

- A third focus group meeting was held on Wednesday, March 26, 2008 from 5:30 p.m. to 6:30 p.m. at Mayberry Elementary (2414 Mayberry Street). The objective of the meeting was to discuss the status of the environmental documentation and provide an overview of the environmental process and schedule.

The SR-2 project team also attended and presented at four meetings held by community groups to provide community stakeholders an overview and update on the status of the project, and to invite the community members to the three scoping meetings listed above. These meetings are listed below:

- Echo Park Community Action Committee (January 31, 2006)
- Echo Park Community Action Committee (March 13, 2006)
- Silver Lake Transportation Committee (April 3, 2006)
- Echo Park Improvement Association (April 6, 2006)

Members of the project team have also periodically briefed the Elected Officials Committee on the project. The Elected Officials Committee consists of federal, state, and local elected officials' staff representing the project area. Individual briefings were also provided to several elected officials.



# **Chapter 4. List of Preparers**

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## **4.1 California Department of Transportation**

Gregory Damico, Oversight Design Manager

Javad Rahimzadeh, Oversight Project Manager

Jerome Arabe, Oversight Project Engineer

Sally Moawad, Environmental Planner

Jinous Saleh, Senior Environmental Planner

Steve Chan, District Hazardous Waste Coordinator

## **4.2 Metropolitan Transportation Authority (Metro)**

Irving N. Taylor, Project Manager

Dolores Roybal Saltarelli, Project Manager

Henry Gonzalez, Co-Project Manager

## **4.3 Los Angeles Department of Transportation (LADOT)**

Irwin Chodash, Project Manager

Edward Yu, Transportation Engineer

## **4.4 ICF Jones & Stokes**

Lee Lisecki, Project Director, 24 years of experience

Amy Corathers, Project Manager, 11 years of experience

Keith Cooper, Senior Technical Analyst, 10 years of experience

Shilpa Trisal, Senior Consultant 1, 6 years of experience

Teresa Tapia, Associate Consultant 1, 2 years of experience

Bert Dudley, Associate Consultant 2, 4 years of experience

Hina Gupta, Associate Consultant 2, 1 year of experience

Gabriel Olson, Associate Consultant 2, 5 years of experience

Mark Robinson, Senior Consultant 3, 22 years of experience

Victor Ortiz, Associate Consultant 2, Air Quality Specialist, 2 years of experience

Portia Lee, Architectural Historian, 15 years of experience

Namrata Belliappa, Associate Consultant 2, GIS Analyst, 4 years of experience

## Chapter 5. Distribution List

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The IS/EA will be distributed to the federal, state, local, and regional agencies and utility providers listed on the following pages. In addition, property owners or community members that are either affected directly by the project or have expressed interest in the project will be provided with the document's Notice of Availability/Notice of Intent and/or a copy of the IS/EA.

Ms. Rebecca Escobar  
1049 W. Kensington Rd.  
Los Angeles, CA 90026

Mr. Andy Takakjian  
2609 Berkley Avenue  
Los Angeles, CA 90026

Mr. Michael Sandler  
1633 Waterloo  
Los Angeles, CA 90026

Ms. Margarita Gutierrez  
2247 Clifford Street  
Los Angeles, CA 90026

Mr. Rob Elk  
2347 Duane Street  
Los Angeles, CA 90039

Mr. Rob Elk  
2308 Duane Street  
Los Angeles, CA 90039

Ms. Marya Eller  
2343 Baxter Street  
Los Angeles, CA 90039

Ms. Ruth Ross  
2371 Cove Ave.  
Los Angeles, CA 90039

Ms. Carla Lazzareschi  
2310 Duane Street  
Los Angeles, CA 90039

Ms. Cheryl Dudley Roberts  
1603 Landa  
Los Angeles, CA 90026

Ms. Cheryl Leon  
2216 Clifford Street  
Los Angeles, CA 90026

Mr. Andrew Sears  
2308 Duane Street  
Los Angeles, CA 90039

Ms. Shelly Robert  
2116 Cove Avenue  
Los Angeles, CA 90039

Mr. Jose Escobar & Ana Gomez  
2260 Allesandro Street  
Los Angeles, CA 90039

Ms. Leesa Martling  
2232 Loma Vista Place  
Los Angeles, CA 90039

Mr. Armando Leon  
2216 Clifford Street  
Los Angeles, CA 90026

A. Renault  
2264 1/2 Duane Street  
Los Angeles, CA 90039

Mr. Everett Littlefield  
1927 Apex Avenue  
Los Angeles, CA 90039

Mr. Luis Ramon  
1511 Allesandro Street  
Los Angeles, CA 90026

Mr. Norman Losnich  
1533 N. Coronado Street  
Los Angeles, CA 90026

Ms. Karla Rodriguez  
1433 Mohawk Street  
Los Angeles, CA 90026

Ms. Maryann Kuk  
2011 W. Silver Lake Drive  
Los Angeles, CA 90039

Ms. Tamara Swanson  
1145 E. Wilson Avenue  
Glendale, CA 91206

Mr. Jim Kuiej  
2228 Elsinore Street  
Los Angeles, CA 90026

Ms. Rebeka Darr  
1956 Apex Avenue, #1  
Los Angeles, CA 90039

Ms. Pam David  
2287 Baxter Street  
Los Angeles, CA 90039

Mr. Willard Strickland  
1503 1/2 Allesandro Street  
Los Angeles, CA 90026

Mr. & Mrs. Cornelis De la Cruz  
2226 Branden Street  
Los Angeles, CA 90026

Mr. Bill Steinberg  
1673 Sargent Place  
Los Angeles, CA 90026

Mr. Gerald Stefek  
1402 Laveta Terrace  
Los Angeles, CA 90026

Ms. Gloria Gwynne  
726 N. LaFayette Park Place  
Los Angeles, CA 90026

Mr. Edmund Soohoo  
2450 Aaron Street  
Los Angeles, CA 90026

Ms. Margarita Fernandez  
329 N. Patton Street  
Los Angeles, CA 90039

Ms. Diana Smith  
2526 1/2 N Berkley Ave.  
Los Angeles, CA 90026

Mr. Gerald Kulzack  
2249 Silver Ridge Avenue  
Los Angeles, CA 90039

Mr. Rey Reyes  
1728 Kent Street  
Los Angeles, Ca 90026

Ms. Lynn Smart  
2440 Neutra Place  
Los Angeles, CA 90039

Ms. Diane McDonald  
2302 Loma Vista Place  
Los Angeles, CA 90039

Tozar Simich  
2237 Fargo Street  
Los Angeles, CA 90039

Mr. Jimmy Kwan  
1611 Allesandro Street  
Los Angeles, CA 90026

Ms. Yvonne Kwan  
1611 Allesandro Street  
Los Angeles, CA 90039

Ms. Maria De Luna  
2141 Baxter Street  
Los Angeles, CA 90039

Ms. Mildred Molinos  
2231 Branden Street  
Los Angeles, CA 90026

Ms. Cynthia Margulis  
1935 Apex Ave.  
Los Angeles, CA 90039

Mr. Michael O' Connor  
2329 Baxton Street  
Los Angeles, CA 90039

Mr. Dion Neutra  
2440 Neutra Place  
Los Angeles, CA 90039

Mr. Paul Gaffner  
2342 Lake View Ave.  
Los Angeles, CA 90039

Ms. Jane Nachazel-Ruck  
1844 Effie Street  
Los Angeles, CA 90026

Mr. Mark Murphy  
2238 Loma Vista Place  
Los Angeles, CA 90039

Ms. Jan Munroe  
1632 Lemoyne  
Los Angeles, CA 90026

M. Ablana  
1504 N. Waterloo  
Los Angeles, CA 90026

Mr. Alonso Ramirez  
2215 Fargo Street  
Los Angeles, CA 90036

Mr. Antonio Molinos  
2231 Branden Street  
Los Angeles, CA 90026

Baor Mango  
2243 Fargo Street  
Los Angeles, CA 90039

Ms. Jennie Gaio  
2538 Corralitas Drive  
Los Angeles, CA 90039

Mr. Al Moggin  
1812 W. Silverlake Drive  
Los Angeles, CA 90026

Velda Gall  
2004 Apex Ave., #112  
Los Angeles, CA 90039

Ms. Marie Gamboa  
2004 Apex Ave., #17  
Los Angeles, CA 90039

Ms. Kim McConnell  
2230 Brandon Street  
Los Angeles, CA 90026

Ms. Alicia Mendez  
2264 Allesandro Street  
Los Angeles, CA 90039

Mr. William McConnell  
2230 Branden Street  
Los Angeles, CA 90026

Ms. Nancy McKune  
1039 Kensington  
Los Angeles, CA 90026

Ms. Weba Garretson  
1838 Preston  
Los Angeles, CA 90026

Mr. Andrew Paszterko  
2055 N. Alvarado Street  
Los Angeles, CA 90039

Mr. Pei Qiy Kuran  
1611 Allesandro Street  
Los Angeles, CA 90026

Ms. Karen Fernando-Lasmarias  
1854 McCollum Street  
Los Angeles, CA 90026

Mr. Lars Gruber  
1624 Easterly Terrace  
Los Angeles, CA 90026

L. Pollard  
1506 Waterloo Street  
Los Angeles, CA 90026

Fumi Gothard  
2246 Clifford Street  
Los Angeles, CA 90026

Mr. Wayne R. Fisher  
2215 Allesandro Way  
Los Angeles, CA 90039

Ms. Kim Pesenti  
1942 Lewoyne Street  
Los Angeles, CA 90026

Mr. Santiago Perez  
2136 Elsinore Street  
Los Angeles, CA 90026

Mr. & Mrs. Juan & Lita Ocuma  
2220 Branden street  
Los Angeles, CA 90026

Ms. Laurie Fitzpatrick  
2143 Duane Street  
Los Angeles, CA 90039

Mr. Bill Freimuth  
2245 Loma Vista  
Los Angeles, CA 90039

Ms. Cheryl Partello  
2216 Clifford Street  
Los Angeles, CA 90026

Mr. Erwin Pardo  
1156 Glendale Blvd., Suite 2  
Los Angeles, CA 90026

Mr. Steve Fong  
2117 Clifford Street  
Los Angeles, CA 90026

Ms. Armida L. Padila  
184 N. Lobdell Place  
Los Angeles, CA 90026

Mr. Roberto Ovilang  
2246 Branden Street  
Los Angeles, CA 90026

LAA Olilang  
2231 1/4 Brandon Street  
Los Angeles, CA 90026

Mr. Daniel D. MacDonald  
2252 Branden Street  
Los Angeles, CA 90026

Ms. Auroon Ohlang  
2246 Branden Street  
Los Angeles, CA 90026

Ms. Yvonne Gulick  
899 W. Kensington Rd.  
Los Angeles, CA 90026

Mr. Timothy Fitzpatrick  
2143 Duane St.  
Los Angeles, CA 90039

Mr. Jim Janis  
2133 Duane Street  
Los Angeles, CA 90036

Jamie Chavez  
2132 Branden Street  
Los Angeles, CA 90026

Ms. Eve Hernandez  
2227 Scott Avenue  
Los Angeles, CA 90026

Ms. Durina Wood  
2272 Silver Ridot Ave.  
Los Angeles, CA 90039

Ms. Heather Woods  
2338 Lakeview Ave.  
Los Angeles, CA 90039

Mr. Adrian Alvarez  
2206 Glendale Blvd.  
Los Angeles, CA 90039

Mr. Ben Juarez  
1336 Allesandro Street, #1  
Los Angeles, CA 90026

Mr. Michael Woo  
2077 Balmer Drive  
Los Angeles, CA 90039

Ms. Janette Zamora  
1610 Allesandro Street  
Los Angeles, CA 90026

Daranee Burvorn Jatuvich  
2224 Duane Street, #4  
Los Angeles, CA 90036

Mr. Ray Juncal  
1517 Benton Way  
Los Angeles, CA 90026

Mr. Phillip Brock  
1821 N. Alvarado Street  
Los Angeles, CA 90026

Mae Hsu-Doyle  
2310 Cove Avenue  
Los Angeles, CA 90039

Ms. Susan Borden  
2024 Valentine Street  
Los Angeles, CA 90026

Mr. Jonathan Williams  
1942 Lewoyne St.  
Los Angeles, CA 90026

Mr. Matt Halsted  
2628 Lake View Avenue  
Los Angeles, CA 90039

Mr. George Haluka  
2215 Fargo Street  
Los Angeles, CA 90039

Mr. Bob Castaneda  
2311 Fargo Street  
Los Angeles, CA 90254

Mr. Peter Chinner  
1673 Sargent Place  
Los Angeles, CA 90026

Braden Hammer  
1827 Santa Ynez Street  
Los Angeles, CA 90026

Liubomyr Slowskei  
1916 Apex Ave.  
Los Angeles, CA 90039

Ms. Janet Chi  
1616 Allesandro Street  
Los Angeles, CA 90026

Ms. Rosie Betanzos  
2215 Baxter Street  
Los Angeles, CA 90039

Mr. Chris  
2303 Berkley  
Los Angeles, CA 90026

Mr. Kevin & Thaddeus  
2231 Cove Way  
Los Angeles, CA 90039

Mr. Paul Thomas  
2230 Branden Street  
Los Angeles, CA 90026

Mr. Anthony Jusay  
722 Bonita Street  
Monrovia, CA 91016

Mr. Blake Kendrick  
2004 Apex Avenue, #11  
Los Angeles, CA 90039

Ms. Sheila Anthony  
2211 Baxter  
Los Angeles, CA 90037

Ms. Carol Dance  
2012 Rockford Rd.  
Los Angeles, CA 90039

S. Thompson  
1651 N. Coronado Street  
Los Angeles, CA 90026

Ms. Janet Cunningham  
2124 Glendale Blvd  
Los Angeles, CA 90039

Ms. Jean Torre  
4759 Toland Way  
Los Angeles, CA 90042

Ms. Esther Alapy  
2117 Clifford Street  
Los Angeles, CA 90026

Mr. Francisco Torrero  
615 N. Alvarado Street, #1  
Los Angeles, CA 90026

Mr. Antonio Traczuk  
1423 Lakeshore Avenue  
Los Angeles, CA 90026

Mr. Eddie Alcazar  
2111 Apex Avenue  
Los Angeles, CA 90039

Mr. Craig Corleins  
2312 Earl Street  
Los Angeles, CA 90039

Mr. Terry Conway  
1029 Monterey Blvd.  
Hermosa Beach, CA 90254

Mrs. & Mr. Nancy & Peter  
Anerbach  
2116 Oak Glen Place  
Los Angeles, CA 90039

Algerth Valentine  
2277 Ewing Street  
Los Angeles, CA 90039

Mr. Seth Baker  
2383 Lake View Avenue  
Los Angeles, CA 90039

Ms. Estrella Kroger  
2223 Fargo Street  
Los Angeles, CA 90039

Ms. Rachel Kreisel  
1343 Allesandro Street  
Los Angeles, CA 90026

Ms. Nancy Auerbach  
2116 Oak Glen Place  
Los Angeles, CA 90039

Mr. Peter Auerbach  
2116 Oak Glen Place  
Los Angeles, CA 90039

Ms. Jennifer Cole  
2243 Fargo Street  
Los Angeles, CA 90039

Mr. David Byrd  
2121 Apex Avenue  
Los Angeles, CA 90039

Roque Arenas  
1618 Allesandro Street  
Los Angeles, CA 90026

Ms. Teri Halsted  
2628 Lake View Avenue  
Los Angeles, CA 90039

Ms. Valencia Watson  
2004 Apex Avenue, #17  
Los Angeles, CA 90039

Ms. Ida Talalla  
1633 Morton Avenue, #7  
Los Angeles, CA 90026

Mr. Paul Apostle  
2000 Rockford Road  
Los Angeles, CA 90039

Mr. Thomas Hanson  
2274 Cove Avenue  
Los Angeles, CA 90039

Ms. Alicia Vega  
2254 Fair Oaks View Terrace  
Los Angeles, CA 90039

Mr. Abel Perez  
20 De Mayo  
4509 N. Temple City Blvd., #203  
Temple City, CA 91780

Mr. Andrew Lynn  
Allesandro Elementary School  
2210 Riverside Drive  
Los Angeles, CA 90039

Pastor Mathew Barnett  
Angelus Temple  
1120 Glendale Blvd.  
Los Angeles, CA 90026

Ms. Karen Sulahian  
Atwater Elementary School  
3271 Silver Lake Blvd.  
Los Angeles, CA 90039

Ms. Stella Nahapetian  
Atwater Village Branch Library  
3379 Glendale Boulevard  
Los Angeles, CA 90039

Mr. Tim Warner  
Atwater Village Neighborhood  
Council  
3371 Glendale Blvd., #105  
Los Angeles, CA 90039

Mr. Jeff Gardner  
Atwater Village Neighborhood  
Council  
3371 Glendale Blvd., #105  
Los Angeles, CA 90039

Mr. Javier Roberta  
Atwater Village Neighborhood  
Council  
3371 Glendale Blvd., #105  
Los Angeles, CA 90039

Ms. Charlie Wooten  
Barlow Respiratory Hospital &  
Research Center  
2000 Stadium Way  
Los Angeles, CA 90026

Ms. Marie Anne Leyva  
Bellevue Primary  
610 N. Micheltorena Street  
Los Angeles, CA 90026

Mr. Gary Yoshinobu  
Belmont High School  
1575 W. 2nd Street  
Los Angeles, CA 90026

Representative  
California Department of  
Conservation  
801 "K" Street, MS 24-01  
Sacramento, CA 95814

Mr. Jack O'Connell  
California Department of Education  
- District & School Support Division  
1430 "N" Street  
Sacramento, CA 95814

Mr. Greg Newhouse  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814

Mr. Alexander Kim  
California Governor's Office  
300 S. Spring Street, #16701  
Los Angeles, CA 90013

Mr. Larry Myers  
California Native American Heritage  
Commission  
915 Capitol Mall, Room 264  
Sacramento, CA 95814

Ms. Georgetta Gregory  
California Public Utilities  
Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

Mr. Steve Larson  
California Public Utilities  
Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

Mr. Michael Peevey  
California Public Utilities  
Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

Ms. Loretta M. Lynch  
California Public Utilities  
Commission  
320 W. 4th Street, Suite 500  
Los Angeles, CA 90013

Mr. Wesley M. Franklin  
California Public Utilities  
Commission  
320 W. 4th Street, Suite 500  
Los Angeles, CA 90013

Ms. Tracy Egoscue  
California Regional Water Quality  
Control Board  
320 W. 4th St., Suite 200  
Los Angeles, CA 90013

The Honorable Paul Krekorian  
California State Assembly, District 43  
620 N. Brand Blvd., #403  
Glendale, CA 91203

Mr. John Hisserich  
California State Assembly, District 43  
620 N. Brand Blvd., #403  
Glendale, CA 91203

Ms. Julianne Hines  
California State Assembly, District 44  
215 N. Marengo Ave., #115  
Pasadena, CA 91101

Ms. Elizabeth Garcia  
California State Assembly, District 44  
215 N. Marengo Ave., #115  
Pasadena, CA 91101

The Honorable Anthony  
Portantine  
California State Assembly, District 44  
215 N. Marengo Ave., #115  
Pasadena, CA 91101

Ms. Alana Yanez  
California State Assembly, District 45  
360 W. Avenue 26, #121  
Los Angeles, CA 90031

Mr. Steve Veros  
California State Assembly, District 45  
360 W. Avenue 26, #121  
Los Angeles, CA 90031

The Honorable Kevin De Leon  
California State Assembly, District 45  
106 North Avenue 56  
Los Angeles, CA 90042

Mr. Milford W. Donaldson  
California State Department of  
Historic Preservation  
1416 9th Street, Room 1442-7  
Sacramento, CA 95814

The Honorable Tom McClintock  
California State Senate, District 19  
223 E. Thousand Oaks Blvd., #400  
Thousand Oaks, CA 91360

The Honorable Jack Scott  
California State Senate, District 21  
215 N. Marengo Avenue, #185  
Pasadena, CA 91101

Ms. Teresa Acosta  
California State Senate, District 21  
215 N. Marengo Avenue, #185  
Los Angeles, CA 91101

The Honorable Gilbert Cedillo  
California State Senate, District 22  
617 S. Olive Street, #710  
Los Angeles, CA 90014

Mr. Dan Farkas  
California State Senate, District 22  
617 S. Olive Street, #710  
Los Angeles, CA 90014

Ms. Diane Eidam  
California Transportation  
Commission  
1120 N Street, MS-52  
Sacramento, CA 95814

Rev. David Higa  
Calvary Chapel Echo Park  
1822 W. Temple Street  
Los Angeles, CA 90026

Ms. Mary Anne Hayashi  
Central City Action Committee  
534 E. Edgeware Rd.  
Los Angeles, CA 90026

Ms. Carol Schatz  
Central City Association of Los  
Angeles  
626 Wilshire Blvd., #200  
Los Angeles, CA 90017

Mr. Randall K. Elly  
Central City Association of Los  
Angeles  
626 Wilshire Blvd., # 200  
Los Angeles, CA 90017

Rev. Yohan Soug  
Chan Yang Methodist Church  
119 Belmont Ave.  
Los Angeles, CA 90026

Ms. Cynthia M. Ruiz  
City of Los Angeles Board of Public  
Works  
200 N. Spring Street, #361-P, MS  
464  
Los Angeles, CA 90012

Ms. Judith A. Wilson  
City of Los Angeles  
Bureau of Sanitation  
1149 S. Broadway, #900  
Los Angeles, CA 90015

Mr. Jay Oren  
City of Los Angeles  
Cultural Affairs Dept.  
201 N. Figueroa Street St. 1400  
Los Angeles, CA 90012

Mr. Anthony De Los Reyes  
City of Los Angeles  
Cultural Heritage Commission  
200 N. Spring Street  
Los Angeles, CA 90012

Ms. Michelle Cues  
City of Los Angeles  
Dept. of Neighborhood  
Empowerment  
305 E. 1st Street  
Los Angeles, CA 90012

Ms. Rita Moreno  
City of Los Angeles  
Dept. of Neighborhood  
Empowerment  
305 E. 1st Street  
Los Angeles, CA 90012

Mr. William Robertson  
City of Los Angeles  
Dept. of Public Works  
1149 S. Broadway, #400  
Los Angeles, CA 90015

Ms. Judith A. Stein  
City of Los Angeles  
Dept. of Public Works  
1149 S. Broadway Street, #900  
Los Angeles, CA 90013

Mr. Walter Butch Bradley  
City of Los Angeles  
Dept. of Public Works  
1149 S. Broadway, #300  
Los Angeles, CA 90015

Ms. Valerie Lynn Shaw  
City of Los Angeles  
Dept. of Public Works  
1149 S. Broadway Street, #300  
Los Angeles, CA 90015

Mr. Ed Ebrahimian  
City of Los Angeles  
Dept. of Public Works  
1149 S. Broadway, 2nd Floor  
Los Angeles, CA 90015

Mr. Gary Lee Moore  
City of Los Angeles  
Dept. of Public Works  
1149 S. Broadway St., Suite 700  
Los Angeles, CA 90015

Mr. Enrique C. Zaldivar  
City of Los Angeles  
Dept. of Public Works  
1149 S. Broadway St., 9th Floor  
Los Angeles, CA 90015

Mr. Irwin L. Chodash, P.E.  
City of Los Angeles  
Dept. of Transportation  
100 S. Main St., 9th Floor, MS 753-01  
Los Angeles, CA 90012

Ms. Rita Robinson  
City of Los Angeles  
Dept. of Transportation  
100 S. Main Street, 10th Floor  
Los Angeles, CA 90012

Ms. Mary D. Nichols  
City of Los Angeles  
Dept. of Water and Power  
111 North Hope Street, Rm. 1555-H  
Los Angeles, CA 90012

Mr. H. David Nahai  
City of Los Angeles  
Dept. of Water and Power  
111 N. Hope Street  
Los Angeles, CA 90012

Mr. John Kirk Mukri  
City of Los Angeles  
Dept. of General Services  
111 E. 1st Street  
Los Angeles, CA 90012

Mr. Douglas L. Barry  
City of Los Angeles Fire Dept.  
200 N. Main Street, Rm. 1020  
Los Angeles, CA 90012

Station Commander  
City of Los Angeles  
Fire Dept. Station 20, Echo Park  
2144 Sunset Blvd.  
Los Angeles, CA 90026

Station Commander  
City of Los Angeles  
Fire Dept. Station 56  
2759 Rowena Ave.  
Los Angeles, CA 90039

Station Commander  
City of Los Angeles  
Fire Dept. Station 6, Angelino  
Heights  
326 N. Virgil Ave  
Los Angeles, CA 90004

The Honorable Antonio Villaraigosa  
City of Los Angeles Mayor's Office  
200 N. Spring Street, Rm. 303  
Los Angeles, CA 90012

Ms. Jane Ellisson Usher  
City of Los Angeles  
Planning Commission  
200 N. Spring Street, Suite 532  
Los Angeles, CA 90012

Ms. Gail Goldberg  
City of Los Angeles  
Planning Department  
200 N. Spring Street, 5th Floor  
Los Angeles, CA 90012

Mr. Robert Perez  
City of Los Angeles,  
Community Development  
Department  
1200 W. 7th Street, 4th Floor  
Los Angeles, CA 90017

Mr. Gerald Gubatan  
City of Los Angeles, Council  
District 1  
200 N. Spring Street, Rm. 410  
Los Angeles, CA 90012

Ms. Guadalupe Duran-Medina  
City of Los Angeles, Council District 1  
200 N. Spring Street, Rm. 410  
Los Angeles, CA 90012

The Honorable Ed Reyes  
City of Los Angeles, Council District 1  
200 N. Spring Street, Rm. 410  
Los Angeles, CA 90012

The Honorable Herb J. Wesson, Jr.  
City of Los Angeles, Council  
District 10  
200 N. Spring Street, Rm. 430  
Los Angeles, CA 90012

The Honorable Bill Rosendahl  
City of Los Angeles, Council District 11  
200 N. Spring Street, Rm. 415  
Los Angeles, CA 90012

The Honorable Greig Smith  
City of Los Angeles, Council District 12  
200 N. Spring Street, Rm. 405  
Los Angeles, CA 90012

Mr. Mitch O'Ferrell  
City of Los Angeles, Council  
District 13  
5500 Hollywood Blvd.  
Los Angeles, CA 90028

Ms. Noel Hyun  
City of Los Angeles, Council District 13  
200 N. Spring Street, Rm. 470  
Los Angeles, CA 90012

The Honorable Eric Garcetti  
City of Los Angeles, Council District 13  
200 N. Spring Street, Rm. 470  
Los Angeles, CA 90012

The Honorable Jose Huizar  
City of Los Angeles, Council  
District 14  
200 N. Spring Street, Rm. 465  
Los Angeles, CA 90012

The Honorable Janice Hahn  
City of Los Angeles, Council District 15  
200 N. Spring Street, Rm. 435  
Los Angeles, CA 90012

The Honorable Wendy Greuel  
City of Los Angeles, Council District 2  
200 N. Spring Street, Rm. 475  
Los Angeles, CA 90012

The Honorable Dennis Zine  
City of Los Angeles, Council  
District 3  
200 N. Spring Street, Rm. 450  
Los Angeles, CA 90012

The Honorable Tom LaBonge  
City of Los Angeles, Council District 4  
200 N. Spring Street, Rm. 480  
Los Angeles, CA 90012

The Honorable Jack Weiss  
City of Los Angeles, Council District 5  
200 N. Spring Street, Rm. 440  
Los Angeles, CA 90012

The Honorable Tony Cardenas  
City of Los Angeles, Council  
District 6  
200 N. Spring Street, Rm. 455  
Los Angeles, CA 90012

The Honorable Richard Alarcon  
City of Los Angeles, Council District 7  
200 N. Spring Street, Rm. 425  
Los Angeles, CA 90012

The Honorable Bernard Parks  
City of Los Angeles, Council District 8  
200 N. Spring Street, Rm. 460  
Los Angeles, CA 90012

The Honorable Jan Perry  
City of Los Angeles, Council  
District 9  
200 N. Spring Street, Rm. 420  
Los Angeles, CA 90012

Mr. Manuel Nicolas Ponce  
Clifford Street Elementary School  
2150 Duane Street  
Los Angeles, CA 90039

Ms. Madeline Janis-Aparicio  
Community Redevelopment Agency  
354 S. Spring Street  
Los Angeles, CA 90013

Mr. Jerry A. Scharlin  
Community Redevelopment  
Agency  
354 S. Spring Street, 8th Floor  
Los Angeles, CA 90013

Mr. William H. Jackson  
Community Redevelopment Agency  
354 S. Spring Street, 8th Floor  
Los Angeles, CA 90013

Mr. Jon Sanabria, AICP  
County of Los Angeles  
Dept. of Regional Planning  
320 W. Temple Street, #1390  
Los Angeles, CA 90012

Mr. Bruce McClendon  
County of Los Angeles  
Dept. of Regional Planning  
320 W. Temple Street, #1390  
Los Angeles, CA 90012

Mr. Douglas Pardo  
De' Pardo Income Tax Service  
1156 Glendale Blvd.  
Los Angeles, CA 90026

Mr. Mike Shull  
City of Los Angeles,  
Dept. of Recreation & Parks  
1200 W. 7th Street, Suite 700  
Los Angeles, CA 90017

Ms. Denise Miller  
Eagle Rock Chamber of  
Commerce  
P.O. Box 41354  
Los Angeles, CA 90041

Ms. Lisa Palombi  
Echo Park Branch Library  
1420 W. Temple Street  
Los Angeles, CA 90026

Mr. Michael O'Brien  
Echo Park Citizen Action Committee  
1633 Morton, #8  
Los Angeles, CA 90026

Ms. Judith Raskin  
Echo Park Community Action  
Committee  
1833 Lemoyne Street  
Los Angeles, CA 90026

Mr. John Clyatt  
Echo Park Community Action  
Committee  
1625 N. Alvarado Street  
Los Angeles, CA 90026

Mr. Kevin Kuzma  
Echo Park Historical Society  
P.O. Box 261022  
Los Angeles, CA 90026

Isa-Kae Meksin  
Echo Park Historical Society  
1028 1/2 Laguna Ave.  
Los Angeles, CA 90026

Ms. Lynn Barbé  
Echo Park Improvement  
Association  
P.O. Box 261021  
Los Angeles, CA 90026

Mr. Andrew Kasbin  
Echo Park Recreation Center  
1632 Bellevue Ave.  
Los Angeles, CA 90026

Rev. David Farley  
Echo Park United Methodist  
Church  
1226 N. Alvarado Street  
Los Angeles, CA 90026

Ms. Judy Donovan  
Edendale Branch Library  
2011 W. Sunset Boulevard  
Los Angeles, CA 90026

Mr. Ramon Ramirez  
Edendale Library Friends Society  
2011 W. Sunset Boulevard  
Los Angeles, CA 90026

Ms. Joelle Dobrow  
Edendale Library Friends Society  
2011 W. Sunset Boulevard  
Los Angeles, CA 90026

Mr. Fernando Chacon  
El Centro Del Pueblo  
1157 Lemoyne Street  
Los Angeles, CA 90026

Ms. Lidia  
El Centro Del Pueblo  
1157 Lemoyne Street  
Los Angeles, CA 90026

Ms. Sally Olguin  
Elysian Heights Elementary  
1562 Baxter Street  
Los Angeles, CA 90026

Mr. Albert Vargas  
Elysian Valley Riverside  
Neighborhood Council  
2812 Newell Street  
Los Angeles, CA 90039

Ms. Gloria Moya  
Elysian Valley Riverside  
Neighborhood Council  
2812 Newell Street  
Los Angeles, CA 90039

Ms. Susan Kimbrough  
EPIA  
1557 Curran Street  
Los Angeles, CA 90026

Mr. Lou Filipesch  
EPPH  
1739 Glendale Blvd.  
Los Angeles, CA 90026

Ms. Susan Espiritu  
Filipino American Service Group Inc.  
135 N. Park View Street  
Los Angeles, CA 90026

Pastor  
First Ukranian Evengelical Baptist  
Church  
2030 Glendale Blvd.  
Los Angeles, CA 90039

Ms. Shelly Backlar  
Friends of the Los Angeles River  
570 W. Ave 26 Suite 250  
Los Angeles, CA 90065

Pastor Peter Hang  
Golden West Christian Church  
1310 Liberty Street  
Los Angeles, CA 90026

Noel & Suzi Gaur-Roger  
Greater Echo Park Elysian  
Neighborhood Council  
1625 Sargent Place  
Los Angeles, CA 90026

Mr. Mathew Dubois  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Mr. David Butler  
Greater Echo Park Elysian  
Neighborhood Council  
P.O. Box 261039  
Los Angeles, CA 90026

Ms. June Betschart  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Mr. Andrew Garsten  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Mr. Darren Hubert  
Greater Echo Park Elysian  
Neighborhood Council  
P.O. Box 261039  
Los Angeles, CA 90026

Ms. Joselyn Geaga-Rosenthal  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Mr. John Eric Concordia  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Mr. Jose Sigala  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Mr. Arturo Garcia  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Ms. Ida Talalla  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Mr. Jason Geaga-yap  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Mr. Jorge Prado  
Greater Echo Park Elysian  
Neighborhood Council  
P.O. Box 261039  
Los Angeles, CA 90026

Mr. Fransisco Torrero  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Ms. Suzanne Rogers  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Ms. Margarita Fernandez  
Greater Echo Park Elysian  
Neighborhood Council  
P.O. Box 261039  
Los Angeles, CA 90026

Ms. Patricia Mendoza  
Greater Echo Park Elysian  
Neighborhood Council  
P.O. Box 261039  
Los Angeles, CA 90026

Mr. Stephen Stickler  
Greater Echo Park Elysian  
Neighborhood Council  
P.O. Box 261039  
Los Angeles, CA 90026

Mr. William Mavropoulos  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Ms. Lisa Baca  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Mr. David Rockello  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Mr. Augustine Cebada  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Mr. Bennett Kayser  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Mr. Arthur Stevens  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Ms. Barbara Rausch  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Dimas Argueta  
Greater Echo Park Elysian  
Neighborhood Council  
P.O. Box 261039  
Los Angeles, CA 90026

Mr. Daniel MacDonald  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Mr. David Schnepf  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Mr. Valentin Rivera  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Ms. Nora Sanchez  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Ms. Suzanne Kimbrough  
Greater Echo Park Elysian  
Neighborhood Council  
P.O. Box 261039  
Los Angeles, CA 90026

Ms. Christine Peters  
Greater Echo Park Elysian  
Neighborhood Council  
2327 Vista Gordo Drive  
Los Angeles, CA 90026

Mr. Larry Pickens  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 26514  
Los Angeles, CA 90026

Mr. Gustavo Moreno  
Greater Echo Park Elysian  
Neighborhood Council  
P.O Box 261039  
Los Angeles, CA 90026

Mr. Steven Arthur  
Greater Echo Park Neighborhood  
Council/EPIA  
2088 Cerro Gordo Street  
Los Angeles, CA 90039

Mr. Omar Ureta  
GRFC  
2055 W. Alvarado Street  
Los Angeles, CA 90039

Mr. Jeff Carr  
Hathaway Hills Homeowners  
Association  
1801 Apex Avenue  
Los Angeles, CA 90026

Ms. Melissa Bauer  
International Church of the  
Foursquare Gospel  
1910 W. Sunset Blvd.  
Los Angeles, CA 90026

M. Spear  
International Institute of Los Angeles  
1824 Altivo Way  
Los Angeles, CA 90026

Ms. Lilian Jumie Sugahara  
Ivanhoe Elementary School  
2828 Herkimer Street  
Los Angeles, CA 90039

Mr. Malcolm Schenot  
Jensen's Recreation Center  
1706 W. Sunset Blvd.  
Los Angeles, CA 90026

Mr. José Ignacio Lozano  
La Opinion  
700 S. Flower Street, #3000  
Los Angeles, CA 90017

Ms. Monica Lozano  
La Opinion  
700 S. Flower Street, #3000  
Los Angeles, CA 90017

Ms. Yolanda Treto  
La Opinion  
700 S. Flower Street, #3000  
Los Angeles, CA 90017

Ms. Gloria Galvan  
La Opinion  
700 S. Flower Street, #3000  
Los Angeles, CA 90017

Ms. Michelle Mowery  
LADOT  
100 S. Main Street, 9th Floor  
Los Angeles, CA 90012

Ms. Julie Christina Dixon  
Lake Street Elementary School  
135N. Lake Street  
Los Angeles, CA 90026

Mr. Davis Kaneps  
Latvian Evangelical Lutheran  
Church of S. California  
1927 Riverside Drive  
Los Angeles, CA 90039

Mr. Salvador Beltran  
LAUSD Transportation  
2710 Media Center Dr. #100  
Los Angeles, CA 90065

Ms. Diane Ramirez Ramos  
Logan Elementary School  
1711 W. Montana Street  
Los Angeles, CA 90026

Mr. Gary Toebben  
Los Angeles Area Chamber of  
Commerce  
350 S. Bixel Street  
Los Angeles, CA 90017

Mr. Matt Benjamin  
Los Angeles County Bicycle  
Coalition  
634 S. Spring Street, #821  
Los Angeles, CA 90014

Kastle Lund  
Los Angeles County Bicycle  
Coalition  
634 S. Spring Street, #821  
Los Angeles, CA 90014

The Honorable Gloria Molina  
Los Angeles County Board of  
Supervisors, District 1  
500 W. Temple Street, Rm. 856  
Los Angeles, CA 90012

Mr. Michael Herndon  
Los Angeles County Board of  
Supervisors, District 2  
500 W. Temple Street, Rm. 866  
Los Angeles, CA 90012

Mr. Carlos Jackson  
Los Angeles County Community  
Development Commission  
2 Coral Circle  
Monterey Park, CA 91755

San Banh  
Los Angeles County Dept. of Public  
Works  
900 S. Fremont Ave., 11th Floor  
Alhambra, CA 91803

Ms. Marianne Jeffers  
Los Angeles County Dept. of  
Public Works  
900 S. Fremont Ave.  
Alhambra, CA 91803

Mr. P. Michael Freeman  
Los Angeles County Fire  
Department  
1320 N. Eastern Ave.  
Los Angeles, CA 90063

Sheriff Leroy Baca  
Los Angeles County Sheriff  
Department  
5019 E. Third Street  
Los Angeles, CA 90022

Mr. Mike Kameya  
Los Angeles County Sheriff  
Department  
4700 Ramona Blvd.  
Monterey Park, CA 91754

Mr. Tony Castro  
Los Angeles Independent  
1730 W. Olympic Blvd., #500  
Los Angeles, CA 90015

Pluria Marshal  
Los Angeles Independent  
1730 W. Olympic Blvd., #500  
Los Angeles, CA 90015

Chief William Bratton  
Los Angeles Police Department  
150 N. Los Angeles Street  
Los Angeles, CA 90012

Officer Debra McCarthy  
Los Angeles Police Department  
2710 W. Temple Street  
Los Angeles, CA 90026

Officer Morris Smith  
Los Angeles Police Department  
3353 San Fernando Rd.  
Los Angeles, CA 90065

Officer Jose Perez  
Los Angeles Police Department  
3353 San Fernando Rd.  
Los Angeles, CA 90065

Mr. John P. Puerner  
Los Angeles Times  
201 W. 1st Street  
Los Angeles, CA 90012

Ms. Marlene Canter  
Los Angeles Unified School District  
333 S. Beaudry Ave., 24th Floor  
Los Angeles, CA 90017

Mr. Roy Romer  
Los Angeles Unified School  
District  
333 S. Beaudry Ave., 24th Floor  
Los Angeles, CA 90017

Mr. David Palmer  
Los Angeles Unified School District  
2710 Media Center Drive, #100  
Los Angeles, CA 90065

Mr. Antonio Rodriguez  
Los Angeles Unified School District,  
Business Services Division  
Transportation Branch, District 4  
2710 Media Center Drive, #100  
Los Angeles, CA 90065

Mr. Richard Alonzo  
Los Angeles Unified School  
District, Local District 4  
4201 Wilshire Blvd.  
Los Angeles, CA 90010

Mr. David Tokofsky  
Los Angeles Unified School District,  
Local District 5  
334 S. Beaudry Ave., 24th Floor  
Los Angeles, CA 90017

Love Korean Church  
2801 W. Temple Street  
Los Angeles, CA 90026

Ms. Paula Bennett  
Mayberry Elementary School  
2414 Mayberry Street  
Los Angeles, CA 90026

Ms. Lynne Goldsmith  
Metro  
One Gateway Plaza, MS 99-22-5  
Los Angeles, CA 90012

Mr. Roger Snoble  
Metro  
One Gateway Plaza, M: 99-3-1  
Los Angeles, CA 90012

Mr. Henry Gonzalez  
Metro  
One Gateway Plaza, MS 99-22-2  
Los Angeles, CA 90012

Ms. Patricia Torres Bruno  
Metro  
One Gateway Plaza  
Los Angeles, CA 90012

Ms. Marisa Yeager  
Metro  
One Gateway Plaza  
Los Angeles, CA 90012

Mr. Gary Katzman  
Metro  
One Gateway Plaza  
Los Angeles, CA 90039

Ms. Grisel Sanchez  
Metro  
One Gateway Plaza  
Los Angeles, CA 90012

Mr. Robin Blair  
Metro  
One Gateway Plaza  
Los Angeles, CA 9001

Ms. Pam O'Connor  
Metro  
One Gateway Plaza, MS 99-3-1  
Los Angeles, CA 90012

Mr. Irving N. Taylor  
Metro  
One Gateway Plaza  
Los Angeles, CA 90012

Mr. Diego Cardoso  
Metro  
One Gateway Plaza  
Los Angeles, CA 90012

Ms. Dolores Roybal Saltarelli  
Metro  
One Gateway Plaza, MS 99-22-2  
Los Angeles, CA 90012

Ms. Helen Ortiz  
Metro  
One Gateway Plaza  
Los Angeles, CA 90012

Mr. Gilbert Ivey  
Metropolitan Water District of  
Southern California  
P.O. Box 54153  
Los Angeles, CA 90054

Mr. Ronald Gastelum  
Metropolitan Water District of  
Southern California  
P.O. Box 54153  
Los Angeles, CA 90054

Director  
National Association For Hispanic  
Elderly Inc.  
1450 W. Temple Street  
Los Angeles, CA 90026

Rev. Chan Lu  
New Hope Mission Methodist  
Church  
1226 N. Alvarado Street  
Los Angeles, CA 90026

Mr. Rosario Ismael, Jr.  
Newmark High School  
134 Witmar St.  
Los Angeles, CA 90026

Business Owner  
O.K. MFG. & Supply  
1316 Glendale Blvd.  
Los Angeles, CA 90039

Father Jake  
Orthodox Cathedral of  
Holy Virgin Mary  
650 Micheltorena St.  
Los Angeles, CA 90026

Father Richard Casillas  
Our Lady of Loretto Catholic  
Church  
250 N. Union Ave.  
Los Angeles, CA 90026

Ms. Fidela Suelto  
Our Lady of Loretto Elementary  
School  
258 N. Union Avenue  
Los Angeles, CA 90026

Ms. Eleanor Vargas  
Plasencia Elementary School  
1321 Cortez Street  
Los Angeles, CA 90026

Mr. Evaristo Barrett  
Rosemont Elementary School  
421 N. Rosemont Ave.  
Los Angeles, CA 90026

Mr. Peter J. Corpus  
Search to Involve Pilipino  
Americans  
3200 W. Temple Street  
Los Angeles, CA 90026

Mr. Al Moggia  
Sierra Club Los Angeles Chapter  
3435 Wilshire Blvd., Suite 320  
Los Angeles, CA 90010

Ms. Linda Hoyer  
Sierra Club Los Angeles Chapter  
3435 Wilshire Blvd., Suite 320  
Los Angeles, CA 90010

Mr. Gordon LaBedz  
Sierra Club Los Angeles Chapter  
3435 Wilshire Blvd., Suite 320  
Los Angeles, CA 90010

Ms. Cheryl Revkin  
Silver Lake Chamber of Commerce  
1724 W. Silverlake Drive  
Los Angeles, CA 90026

Mr. Vince Brook  
Silver Lake Improvement  
Association  
P.O. Box 291274  
Los Angeles, CA 90039

Mr. Joshua St. Thomas  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Mr. Scott Crawford  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Ms. Janet Cuningham  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Ms. Tenaya Wallace  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Mr. Mitchell Eisenberg  
Silver Lake Neighborhood Council  
745 Tularosa Drive  
Los Angeles, CA 90026

Mr. Paul Newman  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Ms. Andrea Marquez  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Ms. Courtney Blackburn  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Leni Fleming  
Silver Lake Neighborhood Council  
2130 Apex Ave.  
Los Angeles, CA 90039

Ms. Laura Dwan  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Mr. Spencer Strauss  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Ms. Gale Jaffe  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Mr. Michael Ray Menjivar  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Ms. Joanna Paden  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Mr. Mathew Dubois  
Silver Lake Neighborhood Council  
2898 Rowena Ave.  
Los Angeles, CA 90039

Ms. Patricia McGrath  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Mr. Kris Wallin  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Ms. Cherie Miller  
Silver Lake Neighborhood Council  
2898 Rowena Ave.  
Los Angeles, CA 90039

Mr. Rusty Millar  
Silver Lake Neighborhood Council  
P.O. Box 291581  
Los Angeles, CA 90029

Mr. Loren Colin  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Ms. Kim Jones  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Mr. Luther Wentzel  
Silver Lake Neighborhood Council  
2898 Rowena Ave.  
Los Angeles, CA 90039

Ms. Gena Nason  
Silver Lake Neighborhood Council  
2227 Ewing Street  
Los Angeles, CA 90039

Ms. Lori Oddino  
Silver Lake Neighborhood Council  
2004 Apex Ave., #10  
Los Angeles, CA 90039

Ms. Renee Nauhaum  
Silver Lake Neighborhood Council  
2898 Rowena Ave., #101  
Los Angeles, CA 90039

Mr. Peter Lassen  
Silver Lake Neighborhood Council/  
Echo Park Community Action Cmte.  
1448 N. Boylston Street  
Los Angeles, CA 90012

Ms. Maryann Kuk  
Silver Lake Residents Association  
P.O. Box 39587  
Los Angeles, CA 90039

Representative  
Silver View II Homeowners  
Association  
2330 Duane Street  
Los Angeles, CA 90026

Ms. Cynthia Jackson  
SLRA  
2009 Balmer Dr.  
Los Angeles, CA 90039

Ms. Diane Edwardson  
SLRA/CRAP  
2630 Corralitas Dr.  
Los Angeles, CA 90039

Ms. Carol Coy  
South Coast Air Quality  
Management District  
21865 E. Copley Drive  
Diamond Bar, CA 91765

Mr. Joseph K. Lyou  
South Coast Air Quality  
Management District  
21865 E. Copley Drive  
Diamond Bar, CA 91765

Mr. Wayne Moore  
Southern California Association of  
Governments  
818 W. Seventh Street  
Los Angeles, CA 90017

Mr. Hasan Ikhata  
Southern California Association of  
Governments  
818 W. Seventh Street  
Los Angeles, CA 90017

Ms. Diana M. Salinas  
St. Teresa of Avila Church  
727 Tularosa Drive  
Los Angeles, CA 90026

Father Joseph Fernandez  
St. Teresa of Avila Church  
2215 Fargo Street  
Silverlake, CA 90039

Mrs. Christina Fernandez-Caso  
St. Teresa of Avila Elementary  
School  
2215 Fargo Street  
Los Angeles, CA 90039

Mr. Carl Mills  
St. Teresa of Avila School  
3822 Brunswick Avenue  
Los Angeles, CA 90039

Mr. Terry Roberts  
State Clearinghouse  
1400 Tenth Street  
Sacramento, CA 95814

Mr. Ron Peregrina  
State Wide Heating, Air  
Conditioning  
2433 Edgewater Terrace  
Los Angeles, CA 90039

Pastor Peter Sung  
Sung Ji Korean Baptist Church  
2226 Fargo Street  
Los Angeles, CA 90039

Mr. Andrew Sears  
The Committee to Save Silver  
Lake's Reservoirs (CSSLR)  
P.O. Box 39735  
Los Angeles, CA 90039

Mr. Bruce Faron  
The Wild Hare  
2218 Aaron Street  
Los Angeles, CA 90026

Mr. Stuart Sobel  
Thrift Storage  
1717 W. Glendale Blvd.  
Los Angeles, CA 90026

Mr. William Barth  
U. S. Department of Housing &  
Urban Development  
611 W. 6th Street, Suite 800  
Los Angeles, CA 90017

Col. Richard Thompson  
U.S. Army Corps of Engineers  
911 Wilshire Blvd.  
Los Angeles, CA 90017-3401

Representative  
U.S. Department of the Interior  
1849 "C" Street, NW, Main Interior  
Bldg, MS 2340  
Washington, DC 20240

The Honorable Xavier Becerra  
U.S. House of Representatives,  
Dist. 31  
1910 W. Sunset Blvd., #560  
Los Angeles, CA 90026

Ms. Gayle Greenberg  
U.S. House of Representatives,  
Dist. 31  
1910 Sunset Blvd., #560  
Los Angeles, CA 90026

The Honorable Diane Watson  
U.S. House of Representatives, Dist. 33  
4322 Wilshire Blvd., #302  
Los Angeles, CA 90010

The Honorable Lucille Roybal-  
Allard  
U.S. House of Representatives,  
Dist. 34  
255 E. Temple Street, #1860  
Los Angeles, CA 90012

The Honorable Grace Napolitano  
U.S. House of Representatives,  
Dist. 38  
11627 E. Telegraph Road, #100  
Sante Fe Springs, CA 90670

Mr. Guillermo Gonzalez  
U.S. Senate  
11111 Santa Monica Blvd., # 915  
Los Angeles, CA 90025

The Honorable Diane Feinstein  
U.S. Senate  
11111 Santa Monica Blvd., #915  
Los Angeles, CA 90025

Mr. Corey Jackson  
U.S. Senate  
312 N. Spring Street, #1748  
Los Angeles, CA 90012

The Honorable Barbara Boxer  
U.S. Senate  
312 N. Spring Street, #1748  
Los Angeles, CA 90012

Mr. Trevor Daley  
U.S. Senate  
11111 Santa Monica Blvd., #915  
Los Angeles, CA 90025

Father Valsil Shteles  
Ukrainian Orthodox Church of  
St. Andrew  
1456 Sutherland Street  
Los Angeles, CA 90026

Postmaster  
United States Post Office  
1525 Alvarado Street  
Los Angeles, CA 90026

Rev. Sam Luange  
Young HWA United Methodist  
Church  
214 Loma Drive  
Los Angeles, CA 90039



## **APPENDICES**



## **Appendix A: CEQA Checklist**



**Appendix A: CEQA Checklist**

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

Supporting documentation of all CEQA checklist determinations is provided in Chapter 2 of this Initial Study/Environmental Assessment. Discussion of all impacts, avoidance, minimization, and/or compensation measures is under the appropriate topic headings in Chapter 2. The environmental factors checked below (☒) would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

**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.	<input type="checkbox"/>
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.	<input checked="" type="checkbox"/>
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	<input type="checkbox"/>
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant un 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.	<input type="checkbox"/>
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 or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	<input type="checkbox"/>

Signature

Date

**Issues**

Potentially Significant      Potentially Significant Unless Mitigation Incorporated      Less than Significant Impact      No Impact

**EVALUATION OF ENVIRONMENTAL IMPACTS:**

<b>1. AESTHETICS. Would the project:</b>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>2. AGRICULTURE 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. Would the project:</b>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>3. 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:</b>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Issues**

Potentially Significant      Potentially Significant Unless Mitigation Incorporated      Less than Significant Impact      No Impact

<b>4. BIOLOGICAL RESOURCES. Would the project:</b>				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>5. CULTURAL RESOURCES. Would the project:</b>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>6. GEOLOGY AND SOILS. Would the project</b>				
<b>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</b>				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Issues**

	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>7. HAZARDS AND HAZARDOUS MATERIALS. Would the project:</b>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Issues

Potentially Significant      Potentially Significant Unless Mitigation Incorporated      Less than Significant Impact      No Impact

<b>8. HYDROLOGY AND WATER QUALITY. Would the project:</b>				
	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>9. LAND USE AND PLANNING. Would the project:</b>				
	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Issues**

Potentially Significant      Potentially Significant Unless Mitigation Incorporated      Less than Significant Impact      No Impact

<b>10. MINERAL RESOURCES. Would the project:</b>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>11. NOISE. Would the project result in:</b>				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>12. POPULATION AND HOUSING. Would the project:</b>				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Issues**

Potentially Significant      Potentially Significant Unless Mitigation Incorporated      Less than Significant Impact      No Impact

<b>13. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government 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:</b>				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>14. RECREATION.</b>				
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<b>15. TRANSPORTATION/TRAFFIC. Would the project:</b>				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e. g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Issues**

Potentially Significant      Potentially Significant Unless Mitigation Incorporated      Less than Significant Impact      No Impact

<b>16. UTILITIES AND SERVICE SYSTEMS. Would the project:</b>				
	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>17. MANDATORY FINDINGS OF SIGNIFICANCE.</b>				
	Potentially Significant	Potentially Significant Unless Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Appendix B: Resources Evaluated Relative to the Requirements of Section 4(f)**



## **Resources Evaluated Relative to the Requirements of Section 4(f)**

This section of the document discusses parks, recreational facilities, wildlife refuges and historic properties found within or adjacent to the project area that do not trigger Section 4(f) protection either because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) The proximity impacts do not result in constructive use.

The Historic Property Survey Report (HPSR) prepared for this project concluded that no properties require evaluation are present within the project vicinity. Therefore, the provisions of Section 4(f) are not triggered.

Alternative A would not result in “use” of a Section 4(f) resource and therefore, the provisions of Section 4(f) are not triggered. Alternative A would not require any permanent use (acquisition) of the Tommy Lasorda Field of Dreams. The Tommy Lasorda Field of Dreams would continue to function as a recreational area under all of the build alternatives. The types of athletic activities (baseball, softball games, etc.) that take place at the field do not require quiet surroundings. No substantial adverse noise impacts to park users were identified and no sound walls are proposed in the vicinity of the field. Further, this alternative would not have aesthetic effects that would substantially impair the protected activities, features, and attributes that qualify this resource for protection under Section 4(f). Finally, this alternative would not affect access to the Tommy Lasorda Field of Dreams. As such, no adverse effects to parks and no use of Section 4(f) park resources in the project area would occur as a result of Alternative A. This alternative, however, would retain the flyover in close proximity to Tommy Lasorda Field of Dreams for use by vehicles traveling southbound on SR-2.

The proposed Alternatives B-E would provide the potential for additional pedestrian accessible open space and green recreation areas. Therefore, these alternatives would have a potential beneficial effect on parks and recreational resources. Alternatives D and E would provide the greatest potential for open space among the build alternatives by eliminating the flyover and retaining the bridge. Similar to Alternative A, these four build alternatives would not result in adverse operational effects on existing park and recreational areas including the Tommy Lasorda Field of Dreams and no use of Section 4(f) park resources would occur.

There are no existing or planned publicly owned parks, recreation areas, or wildlife or waterfowl refuges within or immediately adjacent to the disturbance limits of the proposed project. Therefore, the provisions of Section 4(f) are not triggered.



## **Appendix C: Title VI Policy Statement**



## **Title VI Policy Statement**

The proposed project has been developed in accordance with Title VI of the Civil Rights Act of 1964, which provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. In addition, the project has been developed in conformity with related statutes and regulations mandating that no person in the State of California shall on grounds of race, color, sex, age, national origin, or disabling condition, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity administered by or on the behalf of the California Department of Transportation.



## **Appendix D: Minimization and/or Mitigation Summary**



**ENVIRONMENTAL COMMITMENT RECORD**

Terminus Improvement

District 7- LA-02 Post Miles 13.5/15.0

EA 205500

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
<b>COMMUNITY IMPACTS</b>						
C-1	A Traffic Management Plan (TMP) shall be prepared to prevent unreasonable traffic delays and impacts. The TMP shall be developed in consultation with the City, Caltrans, and the County and shall be provided, along with construction plans, to City police and fire departments prior to commencement of construction activities. The information provided should include access and traffic management plans detailing any projected temporary street closures or expected traffic delays due to construction vehicles using the roadways. The following elements will be a major component in the specific TMP:	TMP Eng./RE/RE (Engineer)/ Public Affairs/PM	Pre and during construction		Caltrans Protocol	

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<ul style="list-style-type: none"> <li>• public awareness campaign particularly related to the scheduling of work;</li> <li>• construction zone enforcement enhancement program (COZEEP);</li> <li>• utilization of portable changeable message signs (PCMS);</li> <li>• advance information signing pertaining to date, time and durations of lanes and road closures;</li> <li>• preparation of temporary detour plans, if needed, during the plans, specifications, and estimates (PS&amp;E) phase (note: no detours are anticipated at this time); and</li> <li>• notification sent to LAUSD and St. Teresa of Avila School at least two weeks in advance of any planned street closures (including partial and/or full closures) or traffic diversions.</li> </ul>					

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
<b>ENVIRONMENTAL JUSTICE IMPACT</b>						
Avoidance Measure	Efforts will continue to be made to ensure meaningful opportunities for public participation during the project planning and development process. This may include, but not necessarily be limited to, additional community meetings, informational mailings, a project website, and news releases to local media. The community outreach and public involvement programs for the project will seek to actively and effectively engage the affected community and include mechanisms to reduce cultural, language, and economic barriers to participation.	Public Affairs/PM	Pre and during construction		Caltrans Protocol	
<b>VISUAL</b>						
Avoidance	The project would be designed in accordance with Caltrans' Highway Design Manual and the 2007 Project Development Manual. The proposed SR-2 improvements would be designed to be in keeping with the local	RE/Landscape Architecture	Design/ Construction		VIA/Scenic Resource Evaluation, Context Sensitive Solutions	

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<p>design context in which the work is proposed, with input from local governmental agencies. Aesthetic treatments to retaining wall gore paving, overpass structures (i.e., vines, colored textured paving, etc.), and, if proposed, extensive landscape screening of soundwalls utilizing a combination of vines, replacement trees and shrubbery would be done. As a result, visual impacts under CEQA and adverse visual effects under NEPA would be less than significant as a result of the project.</p>					
<b>CULTURAL RESOURCES</b>						
A-1	<p>If buried cultural resources are encountered during construction, work in that area must halt and all earth-moving activity within and around the immediate discovery area shall be diverted until a qualified archaeologist can evaluate the nature and significance of the find.</p>	RE/Cultural	Construction		Caltrans Protocol	

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<p>If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the county coroner shall be contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify NAHC, which will then notify the Most Likely Descendent (MLD). The person who discovered the remains shall contact the Department, District 7, Environmental Division, Cultural Studies Branch, and work with the MLD to determine the most respectful treatment of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.</p>					

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
<b>WATER QUALITY</b>						
WQ-1	<p>As part of compliance with conditions of the NPDES General Construction Permit, the City and/or its contractors shall implement a SWPPP to ensure no considerable impacts on water quality will occur during construction. The SWPPP will identify best management practices (BMPs) to maintain water quality. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other nonpoint-source runoff. Measures range from source control, such as reduced surface disturbance, to treatment of polluted runoff, such as detention or retention basins. BMPs to be implemented as part of compliance with conditions of the NPDES General Construction Permit may include but are not limited to the following measures: temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary</p>	RE/Storm Water	Between preconstruction and start of construction		Title 8, California Code of Regulations, Section 1532.1	<p>--Submit for review a copy of the Excavation and Transportation Plan to Construction Stormwater between the preconstruction meeting and start of work and prior to payment or approval.</p> <p>--Implement any air, soil, or hazardous waste sampling plans required by the contractor's lead plan and SSPs.</p>

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<p>revegetation or other ground cover) will be employed to control erosion from disturbed areas; drainage facilities in downstream off-site areas will be protected from sediment using BMPs acceptable to the RWQCB; and grass or other vegetative cover will be established on the construction site as soon as possible after disturbance.</p>					
WQ-2	<p>The implementation of a Hazardous Spill Prevention and Control Program is required as part of compliance with the NPDES General Construction Permit. The City and/or its contractors shall develop and implement a spill prevention and control program to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities. The plan shall be completed before any construction activities begin and include provisions for preventing, containing, and reporting spills of hazardous materials.</p>	RE/RE	Construction		DTSC	<p>The RE can obtain the temporary EPA identification number by contacting DTSC.</p>

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
WQ-3	<p>The implementation of measures to minimize water quality impacts on impaired water bodies, such as the Los Angeles River, are required as part of compliance with the Los Angeles County NPDES municipal stormwater permit. Because the project may be considered a redevelopment project, the City shall develop a Site-Specific Mitigation Plan. This mitigation plan shall follow Development Planning Program guidelines established in the <i>Manual for the Standard Urban Stormwater Mitigation Plan</i>. The Site-Specific Mitigation Plan shall be submitted to the City of Los Angeles Watershed Protection Division for approval. Incorporation of stormwater source control measures, site design principals, and treatment control measures shall be included in the design of the project. BMPs incorporated into the project design may include</p>	RE/RE	Construction		DTSC	Same as above.

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<p>but are not limited to the following:</p> <ul style="list-style-type: none"> <li>• storm drain system stenciling and signage at storm drain inlets;</li> <li>• installation of devices to reduce the velocity or energy of water at storm drain outlets;</li> <li>• reducing the width of sidewalks and incorporating landscaped buffer areas between sidewalks and streets;</li> <li>• installation of a dry detention basin(s) to decrease runoff during storm events, prevent flooding, and allow for off-peak discharge;</li> <li>• installation of an infiltration trench to decrease runoff during storm events, prevent flooding, and allow for off-peak discharge; and</li> <li>• installation of vegetated strips, high infiltration substrates, and vegetated swales where feasible throughout the project site to reduce runoff and provide initial stormwater treatment.</li> </ul>					

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
WQ-4	<p>Because the proposed project would encroach into State right-of-way, the project proponent shall conduct the following:</p> <ul style="list-style-type: none"> <li>• Construction-related water quality impacts shall be minimized according to the <i>Storm Water Quality Handbook: Project Planning and Design Guide (PPDG)</i>. The Project Engineer shall complete Appendix C (Selection of Construction Site BMPs) and Appendix F (Cost Estimate of the Construction Site BMPs). The Caltrans District 7 Construction Storm Water Coordinator would approve completion of the PPDG requirements.</li> <li>• As described in the PPDG, the Project Engineer shall develop the Project Study Report (PSF), Project Report (PR), Project Scope Summary Report (PSSR), and other scoping documents</li> </ul>	RE/Contractor	Construction		Caltrans Protocol	

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<p>during project planning. The primary objectives of these documents are to:</p> <ul style="list-style-type: none"> <li>○ Identify potential storm water quality requirements and pollutants of concern for specific water bodies;</li> <li>○ Ensure that the planned project includes sufficient right-of-way and budget for required storm water controls according to Appendix F, Section F.6 of the PPDG;</li> <li>○ Identify project-specific permanent and temporary BMPs that may be required to mitigate impacts. Permanent BMPs (including design pollution prevention and treatment BMPs) must be implemented to the maximum extent practicable and to the extent that implementation is consistent with existing Caltrans policies;</li> </ul>					

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<ul style="list-style-type: none"> <li>The Project Engineer shall comply with District 7 Directive No. DD31 And DD81 (Caltrans 2005a and 2005b, respectively); and</li> <li>The Project Engineer shall prepare a Storm Water Data Report (Caltrans 2007b) and provide a copy to the Caltrans District 7 Storm Water NPDES Coordinator for review and comment.</li> </ul>					
<b>TRAFFIC AND TRANSPORTATION</b>						
<b>T-1</b>	<p>A Traffic Management Plan (TMP) shall be prepared by the project proponent to prevent unreasonable traffic delays and impacts. The TMP shall be developed in consultation with the City, Caltrans, and the County and shall be provided, along with construction plans, to City police and fire departments prior to commencement of construction activities. The information provided should include access and traffic management plans detailing any projected temporary street closures or</p>	<p>TMP Eng./RE/RE (Engineer)/ Public Affairs/PM</p>	<p>Construction</p>		<p>Caltrans Protocol</p>	

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<p>expected traffic delays due to construction vehicles using the roadways. The following elements will be a major component in the specific TMP:</p> <ul style="list-style-type: none"> <li>• public awareness campaign particularly related to the scheduling of work;</li> <li>• construction zone enforcement enhancement program (COZEEP);</li> <li>• utilization of portable changeable message signs (PCMS);</li> <li>• advance information signing pertaining to date, time and durations of lanes and road closures;</li> <li>• preparation of temporary detour plans, if needed, during the plans, specifications, and estimates (PS&amp;E) phase (note: no detours are anticipated at this time); and</li> <li>• notification sent to LAUSD and St. Teresa of Avila School at least two weeks in advance</li> </ul>					

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	of any planned street closures (including partial and/or full closures) or traffic diversions.					
<b>GEOLOGY</b>						
GEO-1	Geologic and seismic hazards shall be avoided or minimized by employing sound engineering practice in the design and construction of the proposed project.	RE	Design/construction		Caltrans Protocol	
GEO-2	Because of the potential for distant seismic ground shaking and soil liquefaction, design and construction of the proposed project shall conform to all applicable provisions and guidelines set forth by the Department regarding earthquake safety design. With implementation of standard grading controls and structure design measures to address seismic and geologic conditions, project geologic and soil-related impacts will be mitigated. Appropriate geotechnical soil tests from project site assessment borings shall be performed and reviewed to	RE	Construction		Caltrans Protocol	

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<p>evaluate whether potentially expansive and/or liquefaction soil conditions are present, in accordance with Table 18-1-B of the 2001 California Building Code (CBC). The applicant shall comply with all requirements of the CBC and the Department's building/design codes governing the proposed terminus improvements. A site grading plan shall be submitted for review and acceptance by the City before grading permits are issued. The grading plan shall be accompanied by a soils report prepared in accordance with the Guidelines for Geotechnical and Geological Reports in the City of Los Angeles and Department guidelines and signed by a California Registered Civil Engineer and/or a California Registered Geologist.</p>					
GEO-3	<p>Project alternatives that require relocation of retaining walls and/or regrading of slopes shall require a slope stability evaluation, which will</p>	RE	Construction			

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	include site-specific recommendations for mitigating potential slope stability issues.					
<b>PALEONTOLOGY</b>						
P-1	If project plans change to include unsurveyed areas or if buried paleontological resources are encountered during construction, work must halt until a qualified paleontologist can evaluate the nature and significance of the find. If required, recovery of significant paleontological deposits shall occur using standard paleontological techniques, including, but not limited to, manual or mechanical excavations, monitoring, soil testing, photography, mapping, or drawing to adequately recover the scientifically consequential information from and about the paleontological resource.	RE/Cultural	Construction		Caltrans Protocol	
<b>HAZARDOUS MATERIALS</b>						
HM-1	Prior to project construction, a thorough review of current environmental records shall be conducted and a site-	Hazardous Waste/Consultant	Pre-Construction			

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	<p>specific inspection shall be performed to verify the environmental status of the site. Results of the record review or visual inspection that indicate environmental contamination may be present at the property shall cause low potential sites to be reevaluated in further detail to confirm presence or absence of off-site contamination.</p> <p>Additionally, low potential sites shall be reevaluated if the location of potential ground disturbance varies from previous construction parameters and brings ground disturbance closer to hazardous material sites. A qualified and approved environmental consultant (California registered geologist, environmental assessor, or civil engineer experienced in environmental assessments acceptable to Metro/Caltrans) shall perform the review and evaluation, and the results reviewed and approved by the appropriate County Health Department or DTSC prior to construction.</p>					

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
HM-2	<p>During excavation and ground disturbance for project construction, the contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, the contractor shall stop work until the material is properly characterized and appropriate measures are taken to protect human health and the environment. The contractor shall comply with all local, State, and federal requirements for sampling and testing, and subsequent removal, transport, and disposal of hazardous materials. Additionally, In the event that evidence of contamination is observed, the contractor shall document the exact location of the contamination and shall immediately notify the Caltrans and/or the MTA, as appropriate, describing proposed actions.</p>	RE/Consultant	Construction			

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
HM-3	The presence of aerially deposited lead contaminated soil must be confirmed before or during the design phase of the project to develop proper plans to reuse the affected soil within the project limits. The aerial lead site investigation study and report must conform to the requirements of Caltrans and DTSC. The aerial lead study shall require subsurface soil sampling and laboratory testing using the DI-WET and Toxicity Characteristic Leaching Procedure (TCLP) methods for lead, soluble lead, and soil pH within existing unpaved areas that will be disturbed or regraded for the project.	RE/Consultant			Caltrans Protocol	
HM-4	A survey of buildings, structures, and pavement areas to be removed or demolished shall be conducted to assess the presence and extent of asbestos, lead, and chromium containing materials. This study should be conducted prior to final project design by a qualified and approved environmental specialist. The					

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	<p>investigation shall include collecting samples for laboratory analysis and quantification of contaminant levels within the buildings and structures proposed for demolition, and in pavement disturbance areas. Based on these findings appropriate measures for handling, removal, and disposal of these materials can be developed. Regulatory agencies for the State of California and County of Los Angeles should be contacted to plan handling, treatment, and/or disposal options.</p>					
<b>AIR QUALITY</b>						
AQ-1	<p>The project shall conform to the Department's construction requirements, as specified in the Department's Standard Specifications, Section 7-1.01F (Air Pollution Control): "The contractor shall comply with all air pollution control ordinances and statutes that apply to any work performed pursuant to the contract, including any air pollution control rules, regulations, ordinances,</p>	RE/RE	Construction		California Department of Transportation	

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<p>and statutes specified in Section 11017 of the Government Code.” Implementation of said control measures would avoid and/or minimize any construction exhaust emissions-related impacts on air quality.</p>					
AQ-2	<p>The owner or operator of any construction/ demolition equipment shall</p> <ul style="list-style-type: none"> <li>• use periodic watering for short-term stabilization of disturbed surface areas to minimize visible fugitive dust emissions. For purposes of this rule, use of a water truck to moisten disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance;</li> <li>• take actions sufficient to prevent project-related trackout onto paved surfaces;</li> <li>• cover loaded haul vehicles while operating on publicly maintained paved surfaces;</li> </ul>	RE/Contractor	Construction		AQMD, California Department of Transportation	

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	<ul style="list-style-type: none"> <li>• stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than 30 days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions;</li> <li>• clean up project-related trackout or spills on publicly maintained paved surfaces within 24 hours; and</li> <li>• reduce nonessential earth-moving activity under high wind conditions. For purposes of this rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.</li> </ul>					

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
<b>NOISE</b>						
N-1	The contractor shall comply with all appropriate provisions of the City of Los Angeles Municipal Code, including restrictions on hours of operation (i.e., 7:00 a.m. to 9:00 p.m. on weekdays, 8:00 a.m. to 6:00 p.m. on Saturdays, and at no time on Sundays). In the event it becomes necessary for construction activities to occur outside these hours, a variance shall be obtained.	Design/RE	Design/Construction		Noise Study	
N-2	Maintenance yards, batch plants, haul roads, and other construction-oriented operations shall be placed at locations that would be the least disruptive to the community.	RE/Construction	Construction		Standard Specifications/ED	
N-3	Community meetings should be held to explain the construction work, the time involved, and the control measures being taken to reduce impacts.	RE/Construction	Construction		Standard Specifications/ED	
N-4	The timing and duration of construction activities shall be scheduled to minimize noise impacts at noise-sensitive locations.	RE/Construction	Construction		Standard Specifications/ED	

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
N-5	As practicable, noise-attenuating “jackets” or portable noise screens shall be used to provide shielding for pavement breaking, jack hammering, or similar activities when work is close to noise-sensitive areas.					
N-6	The contractor shall comply with the Department’s Standard Specifications 7-1.011 (July 1999), <i>Sound Control Requirements</i> . The contractor shall comply with all local sound-control and noise-level rules, regulations, and ordinances, which apply to any work performed pursuant to the contract. Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler.					

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
<b>BIOLOGICAL ENVIRONMENT</b>						
PS-1	<p>All trees within City jurisdiction or that are removed shall be replaced by the project proponent, Metro, in accordance with applicable City regulations and guidelines as follows:</p> <ul style="list-style-type: none"> <li>• Mark and replace all native trees with greater than a 1-inch diameter at breast height (dbh) (4.5 feet above surrounding grade) with the same species at a 2:1 ratio. Source materials should be of the same subspecies and/or variety locally present and from seeds or cuttings gathered within coastal southern California to ensure local provenance.</li> <li>• Mark and replace all nonnative trees with greater than a 1-inch dbh (4.5 feet above surrounding grade) with native trees of appropriate local climate tolerance at a 2:1 ratio. Source materials should be from seeds or cuttings gathered within coastal</li> </ul>	RE/BIO	Construction		NES	

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<p>southern California to ensure local provenance.</p> <ul style="list-style-type: none"> <li>• All removed trees greater than 20 feet in height or 8 inches dbh (4.5 feet above surrounding grade) should be replaced with the same species (if native) or a suitable native tree of appropriate local climate tolerance on a 2:1 basis. Source materials should be from seeds or cuttings gathered within coastal southern California to ensure local provenance.</li> <li>• Trees within the Caltrans ROW that are removed during construction, shall be replaces in accordance with Caltrans regulations and guidelines as listed in Landscape Architect PS&amp;E Guide of 2008.</li> </ul>					
AS-1	To avoid impacts on birds prohibited under the MBTA and similar state statutes, one of the following measures shall be implemented by the City: (1) No ground disturbance, site clearing, or removal of any potential nesting habitat shall take place within the	RE/BIO	Install any required ESA fence as a first order of work.		NES	

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
	<p>typical breeding/nesting season for birds (February 15 to August 30) or (2) prior to any ground-disturbing activities, a qualified biologist shall conduct surveys for nesting birds (including raptors). The surveys shall occur a minimum of 3 days prior to the clearing, removal, or trimming of any vegetation. Surveys shall include areas within 200 feet of the edge of the project boundary (as legally accessible) and the entire project site. If active nests are found, a 150-foot (minimum) temporary fence barrier shall be erected around the nest site. A 500-foot barrier shall be required for any raptor nesting site. No habitat removal or any other work shall be allowed to occur within the fenced nest zone until a qualified biologist confirms that nesting is no longer active and/or the young have fledged and left the nest.</p>					

MITIGATION MEASURE NO./AVOIDANCE MEASURE	AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES	RESPONSIBLE PARTY/MONITOR	TIMING/PHASE	TASK COMPLETED (sign and date)	COMMITMENT SOURCE	COMMENTS
IS-1	Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential for spreading noxious weeds before arriving at the site and before leaving the site during the course of construction.	RE/BIO	Construction		NES	
IS-2	All targeted vegetative material will be immediately removed from the project area. This includes small cuttings, leaves, branches, leaves, seeds, and vegetative litter.	RE/BIO	Pre-Construction		NES	
IS-3	Trucks with loads carrying vegetation shall be covered, and vegetative material removed from the site shall be disposed of in accordance with applicable laws and regulations.	RE/BIO	Construction		NES	
IS-4	All disturbed ground that remains as open space post-construction will be hydroseeded with a seed mix restricted to local natives to promote recolonization and reduce the risk of providing optimal conditions for invasive species. Any landscaping within the BSA will use native species.	RE/BIO	Post-Construction		NES	

**Appendix E: Community Outreach Newspaper Notices**



# ARTS & ENTERTAINMENT

amounts to only a few minutes of screen time, their interaction is the foundation of the film's plot. Goodman said his Scottish co-star, who is best known for

That really scared me about it, whether that would work or not, because I really do love this movie."

## State Route (SR-2) Freeway Terminus Improvement Project

You are invited to participate in Scoping and Informational Meetings

**April 11, 6-8pm**  
St. Teresa of Avila Church  
2215 Fargo Street  
Silver Lake, CA 90039

**April 19, 2-4pm**  
Los Angeles County  
Metro  
Windsor Room - 15<sup>th</sup> Floor  
One Gateway Plaza  
Los Angeles, CA 90012

**April 20, 6-8pm**  
Barlow Hospital  
Williams Hall  
2000 Stadium Way  
Elysian Park, 90026

Join us and learn more about:

- Environmental Study process
- Metro & Community Design Alternatives
- Safety & Pedestrian Enhancements

For more information, please visit the project website at [www.metro.net](http://www.metro.net), or call the project helpline at 213.922.3010.



### High School Jazz Band Competition - Luckman

april 15

April 15, 2006 - 7pm - 11pm

Proceeds from this event will go directly to high school music programs throughout Southern California

Tickets available at:

Luckman Fine Arts Complex Box Office  
[www.luckmanarts.org](http://www.luckmanarts.org) or (323) 343-6600

or Ticketmaster

[www.ticketmaster.com](http://www.ticketmaster.com) or (213) 365-3500 or (714) 740-7878

april 30

### Free Concert - Hollywood & Highland

April 30, 2006 - 1pm

This event is free to the public and will be held at Hollywood & Highland's Central Courtyard.



for more information, visit [www.kkjj.org](http://www.kkjj.org) or call 562-985-5566



order the pe  
increase and put off this  
act,"  
contends  
until next year."  
The tensio  
roughly about by this  
has  
year's negotiatio  
was illuminated in a

2010, she will work her way to be the first ad-interim prime minister of the so-called parliament. So if this happens, Speaker De Venecia, who has been ruling for decades to become head of the banana republic, and himself consigned to the can.

But then many are already questioning the legality of this nation.

In the Defensor-Santiago case (270 U.S. 106), the Supreme Court held that this kind of law's initiative to amend the charter is unconstitutional. In this initiative, it is even backed by an enabling law that Congress enacted (RA 6735). Yet, the court held that "an enabling law must specify the processes of the initiative which said law is intended to fully provide for the implementation of the initiative." So how much more is "Malacanang's initiative," which has no enabling law from Congress as to the processes of implementation for the people to exercise that power or initiative, where be?

In speaking of the processes of implementation of an initiative of this nature, it's funny, if not interesting, watching the TV interviews of those Filipinos who affix their signatures on the initia-

tive. They were asked if they knew what they were signing about, its purpose, importance and benefit that could bring into their miserable life. The blanket response was: "Hindi ho namin alam lahat iyan, basta po pinapirma lamang kami." Others responded to the question why they signed as: "Kasi po, sumusunod lang po kami

sa mga nagsipirma."

And when all of them were questioned if the government people soliciting their signatures explained to them the purpose and reason for this initiative, their blanket response again was: "Hindi po, wala po silang sinasabi na paliwanag sa amin."

So there you go. This is what

the administration people call "the new expression of people's power." Anyway, the Senate, as a body, dampened the whole initiative last Wednesday. And the opposition, together with several legal organizations, have already petitioned the Supreme Court to declare the initiative as unconstitutional. (AJ)

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**April 20, 6-8pm**  
**Barlow Hospital**  
**Williams Hall**  
**2000 Stadium Way**  
**Elysian Park, 90026**

Join us and learn more about:

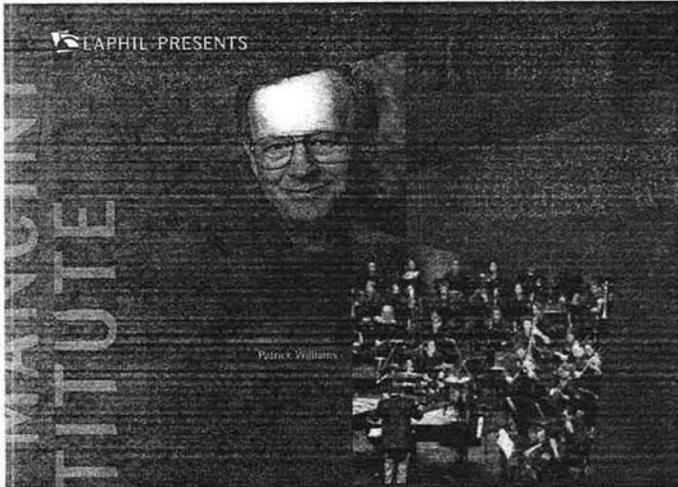
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# We're Moving.

Effective April 3, 2006, Bander Law Firm will be moving to a new location at 1055 W. 7th Street, Suite 1950 Los Angeles, CA 90017.



LAPHIL PRESENTS

Patrick Williams

## CULTURE OF CONFESSION

**CTURE: Thursday, April 13, 7:30pm, FREE**

**CAUTION:** Otis Forum, Ahmanson Building, Goldsmith Campus  
 ating is limited and first come, first served  
 e Parking and Admission  
 ) 665-6905, www.otis.edu, galleryinfo@otis.edu

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 CALIFORNIA | 90028 | [laweekly.com](http://laweekly.com)

a partnership between **experienceLA** & **LA WEEKLY**

APRIL 7-13, 2006 **LA WEEKLY 77**

**PATRICK WILLIAMS**, JILL SATTLER and KAREN WRIGHT, thru April 15, 6-8pm, 1500 Wilshire Blvd., 15th Floor, Los Angeles, CA 90017, (213) 922-3010

**PATRICK WILLIAMS**, JILL SATTLER and KAREN WRIGHT, thru April 15, 6-8pm, 1500 Wilshire Blvd., 15th Floor, Los Angeles, CA 90017, (213) 922-3010

**MC** 6086 Comery Ave., L.A. COCO FUSCO: Operation Atropos, video, thru May 13, (323) 939-3177

**OTIS COLLEGE BEN WALTZ GALLERY** 9045 Lincoln Blvd., L.A. FROM THE ISLAND OF MISFIT TOYS, group show with DEBORAH BROWN, KELLY HEATON, IERON DE VRIES and others, thru April 15, (310) 665-6905

**OVERTONES** 11306 Venice Blvd., L.A. SUE COE and AMY ROSS: Sheep of Fools, drawings, thru May 7, (310) 915-0346

**O.E.D.**, 2622 S. La Cienega Blvd., L.A. ROWENA DRING: A Place

**FOCUS ONE GALLERY** 404 E. Huntington Dr., Montrovia, 626-5455

From gallery and Terra del Sol artists, thru May 19, (909) 397-0218

**FIRST STREET GALLERY ART CENTER** 250 W. First St., Suite 120, Claremont, SPRING, group show with works Reception Sat., April 8, 6-9 p.m., (909) 397-0218

**CHRIS ALLEC and JAY REED:** Making Links, thru May 6, 6-8pm, 799-0826

**CONTEMPORARY FINE ART** 300 S. Thomas St., Pomona, 909-866-6666

If the answer is YES...

from a burning house

algunos activistas pol-  
**ser cubanos!** Nos, y hasta de intereses  
sienten, aunque prnómicos, que usen la  
la Patria de Martí ndición humana del tra-  
jador ilegal para fines  
rticulares. Para nadie  
¡Nos habremc un secreto que existen  
y nos seguiremórupaciones ideológicas  
les molesten es filtradas en las manifes-  
ciones. Y si estos acti-  
**tiendan**". Graestas alineados tienen o-  
**TRITICA CUBAs** motivaciones inclui-  
**QUE LA INTEGas** en una lucha que es  
**TEGRAN y la c**stificable, lo único que  
**se ha mantenid**stán logrando es dañar la  
**se mantendrá**ausa de los trabajadores,  
**LUCHA POR** tropellando los mismos  
**MANTENDRA L**erechos que las manifes-  
aciones pretender defen-  
**libertad en un**ier.  
**pero CUBA SE** Se han creado mitos y  
e han exagerado infor-  
naciones, que en nada  
Debemos espnefician a los inmigran-  
nuestra respoes. Uno de los mitos de los  
**LIBRE Y DEM**ideres de estas manifes-  
aciones es pretender que  
**POR LA DEM**os 12 millones de inmi-  
**VIVIR EN ELL**grantes sin documenta-  
ción están amparados por  
una sola bandera. De  
hecho, los organizadores  
de las protestas están  
dañando la imagen de las  
mismas, ofreciendo un tin-  
te foráneo con el desplie-  
gue de banderas extran-

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**Appendix F: California Office of Historic Preservation, Department of Parks and Recreation, Concurrence Letter**



**OFFICE OF HISTORIC PRESERVATION  
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896  
SACRAMENTO, CA 94296-0001  
(916) 653-6624 Fax: (916) 653-9824  
calshpo@ohp.parks.ca.gov  
www.ohp.parks.ca.gov



January 27, 2009

Reply To: FHWA081229A

Gary Iverson  
Chief, Cultural Resources Services  
Department of Transportation  
Division of Environmental Planning  
100 S. Main Street, Suite 100  
Los Angeles, CA 90012

Re: Determinations of Eligibility for the Proposed SR-2 Freeway Terminus Improvement Project, Los Angeles, CA

Dear Mr. Iverson:

Thank you for consulting with me about the subject undertaking in accordance with the *Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA)*.

The California Department of Transportation is requesting my concurrence, pursuant to Stipulation VIII.C.5 of the PA, that the following properties are not eligible for inclusion on the National Register of Historic Places:

- Residence, 2219 Baxter Street, Los Angeles
- Duplex Residence, 2227-2229 Ewing Street, Los Angeles
- St. Teresa of Avila Rectory, 2216 Fargo Street, Los Angeles
- St. Teresa of Avila School, 2223 Fargo Street, Los Angeles
- St. Teresa of Avila Convent, 2213 Fargo Street, Los Angeles
- Commercial Building, 1840-1842 Glendale Boulevard, Los Angeles
- Commercial Building, 1855 Glendale Boulevard, Los Angeles
- Western Ukrainian Baptist Church, 2030 Glendale Boulevard, Los Angeles
- Residence, 2038 ½ Glendale Boulevard, Los Angeles
- St. Teresa of Avila Chapel, 2204 Fargo Street, Los Angeles

Based on my review of the submitted documentation, I concur.

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist or Tristan Tozer of my staff at (916) 654-0631 (Natalie) or (916) 653-8920 (Tristan) or e-mail at [nlindquist@parks.ca.gov](mailto:nlindquist@parks.ca.gov) and [ttozer@parks.ca.gov](mailto:ttozer@parks.ca.gov).

Sincerely,

A handwritten signature in cursive script that reads "Susan K Stratton for".

Milford Wayne Donaldson, FAIA  
California State Historic Preservation Officer



## **Appendix G: List of Acronyms**



## Acronyms and Abbreviations

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
2000 Census	2000 U.S. Census of Population and Housing
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACOE	U.S. Army Corps of Engineers
ADA	Americans with Disabilities Act
amsl	above mean sea level
APE	area of potential effects
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ASR	Archaeological Survey Report
Basin	South Coast Air Basin
BMPs	best management practices
BSA	biological study area
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHL	California Historical Landmarks
CIA	Community Impact Assessment
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
Community Plan Area	Silver Lake-Echo Park-Elysian Valley Community Plan Area
County	County of Los Angeles
CR	California Register of Historical Resources
CWA	Clean Water Act
dbh	diameter at breast height
DWR	California Department of Water Resources
EIR/EIS	environmental impact report/ environmental impact statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FHWA	Federal Highway Administration
field	Tommy Lasorda Field of Dreams
FONSI	findings of no significant impact
FR	Federal Register
General Construction Permit	NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activities
GHG	greenhouse gas

Glendale Freeway	State Route 2
Golden State Freeway	Interstate 5
GWR	groundwater recharge
HHS	U.S. Department of Health and Human Services
Hollywood Freeway	U.S. Highway 101 (U.S. 101)
HRI	California State Historic Resources Inventory
I-5	Interstate 5
IPCC	Intergovernmental Panel on Climate Change
IS/EA	Initial Study/Environmental Assessment
ITS	Intelligent Transportation Systems
kph	kilometers per hour
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAPD	Los Angeles Police Department
LARWQCB	Los Angeles Regional Water Quality Control Board
LAUSD	Los Angeles Unified School District
LOS	Level of Service
LPA	Locally Preferred Alternative
LWCF Act	Land and Water Conservation Fund Act
M	Moment Magnitude
MBTA	Migratory Bird Treaty Act
Metro	Los Angeles County Metropolitan Transportation Authority
mph	miles per hour
MS4 Permit	NPDES General Permit for Municipal Small Storm Sewer Systems
MS4s	Municipal Small Storm Sewer Systems
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NO <sub>2</sub>	nitrogen dioxide
NOI	Notice of Intent
NO <sub>x</sub>	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NR	National Register of Historic Places
NRHP	National Register of Historic Places
O <sub>3</sub>	Ozone
Pb	Lead
PCE	Tetrachloroethylene
PDT	Project Development Team
PHI	California Points of Historical Interest
PM	post mile
PM10	Particulate Matter less than 10 microns in diameter
PM2.5	Particulate Matter less than 2.5 microns in diameter
Porter-Cologne	Porter-Cologne Water Quality Control Act of 1969
ppm	parts per million
PR	Project Report
proposed project	SR-2 Freeway Terminus Improvement Project
PSR	Project Study Report

PSR/PDS	Project Study Report/Project Development Study
Qaf	Artificial Fill
Qyf	Young Alluvial Fan Deposits
RCEM	Road Construction Emissions Model
REC1	contact water recreation
REC2	non-contact water recreation
ROG	reactive organic gases
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	regional water quality control board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
SR	State Route
SR 2	State Route 2
SRA	Source Receptor Area
St. Teresa	Saint Teresa of Avila School
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCE	Trichloroethylene
TDS	total dissolved solids
TeNS	Caltrans Technical Noise Supplement
TMDL	Total Maximum Daily Load
Tpna	Puente Formation
U.S. 101	U.S. Highway 101 (Hollywood Freeway)
USC	United States Code
USGS	U.S. Geological Survey
WARM	warm freshwater habitat
WDRs	waste discharge requirements
WET	wetland habitat
WILD	wildlife habitat

