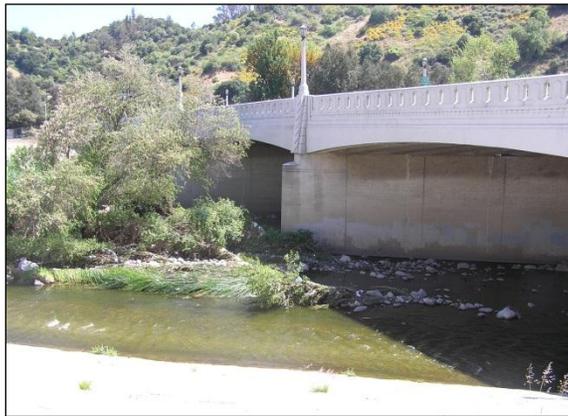


# Riverside Drive Bridge Widening and Rehabilitation Project

LOS ANGELES COUNTY, CALIFORNIA  
DISTRICT 7 – LA – 0 - CITY OF LOS ANGELES  
BHLS-5006 (205)  
BRIDGE #53C-1298

## Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment and Section 4(f) Evaluation



Prepared by the  
**State of California Department of Transportation  
and the City of Los Angeles**

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 Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.



April 2013



SCH# 2007061075  
District 7-LA-0-City of Los Angeles  
BHLS-5006 (205)  
Bridge #53C-1298

The City of Los Angeles and California Department of Transportation propose to widen and seismically retrofit the Riverside Drive Bridge (53C-1298), located south of the junction of Victory Boulevard, Sonora Avenue, and Riverside Drive and north of Zoo Drive in the Hollywood Community Planning Area of the City and County of Los Angeles.

## INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION/ ENVIRONMENTAL ASSESSMENT AND SECTION 4(f) EVALUATION

Submitted Pursuant to: (State) Division 13, California Public Resources Code  
(Federal) 42 USC 4332(2)(C) and 49 U.S.C. 303

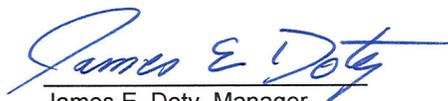
THE STATE OF CALIFORNIA  
Department of Transportation

and

The City of Los Angeles

4-30-13

Date of Approval



James E. Doty, Manager  
Environmental Management Group  
Bureau of Engineering  
Department of Public Works  
City of Los Angeles

5/7/13

Date of Approval



Michael Miles  
District Director  
Division of Environmental Planning, District 7  
California Department of Transportation

The following persons may be contacted for additional information concerning this document:

Carlos Montez, Branch Chief  
Caltrans District 7  
Division of Environmental Planning  
100 S. Main Street  
Los Angeles, CA 90012  
Phone: (213) 897-9116

Linda Moore, Bridge Program Environmental Manager  
City of Los Angeles  
Bureau of Engineering, Department of Public Works  
1149 S. Broadway, Suite 750  
Los Angeles, CA 90015  
Phone: (213) 485-5751



## PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

### ***Project Description***

The City of Los Angeles and the California Department of Transportation propose to widen and seismically retrofit the existing Riverside Drive Bridge (53C-1298), located south of the junction of Victory Boulevard, Sonora Avenue, and Riverside Drive; and north of Zoo Drive in the Hollywood Community Planning Area of the City and County of Los Angeles. The project would include widening and rehabilitating the existing four-lane bridge to correct existing geometrical design deficiencies, address seismic vulnerabilities, and improve pedestrian and bicycle travel.

### ***Determination***

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the City's intent to adopt a MND for this project. This does not mean that the City's decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public. The City has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on agriculture and forest resources, exposure involving rupture of an earthquake fault, exposure to 100-year flood area, risk of inundation, mineral resources, airports, displacement of people/housing, public services, wastewater, or solid waste. In addition, the proposed project would have no significant effect on aesthetics, sensitive species, migratory species, biological protection policies, conservation plans, archeological resources, paleontological resources, human remains, exposure to geologic hazards, hazards and hazardous materials, water quality, land use and planning, noise, population growth, recreation, transportation/traffic, emergency access, or utilities.

The proposed project would have no significant effect on riparian habitats, federal wetlands, historical resources, groundwater quality, or hazardous materials because mitigation measures have been incorporated into the project that would reduce potential effects to a less than significant level.



James E. Doty, Manager  
Environmental Management Group  
Bureau of Engineering  
Department of Public Works  
City of Los Angeles

4-30-13

Date



## SUMMARY

### S.1 BACKGROUND

The City of Los Angeles (City) and the California Department of Transportation (Caltrans) propose to rehabilitate and widen the Riverside Drive Bridge (Bridge #53C-1298) over the Los Angeles River in Los Angeles, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA) and the City is the lead agency under the California Environmental Quality Act (CEQA). 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 Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

The bridge, built in 1938, is a five-span, cast-in-place, concrete T-beam structure that is 382 feet long and 56 feet wide, and accommodates four lanes of traffic and five-foot sidewalks. There are no shoulders or bike lanes on the bridge. The bridge was determined to be eligible for the National Register of Historic Places (NRHP) under the 2005 Caltrans Historic Bridge Inventory and was designated in 2008 as Historic-Cultural Monument (HCM) No. 910 under the City's Cultural Heritage Ordinance.

The bridge traverses south to north and crosses over the Los Angeles River in the Hollywood Community Planning Area of the city. The proposed project is in an urban setting dominated by residential neighborhoods, parkland, equestrian trails, and transportation facilities. To the south of the bridge, Riverside Drive terminates at a T-intersection with Zoo Drive. State Route (SR) 134 and Griffith Park lie to the south of the project area. The Bette Davis Picnic Area (part of Griffith Park) and residential neighborhoods lie to the north. The western portion of Bette Davis Picnic Area is designated as Easter Fields, a horse exercise field, which connects to the adjacent equestrian trails.

The project would include widening and rehabilitating the existing four-lane bridge to correct existing geometrical design deficiencies, address seismic vulnerabilities, and improve pedestrian and bicycle travel. The proposed project includes a single-sided widening alternative that would reduce impacts on the historical features of the bridge.

### S.2 PROPOSED PROJECT

#### No Build Alternative

The No Build Alternative would involve no changes to existing conditions; the current bridge, roadway, and bike path facilities would remain the same, and no seismic improvements would be completed.

#### Build Alternative

The build alternative consists of five project elements: seismic retrofit, bridge improvements, utility alterations, bike path improvements, and intersection improvements at the SR-134 on-ramp.

### ***Seismic Retrofit***

Seismic retrofit improvements would be limited to abutment seat extensions and concrete fill along the abutment walls below grade.

### ***Bridge Improvements***

The existing bridge would be widened approximately 19 feet on the downstream side. The widened structure would be approximately 75 feet wide and would accommodate four 11-foot through lanes, a 2-foot median, two 5-foot shoulders, two 8-foot sidewalks, and two 1-foot barrier railings. The new portion of the deck would be supported by cast-in-place concrete box girders, rather than matching the existing concrete T-beams. The box girders would be supported by new, separate, concrete piers, measuring approximately 21 feet in length and 3 feet in width. The new piers would be separated from the existing pier walls by approximately four feet.

The railings on the upstream side would be reconstructed to match the existing railings, while satisfying current crash barrier requirements. The only change in design would occur at the pointed arch openings, the interior dimensions of which would be narrowed to meet current code requirements. The opening would be narrowed in such a way that a distinct shadow line is created, distinguishing the original width from the new width. The decorative elements on the upstream side, including the ornamented pylons and the horizontal bands of indentations beneath the railings would remain intact and be repaired as necessary.

The concrete light standards atop the pylons would be replaced with replicas. The lanterns would also be replaced with replicas of the original 1938 lanterns, which would also be modified on the interior to house LED lights.

The new railing would match the reconstructed railing on the upstream side. The horizontal banding would be recreated beneath the new railing. The pylons would be differentiated from the original features on the upstream side through simplified ornamentation. The new ornamentation would reference the historic ornamentation and be compatible with it, without mimicking it exactly.

Drainage improvements would be made to the deck. Drains would be installed at the new shoulders to divert rainfall into the channel lining below the bridge. Filters would be installed at the existing catch basin at the southeast corner of the bridge to treat rainfall runoff.

### ***Utility Alteration***

To alter an existing storm drain, excavation would be required south of the bridge, along the abutment, at a depth of 15 feet. To connect bridge electrical lines to the series circuit that currently ends at Victory Boulevard, existing utility lines would be extended north along Riverside Drive until just south of the intersection of Riverside Drive, Victory Boulevard, and Sonora Avenue. These improvements would likely be accomplished through micro tunneling or jacking of pipe at a maximum depth of 36 inches.

### ***Bike Path Improvements***

The project would provide a bike path, 14 feet wide, which would cross under the bridge. This undercrossing would connect the existing Los Angeles River bike path east of the bridge to the area west of the bridge, where there are plans to extend the bike path. The bike path would be paved and striped according to current standards. The project would also provide a new connection from the future bike path to Riverside Drive. The connection would require the removal of the existing concrete railing atop the bridge's southwest abutment.

### **Intersection Improvements**

To improve visibility for bicyclists, motorists, and pedestrians, the intersection of the SR-134 on-ramp and Riverside Drive would be modified by softening the curve at the bridge's southwest abutment. The southwest abutment's concrete railing would be removed to accommodate the new curve, improve visibility, and allow for a new entry point to the bike path, as discussed above. The abutment itself would remain in place.

### **Construction Activities**

The project area includes areas to the west (upstream) where water diversion would take place. A construction staging area is proposed northwest of the bridge within the adjacent Bette Davis Picnic Area. The staging area would be in a 25,000-square-foot (approximately 0.57-acre) portion of the 14.7-acre park west of Riverside Drive near the bridge. No grading or digging would be needed to accommodate the contractor's activities within the staging area and no trees would be removed. Following construction, the area would be restored to existing conditions.

## **S.3 ENVIRONMENTAL CONSEQUENCES**

Table S-1 provides a summary of the impacts associated with the No Build and Build Alternatives.

**Table S-1 –Summary of Environmental Consequences**

Area of Impacts	No Build Alternative	Build Alternative
Land Use	No Impact	The Build Alternative would require temporary use of approximately 25,000 square feet (0.57 acre) of area within the Bette Davis Picnic Area of Griffith Park for construction staging. Other areas of the park would remain open, and the area would be restored following project construction. Therefore, this alternative would not result in adverse impacts on the Bette Davis Picnic Area.
Growth	No Impact	No Impact
Community Impacts	No Impact	The Build Alternative would temporarily affect access within the project area during construction, including access for bicycles and pedestrians using the route. With implementation of a traffic management plan, this alternative would not result in adverse impacts on community character and cohesion.
Utilities/Emergency Services	No Impact	<p>The Build Alternative would potentially result in intermittent disruptions of the electrical lines during construction. The disruption would be temporary and coordinated as part of the City's standard plans and specifications design process to avoid adverse impacts on utility service.</p> <p>The Build Alternative would require temporary lane closures that could result in traffic delays and affect emergency access in the project area; however, it is anticipated that one travel lane in each direction would remain open throughout construction, so detours would not be required. A traffic management plan would be coordinated with emergency service providers and implemented during construction to ensure that emergency services are not adversely affected.</p>
Traffic and Transportation/Pedestrian and Bicycle Facilities	The No Build Alternative would not help improve the operation of the bridge or provide safer facilities for bicycles and pedestrians.	The Build Alternative would have a beneficial effect on the roadway system, the local and regional bike path network, and pedestrian facilities. Short-term construction activities may temporarily disrupt traffic operations through the area. With implementation of a traffic management plan, this alternative would not result in adverse impacts on traffic operations.

## Summary

Visual/Aesthetics	No Impact	While visual changes would result from the replacement of features visible from key viewpoints, because the existing aesthetic features of the bridge would be replaced with the same or similar components, the Build Alternative would not be expected to degrade the overall visual character of the site and surroundings. Therefore, no adverse impacts to the existing visual character and quality are anticipated.
Cultural Resources	No Impact	The Build Alternative would have adverse effects on the Riverside Drive Bridge through destruction of parts of the historic fabric of the bridge structure. Mitigation measures would be implemented to reduce the adverse effects.
Hydrology and Floodplain	No Impact	For the Build Alternative, the proposed bridge's low chord elevation (where the lowest structural element is) would remain above the top of levee elevation; therefore, impacts to the existing grade would be minimal. The Build Alternative would widen the bridge deck downstream only, and the piers would be extended. However, the overbank areas near the Riverside Drive Bridge are in an urban area, and the overall impact on natural and beneficial floodplain values is minimal.
Water Quality and Storm water Run-off	No Impact	During construction, the Build Alternative would require a water diversion west of the bridge, as well as work within the river channel for the installation of new piers. Compliance with federal and state regulations, such as the Clean Water Act, would ensure that the project would not result in adverse impacts on water quality in the Los Angeles River. In addition, the effects of soil erosion and other construction-related discharges on storm water quality would be substantially minimized through compliance with the applicable permit requirements.
Geology/Soils/Seismic/Topography	The No Build Alternative would not improve the seismic stability of the bridge. The bridge would remain vulnerable to seismic events.	The Build Alternative would be constructed in compliance with all applicable laws, regulations, and standard City specifications. By meeting current seismic design standards, the Build Alternative would address existing deficiencies and would not subject people or structures to potential adverse effects related to geology, soils, seismicity, and topography.
Hazardous Waste/Materials	No Impact	The Build Alternative would include construction activities in an area where contaminants may be present. Compliance with

## Summary

		federal and state laws and regulations, would ensure that no adverse impacts related to hazardous waste or materials would occur.
Air Quality	No Impact	Compliance with federal, state, and local regulations would ensure that the Build Alternative would not result in adverse air quality impacts during construction. Because the Build Alternative would maintain the same number of through lanes (two in each direction) and would not increase the capacity of the bridge, this alternative would not be expected to result in an increase in levels of mobile source emissions above those existing today.
Noise	No Impact	During construction, it is anticipated that noise increases from the Build Alternative would be temporary and of short duration thus remaining within the City's established guidelines. The Build Alternative would maintain the same number of through lanes (two in each direction) and would not increase the capacity of the bridge. Furthermore, average daily traffic (ADT) levels are not expected to increase following project construction; therefore, operation impacts related to noise are not anticipated.
Natural Communities	No Impact	For the Build Alternative, approximately 0.46 acre of willow riparian habitat would be temporarily impacted by construction activities and vegetation removal. Vegetation removal would be minimized to the extent feasible, and the project area would be revegetated following construction with native plant materials. Some invasive species, including <i>Arundo donax</i> , would also be removed; this would result in a beneficial impact. The proposed bridge widening would create a slightly larger bridge footprint and result in a small decrease in the area available for vegetation growth (0.09 acre) resulting from direct (bridge footprint) and indirect (shading) effects of the widened bridge; however, this area would be minimal and would not be expected to result in an adverse impact to the existing natural communities.
Wetlands and Other Waters	No Impact	Based on preliminary plans, the Build Alternative would result in approximately 1.69 acres of temporary impacts and 0.09 acres of permanent impacts on U.S. Army Corps of Engineers (USACE) jurisdictional areas. Avoidance, minimization, and mitigation measures would be implemented to reduce these impacts.

## Summary

Plant Species	No Impact	No Impact
Animal Species	No Impact	During construction, the Build Alternative has the potential to temporarily affect southwestern pond turtles, arroyo chub, migratory birds, and bats. With the implementation of avoidance and minimization measures, no adverse impacts are anticipated on these animal species.
Threatened and Endangered Species	No Impact	No least Bell's vireo or southwestern willow flycatchers have been observed in the Biological Study Area (BSA) during two rounds of protocol-level surveys. In addition, habitat is marginal in the BSA for these species. Therefore, least Bell's vireo and southwestern flycatchers are not anticipated to be present in the BSA. With the implementation of avoidance and minimization measures, impacts on these species are not anticipated.
Invasive Species	No Impact	The Build Alternative would require removal of some vegetation, including invasive species within the riparian habitat in the Los Angeles River. Invasive species removal would be conducted in a manner that prevents their spread.
Climate Change	No Impact	Due to the temporary nature of construction activities for the Build Alternative, the contribution of construction greenhouse gas (GHG) emissions to climate change would be minimal. The Build Alternative is not expected to increase GHG emissions during operation because this alternative would maintain the same number of through lanes (two in each direction) and would not increase the capacity of the bridge.

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# 1 PROPOSED PROJECT

## 1.1 Introduction

The City of Los Angeles (City) and the California Department of Transportation (Caltrans) propose to rehabilitate and widen the Riverside Drive Bridge (Bridge #53C-1298) over the Los Angeles River in Los Angeles, California (see **Figure 1** and **Figure 2**). Caltrans is the lead agency under the National Environmental Policy Act (NEPA) and the City is the lead agency under the California Environmental Quality Act (CEQA).

The bridge, built in 1938, is a five-span cast-in-place concrete T-beam structure that is 382 feet long and 56 feet wide, and accommodates four lanes of traffic and five-foot sidewalks. There are no shoulders or bike lanes on the bridge. The bridge was determined to be eligible for the National Register of Historic Places (NRHP) under the 2005 Caltrans Historic Bridge Inventory and was designated in 2008 as Historic-Cultural Monument (HCM) No. 910 under the City's Cultural Heritage Ordinance.

The bridge traverses south to north and crosses over the Los Angeles River in the Hollywood Community Planning Area of the city. The proposed project is in an urban setting dominated by residential neighborhoods, parkland, equestrian trails, and transportation facilities. To the south of the bridge, Riverside Drive terminates at a T-intersection with Zoo Drive. State Route (SR) 134 and Griffith Park lie to the south of the project area. The Bette Davis Picnic Area (part of Griffith Park) and residential neighborhoods lie to the north. The western portion of Bette Davis Picnic Area is designated as Easter Fields, a horse exercise field, which connects to the adjacent equestrian trails.

The project would include widening and rehabilitating the existing four-lane bridge to correct existing geometrical design deficiencies, address seismic vulnerabilities, and improve pedestrian and bicycle travel (see **Figure 3**). The proposed project includes a single-sided widening alternative that would reduce impacts on the historical features of the bridge.

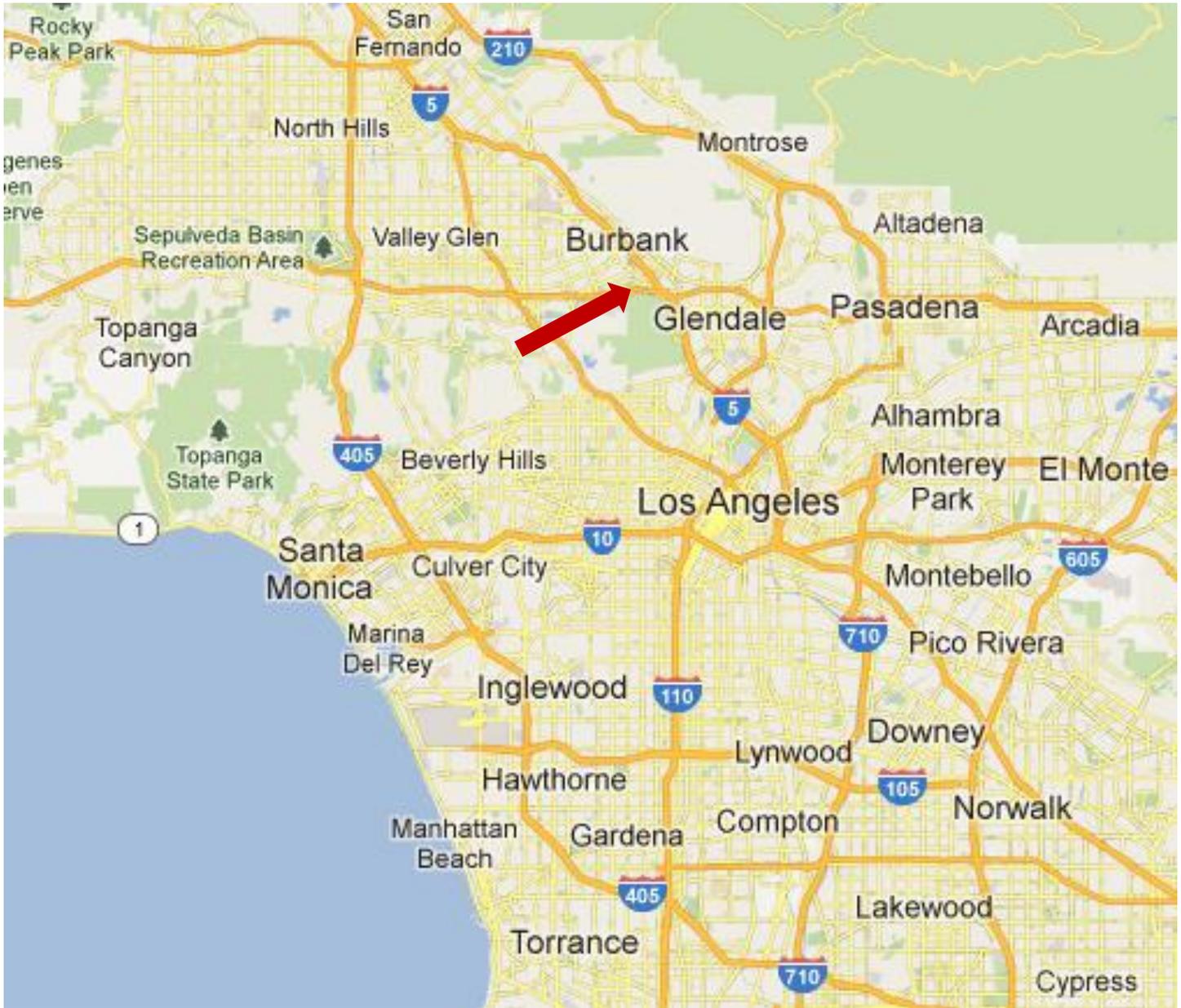
The proposed project is identified in the Southern California Association of Governments' (SCAG) 2011 Federal Transportation Improvement Program under a group of projects funded through the Highway Bridge Program (HBP). The HBP provides funding to enable states to improve the condition of their highway bridges through replacement, rehabilitation, and systematic preventative maintenance.

## 1.2 Purpose and Need

The purpose of the project is to meet the following objectives:

- Improve geometric design deficiencies from inadequate structure width;
- Improve safety of bridge to meet current design standards; and
- Help achieve local planned development of the Los Angeles River Bike Path.

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No Scale

Source: Google Maps, 2012



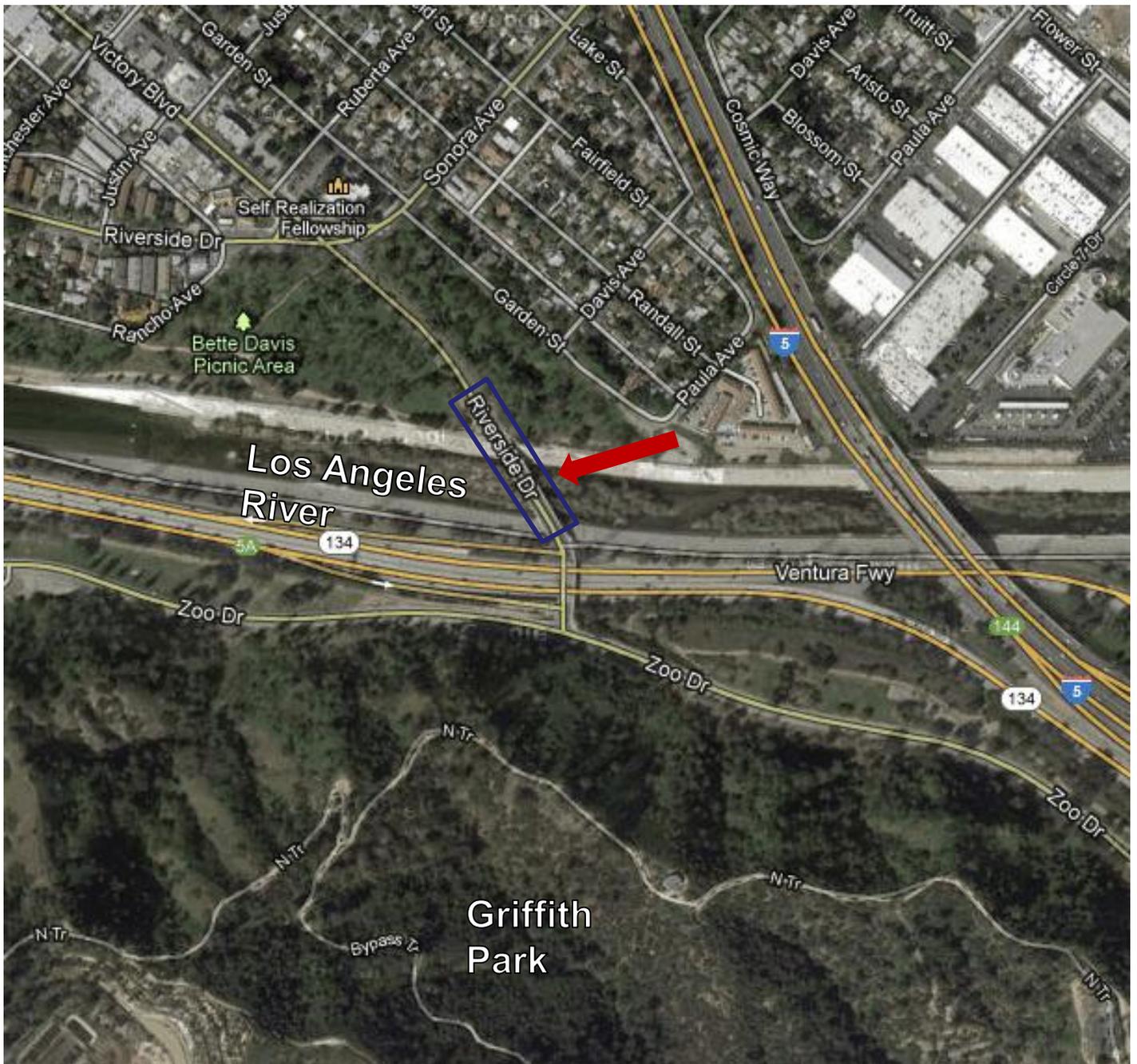
Project Location



Figure 1 Project Vicinity Map







No Scale

Source: Google Maps, 2012



Project Location



Riverside Drive Bridge



Figure 2 Project Location Map







Source: USGS National Map Seamless Server



= Project Area



The project is proposed to improve safety and operation of the Riverside Drive Bridge. The following subsections discuss the existing conditions of the Riverside Drive Bridge that constitute the need for the proposed project.

### **1.2.1 Design and Geometrical Deficiencies**

The FHWA uses a Sufficiency Rating, as well as indicators of Functionally Obsolete and/or Structurally Deficient to prioritize bridge improvements. The Sufficiency Rating evaluates the functional adequacy and condition of the bridge on a scale from zero (low) to 100 (high). To be eligible for federal rehabilitation funding through the Highway Bridge Program, a bridge must have a Sufficiency Rating less than or equal to 80, as well as be classified as Functionally Obsolete or Structurally Deficient.

An April 2011 Caltrans bridge inspection report, prepared by the Structure Maintenance and Investigations Division, scored the bridge's Sufficiency Rating at 75.2 and confirmed that the structure is Functionally Obsolete due to inadequate traffic lane widths and the absence of shoulders.

The bridge is also on the Highway Bridge Program Eligible Bridge List (EBL) due to inadequate structure width. The proposed project would improve pedestrian and bicycle travel, and improve existing geometric design deficiencies that contribute to the bridge's placement on the EBL.

Additionally, the existing bridge railings do not meet current design standards. Based on structural calculations performed by a previous project design team, the "crashworthiness" of the existing railings is estimated to be approximately one tenth of the current standards. The new bridge railings would meet current design standards.

### **1.2.2 Seismic Vulnerabilities**

The structure has also been determined to be vulnerable to a seismic-induced failure in the event of the newly defined Maximum Credible Event earthquake activity. The Riverside Drive Bridge was seismically retrofitted in 1992; however, since that time, the engineering estimates for the Maximum Credible Event have increased substantially and the previous retrofit has been determined to be inadequate. Therefore, the bridge is subject to seismic vulnerabilities and additional retrofitting is required.

### **1.2.3 Bicycle Traffic**

The Los Angeles River bike path currently extends along the riverbank from the Riverside Drive Bridge, generally in a southeast direction, to Barclay Street in Elysian Valley. The Class I bikeway currently terminates at Riverside Drive at the southeast corner of the Riverside Drive Bridge. Bicyclists continuing from this point must leave the bike path and share the constrained roadway with vehicular traffic. There are currently no bike lanes or shoulders on the bridge, which presents nonstandard conditions for bicyclists travelling through the project area. The proposed project would add shoulders to the bridge for the bicyclists and would provide an undercrossing that links the eastern and western segments of the Los Angeles River bike path.

The Riverside Drive Bridge crosses the Los Angeles River in the Hollywood Community Planning Area of Los Angeles (see **Figures 1 and 2**). The bridge is situated in a fully urbanized

setting that is dominated by recreational, residential, floodway (Los Angeles River), and transportation facilities. SR-134 is immediately south of the project area and the Bette Davis Picnic area is immediately north. The Los Angeles River bike path terminates in the southeast quadrant of the bridge.

### **1.2.4 Independent Utility and Logical Termini**

23 Code of Federal Regulations (CFR) 771.111 (f) requires that a project connect logical termini and be of sufficient length to address environmental matters on a broad scope. Logical termini for project development are defined by FHWA as the rational endpoints for a transportation improvement and for the review of the environmental impacts. A project must also demonstrate independent utility. Independent utility means that the project would be functional even if no additional transportation improvements were made. Finally, CFR 771.111 (f) requires that implementation of a project must not restrict future consideration of alternatives for other reasonably foreseeable transportation improvements.

The proposed project includes the logical termini required to achieve the project purpose and need and to provide sufficient analysis of potential project impacts. The rational endpoint for the transportation improvement is the project limits (see **Figure 3**), which encompasses the area of direct impact for the proposed bridge and bike path improvements, and for the associated utility work and temporary construction work and staging areas. In addition to the project limits, the rational endpoint for the review of environmental impacts encompasses the area of potential indirect and cumulative impacts, which is the Southern California region.

The project demonstrates independent utility because it would accomplish the purpose and need for the project to reduce seismic hazards, improve geometric deficiencies, improve bicycle travel, and provide a bicycle connection under the bridge, without requiring any future improvements. The project would not restrict the consideration of alternatives for any other reasonably foreseeable transportation improvements, and there are no known improvements planned for the area.

## **1.3 Project Description**

The City and Caltrans propose to rehabilitate and widen the Riverside Drive Bridge (Bridge #53C-1298) over the Los Angeles River in Los Angeles, California (see **Figure 1** and **Figure 2**). Caltrans is the lead agency under NEPA and the City is the lead agency under CEQA.

The project would include widening and rehabilitating the existing four-lane bridge to correct existing geometrical design deficiencies, address seismic vulnerabilities, and improve pedestrian and bicycle travel. The proposed project includes a single-sided widening alternative that would reduce impacts on the historical features of the bridge. The project limits are shown on **Figure 3**.

### **1.3.1 No Build Alternative**

The No Build Alternative would involve no changes to existing conditions; the current bridge, roadway, and bike path facilities would remain the same, and no seismic improvements would be completed.

### **1.3.2 Build Alternative**

The Build Alternative includes five project elements: seismic retrofit, bridge improvements, utility alterations, bike path improvements, and intersection improvements at the SR-134 on-ramp (see **Figures 4A** and **4B**).

#### **Seismic Retrofit**

Seismic retrofit improvements would be limited to abutment seat extensions and concrete fill along the abutment walls below grade (see **Figure 5**).

#### **Bridge Improvements**

The existing bridge would be widened approximately 19 feet on the downstream side. The widened structure would be approximately 75 feet wide and would accommodate four 11-foot through lanes, a 2-foot median, two 5-foot shoulders, two 8-foot sidewalks, and two 1-foot barrier railings. The new portion of the deck would be supported by cast-in-place concrete box girders, rather than matching the existing concrete T-beams. The box girders would be supported by new, separate, concrete piers, measuring approximately 21 feet in length and three feet in width. The new piers would be separated from the existing pier walls by approximately four feet.

The railings on the upstream side would be reconstructed to match the existing railings, while satisfying current crash barrier requirements. The only change in design would occur at the pointed arch openings, the interior dimensions of which would be narrowed to meet current code requirements. The opening would be narrowed in such a way that a distinct shadow line is created, distinguishing the original width from the new width. The decorative elements on the upstream side, including the ornamented pylons and the horizontal bands of indentations beneath the railings would remain intact and be repaired as necessary.

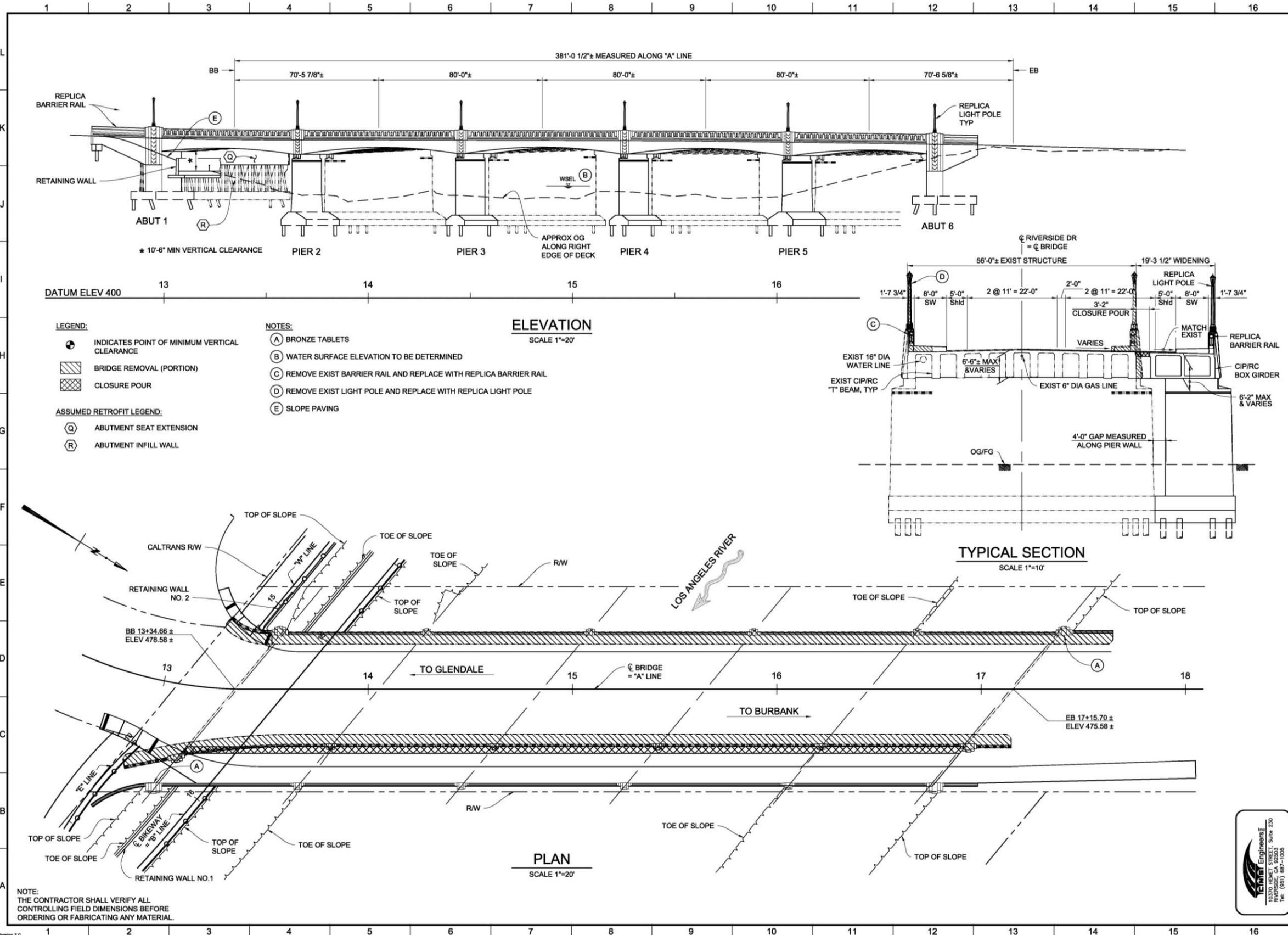
The concrete light standards atop the pylons would be replaced with replicas. The lanterns would also be replaced with replicas of the original 1938 lanterns, which would also be modified on the interior to house LED lights.

The new railing would match the reconstructed railing on the upstream side. The horizontal banding would be recreated beneath the new railing. The pylons would be differentiated from the original features on the upstream side through simplified ornamentation. The new ornamentation would reference the historic ornamentation and be compatible with it, without mimicking it exactly.

Drainage improvements would be made to the deck. Drains would be installed at the new shoulders to divert rainfall into the channel lining below the bridge. Filters would be installed at the existing catch basin at the southeast corner of the bridge to treat rainfall runoff.

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REVISION DATE: 04/20/12 3:18 PM FILE: P:\11020 RIVERSIDE DR (RISAN 200 DR) BRIDGE\CA\03\03\01\1201 - GENERAL PLAN.DWG  
 THE CITY OF LOS ANGELES OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF THIS PLAN SHEET.



**LEGEND:**

- ⊙ INDICATES POINT OF MINIMUM VERTICAL CLEARANCE
- ▨ BRIDGE REMOVAL (PORTION)
- ▩ CLOSURE POUR
- ⊕ ABUTMENT SEAT EXTENSION
- ⊖ ABUTMENT INFILL WALL

**NOTES:**

- (A) BRONZE TABLETS
- (B) WATER SURFACE ELEVATION TO BE DETERMINED
- (C) REMOVE EXIST BARRIER RAIL AND REPLACE WITH REPLICA BARRIER RAIL
- (D) REMOVE EXIST LIGHT POLE AND REPLACE WITH REPLICA LIGHT POLE
- (E) SLOPE PAVING

**ASSUMED RETROFIT LEGEND:**

**ELEVATION**  
SCALE 1"=20'

**TYPICAL SECTION**  
SCALE 1"=10'

**PLAN**  
SCALE 1"=20'

NOTE:  
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

<b>BUREAU OF ENGINEERING</b>	
DATE BY:	STRUCTURE NO.:
V. NO. REVISIONS:	INDEX NO.:
<b>GARY LEE MOORE, P.E.</b> CITY ENGINEER DESIGN GROUP	
ENGINEER: J. LU	DATE:
DESIGNED BY: Q. NGUYEN	U.S. NO.:
DRAWN BY: N. LU	CHECKED BY:
APPROVED BY:	
<b>GENERAL PLAN</b> RIVERSIDE DRIVE BRIDGE OVER LOS ANGELES RIVER RIVERSIDE DRIVE OVER LOS ANGELES, CA.	
WORK ORDER NO.:	
DRAWING NO.:	
<b>S-1</b>	
SHEET 1 OF 2 SHEETS	

CITY OF LOS ANGELES  
 DEPARTMENT OF PUBLIC WORKS  
 1200 N. GARDEN STREET, SUITE 230  
 RIVERSIDE, CA 92501  
 Tel: (951) 687-1025



Figure 4A Preliminary Project Layout









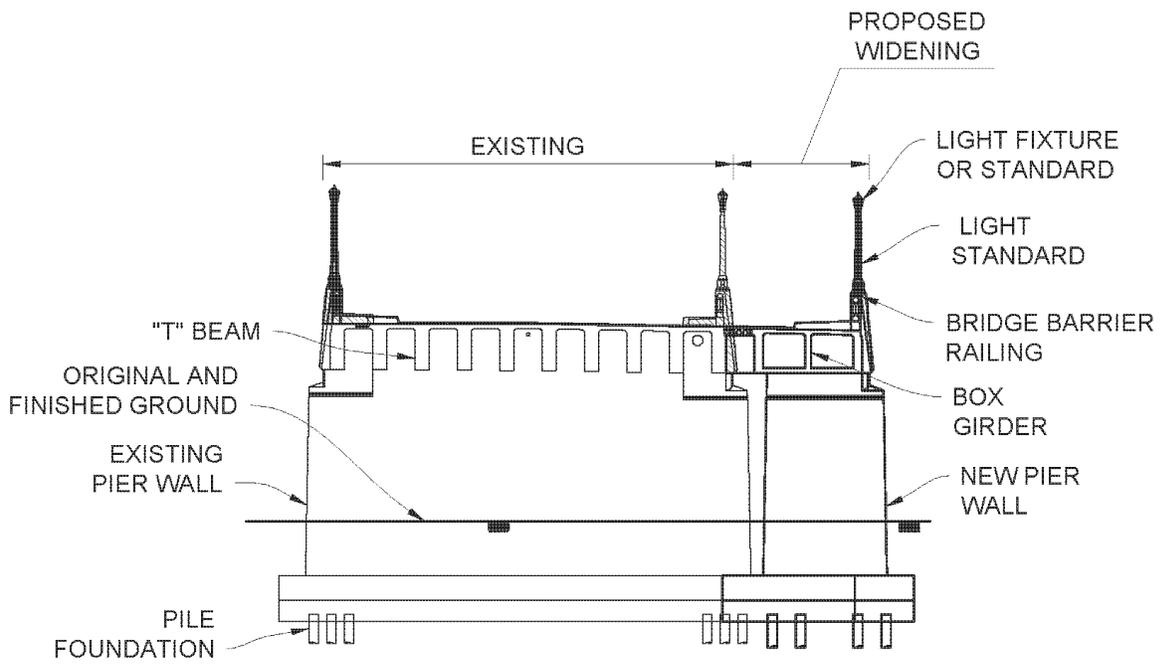
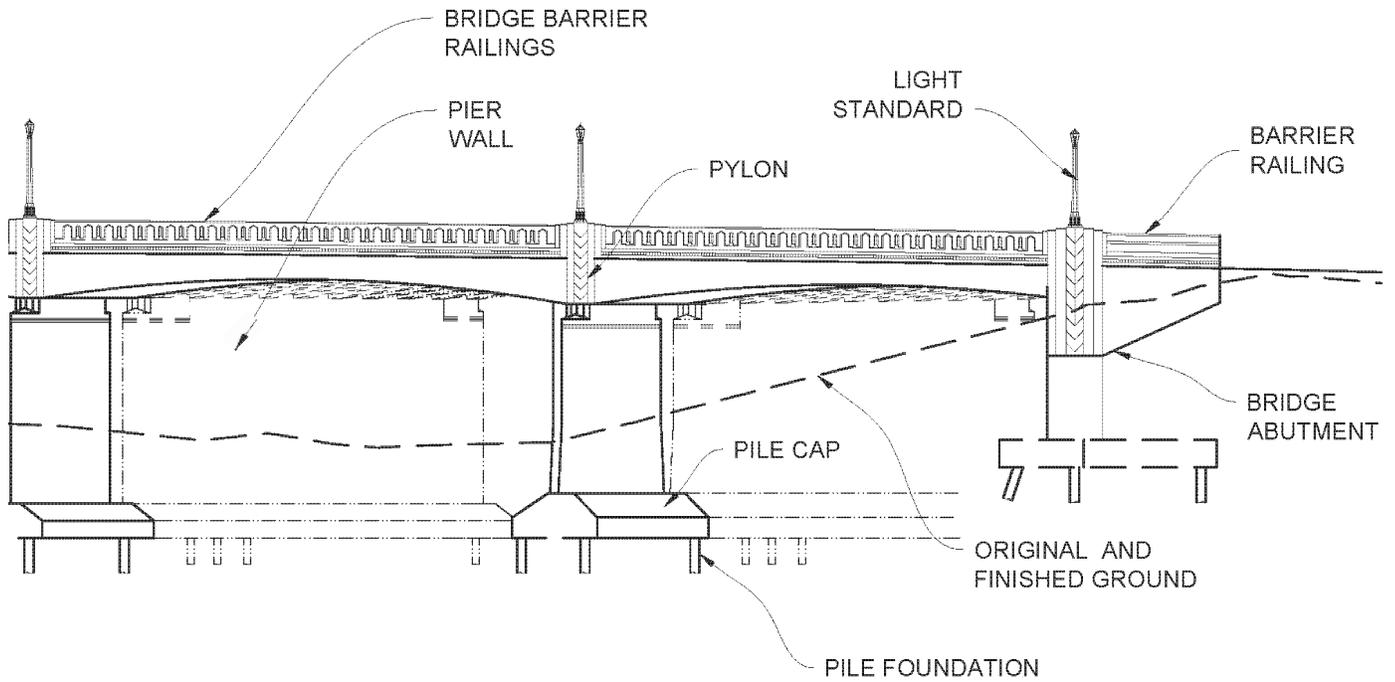


Figure 5 Bridge Terms Diagram



### **Utility Alteration**

Excavation would be required south of the bridge, along the abutment at a depth of 15 feet, to alter an existing storm drain. To connect bridge electrical lines to the series circuit that currently ends at Victory Boulevard, existing utility lines would be extended north along Riverside Drive until just south of the intersection of Riverside Drive, Victory Boulevard, and Sonora Avenue. These improvements would likely be accomplished through micro tunneling or jacking of pipe at a maximum depth of 36 inches.

### **Bike Path Improvements**

The project would provide a 14-foot wide bike path that would cross under the bridge. This undercrossing would connect the existing Los Angeles River bike path east of the bridge to the area west of the bridge, where there are plans to extend the bike path. The bike path would be paved and striped according to current standards. The project would also provide a new connection from the future bike path to Riverside Drive. The connection would require the removal of the existing concrete railing atop the bridge's southwest abutment.

### **Intersection Improvements**

To improve visibility for bicyclists, motorists, and pedestrians, the intersection of the SR-134 on-ramp and Riverside Drive would be modified by softening the curve at the bridge's southwest abutment. The southwest abutment's concrete railing would be removed to accommodate the new curve, improve visibility, and allow for a new entry point to the bike path, as discussed above. The abutment itself would remain in place.

In addition, grading work would be conducted for a bikeway on the west side of Riverside Drive, and new curbs and gutters would be installed adjacent to the SR-134 on-ramp. Cold plane AC Pavement would be poured at the entrance to the westbound SR-134 on-ramp, and the ramp meter for the westbound on-ramp would be relocated.

A bikeway, retaining wall, and new curbs and gutters would also be constructed on the east side of Riverside Drive. A new storm drain would be constructed on the east side of Riverside Drive, including grading and pavement reconstruction. The existing storm drain system would be replaced. Lighting and conduits would be installed for the bikeway and roadway on both sides of Riverside Drive.

### **Construction Activities**

The project area includes areas to the west (upstream) where water diversion would take place. A construction staging area is proposed northwest of the bridge within the adjacent Bette Davis Picnic Area. The staging area would be in a 25,000-square-foot (approximately 0.57-acre) portion of the 14.7-acre park west of Riverside Drive near the bridge. No grading or digging would be needed to accommodate the contractor's activities within the staging area and no trees would be removed. Following construction, the area would be restored to existing conditions.

### **Estimated Cost**

The total estimated construction cost for the Build Alternative is \$8,500,000.

### **1.3.3 Alternatives Considered but Eliminated from Discussion**

In April 2009, an alternatives analysis was conducted to determine the alternatives that would meet several criteria pertaining to the project purpose and need. These criteria consisted of evaluating the degree to which the alternatives would preserve the historical architectural features of the bridge, resolve the roadway geometric deficiencies, bring the railings up to standard, resolve seismic deficiencies, provide bicycle and pedestrian access, minimize impacts on the Bette Davis Picnic Area, comply with the requirements for HBP funding by removing the bridge from the EBL, and meet cost-effectiveness and feasibility standards.

The following alternatives were analyzed based on these criteria.

- Alternative 1: This alternative would include widening the bridge by 12 feet on each side, replicating all architectural features, completing the seismic retrofit, and building the bike path undercrossing. Alternative 1 was eliminated because of potentially significant environmental impacts resulting from widening both sides of the bridge, including potentially adverse impacts on the historic status of the bridge. Alternative 1 would not maintain many of the historic features on the upstream side of the bridge, and therefore would not minimize impacts on the historic bridge when compared to a single-sided widening alternative. The total estimated construction cost of this alternative is \$8,000,000.
- Alternative 2: This alternative would include widening the bridge by 12 feet on each side, preserving the existing railings, replicating other architectural features, completing seismic retrofit, and building the bike path undercrossing. Alternative 2 was eliminated because of potentially significant environmental impacts resulting from widening both sides of the bridge, including potentially adverse impacts on the historic status of the bridge. Alternative 2 would not maintain many of the historic features on the upstream side of the bridge, and therefore would not minimize impacts on the historic bridge when compared to a single-sided widening alternative. Furthermore, Alternative 2 would not bring the railings up to standard, and therefore would not meet the purpose and need for the project. The total estimated construction cost of this alternative is \$8,000,000.
- Alternative 3: This alternative would include widening the bridge by 24 feet on one side, preserving the existing railings, replicating other architectural features, completing seismic retrofit, and building the bike path undercrossing. Alternative 3 was eliminated because it would not meet the purpose and need for the project and is not eligible for HBP funding.
- Alternative 4: This alternative would include completing the seismic retrofit and building the bike path undercrossing. Alternative 4 was eliminated because it would not meet the purpose and need for the project and is not eligible for HBP funding.
- Alternative 5: This alternative would include construct a new vehicular bridge upstream, completing seismic retrofit, and building the bike path undercrossing. Alternative 5 was eliminated because it would not meet the purpose and need for the project and is not eligible for HBP funding.
- Alternative 6: This alternative would include constructing a new pedestrian bridge upstream, completing seismic retrofit, and building the bike path undercrossing. Alternative 6 was

eliminated because it would not meet the purpose and need for the project and is not eligible for HBP funding.

- Alternative 7: This alternative would include saw cutting the bridge along the centerline, separating the two halves, and then build interior widening; completing seismic retrofit, and building the bike path undercrossing. Alternative 7 was eliminated because it would not meet the purpose and need for the project and is not eligible for HBP funding.
- Transportation System Management (TSM) Alternative: The TSM alternative would include refining the existing transportation system to increase the efficiency of existing facilities without widening the bridge. Under this alternative, alternative modes of transportation would be improved to enhance mobility and reduce local and regional congestion on Riverside Drive. The TSM Alternative was eliminated because it would not meet the project's need to functionally and seismically rehabilitate the bridge.
- Transportation Demand Management (TDM): A TDM would include regional means of reducing the number of vehicle trips and vehicle miles traveled as well as increasing vehicle occupancy. The TDM Alternative was eliminated because it would not meet the project's need to functionally and seismically rehabilitate the bridge.

### 1.4 Permits and Approvals Needed

For the project to be implemented, a series of actions and approvals would be required from various regulatory agencies. Anticipated project approvals/actions would include, but are not limited to, the following:

#### 1.4.1 City of Los Angeles

After the public circulation period, all comments will be considered, and the City will make the final determination of the project's effect on the environment. If it is found that all of the project impacts can be reduced to a less than significant level through project avoidance, minimization, and mitigation measures, then the City may adopt a Mitigated Negative Declaration (MND) for the project.

#### 1.4.2 California Department of Transportation

California participated in the "Surface Transportation Project Delivery Pilot Program" (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007 and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6th, 2012, amended 23 USC 327 to establish a revised and permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a memorandum of understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012 and terminates eighteen months from the effective date of FHWA regulations developed to clarify amendments to 23 USC 327 or on January 1, 2017. The NEPA Assignment MOU incorporates by reference the terms and conditions of the Pilot Program MOU. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and Caltrans assumed all of the

## Chapter 1 Proposed Project

United States Department of Transportation (U.S. DOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

After the public circulation period, all comments will be considered, and Caltrans will make the final determination of the project's effect on the environment. If it is found that the project would not have an adverse impact on the human environment as a whole, then Caltrans may prepare and approve a Finding of No Significant Impact (FONSI) for the project.

Under CEQA, Caltrans is identified as a responsible agency, which means Caltrans has discretionary approval authority and the responsibility to consider the environment effects of the project pursuant to CEQA for state right of way. As part of the approval and findings process, Caltrans may take the following actions:

- Issue an encroachment permit for any work within Caltrans' right of way; and
- Review the design of the proposed project as it pertains to state right of way.

### 1.4.3 Governmental Agency Approvals

**Table 1** lists the agency permits and approvals that are anticipated for project construction:

**Table 1  
Anticipated Permits and Approvals**

Agency	Permit/Approval	Status
U.S. Army Corps of Engineers (USACE)	Section 404 of the Clean Water Act (CWA) permitting would likely be required for impacts on wetlands and waters of the U.S.	A Wetland Delineation report dated August 2012 was prepared as part of the environmental review process for the proposed project. This report was submitted to the USACE in August 2012 for review and verification of the presence of wetlands and other waters of the U.S. within the project area. A 404 pre-construction notification would be submitted to the USACE prior to construction, if required.
U.S. Fish and Wildlife Service (USFWS)	Section 7 of the Federal Endangered Species Act (FESA), informal consultation with USFWS may be required. There is potential for migratory birds to be present in the project area; therefore, compliance with the Migratory Bird Treaty Act (MBTA) would be required.	An official list of federal threatened or endangered species with the potential to occur in the project area was requested and received from the USFWS Carlsbad Office on June 28, 2012. The USFWS Carlsbad Office, which has jurisdiction over listed species within the Los Angeles River corridor, was contacted via email in May of 2012 to discuss the protocol for endangered species surveys.
State Historic Preservation Officer (SHPO)	Section 106 Coordination with SHPO through Caltrans would be required. As part of the 106	An HPSR, FOE, and draft MOA were prepared for the project. These documents were submitted to SHPO on and are

## Chapter 1 Proposed Project

	process, SHPO and Caltrans would enter into a Memorandum of Understanding (MOU) regarding adverse effects on the historic integrity of the Riverside Drive Bridge.	currently under review.
Regional Water Quality Control Board (RWQCB), Los Angeles Region	A Storm Water Pollution Prevention Plan (SWPPP) under the National Pollutant Discharge Elimination System (NPDES), and Section 401 of the CWA permitting with the Regional Water Quality Control Board (RWQCB) would likely be required prior to project construction.	A SWPPP would be submitted to the RWQCB prior to construction, and an application for a 401 Water Quality Certification application would be submitted, if required.
California Department of Fish and Wildlife (CDFW)	Notification of streambed alteration, pursuant to Section 1602 of the California Fish and Game Code, and submittal of CDFW filing fee for review of the MND would be required prior to project construction.	Prior to construction, a SAA notification package and MND filing fee would be submitted to the CDFW.

A “trustee agency”, under CEQA, is an agency with legal jurisdiction over natural resources affected by the project that are held in trust by that agency for the people of California. The only known trustee agency is the CDFW.

## **2 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION**

### **2.1 Environmental Issues Excluded from Discussion**

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

- Coastal Zone: The project area is not in the coastal zone.
- Wild and Scenic Rivers: The Los Angeles River is not a designated wild and scenic river.
- Farmlands/Timberlands: There are no farmlands or timberlands within or adjacent to the project area.
- Relocations and Real Property Acquisition: The proposed project would not displace housing, businesses, or require the acquisition of property.
- Paleontology: The project area is developed and highly disturbed, and there are no known paleontological resources in the area.

## **HUMAN ENVIRONMENT**

### **2.2 Land Use**

This section describes the existing land uses in the project area, characterizes surrounding uses and summarizes current planning activities in the project area. This analysis focuses on land use compatibility and impacts associated with the implementation of the project.

#### **2.2.1 Existing and Future Land Use**

##### **Regulatory Setting**

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

The City of Los Angeles General Plan Framework (General Plan Framework) is a comprehensive, long-range document containing purposes, policies, and programs for the development of Los Angeles. The General Plan Framework 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. It responds to state and federal mandates to plan for the City's future.

The General Plan Framework supersedes the citywide elements of the City's General Plan. The document contains seven mandated elements and several optional elements, including air quality, conservation, cultural resources, housing, infrastructure, noise, open space, public facilities and services, safety, and transportation. The framework also includes a land use element or plan for each of the 35 community plan areas within the city.

##### ***City of Los Angeles General Plan Land Use Element***

The land use plan covers typology, urban design standards, community conservation/protection areas, areas of change (i.e. development infill and intensification), public and quasi-public facilities, environmental issues, and the Land Use Plan's relationship to other General Plan elements. Accessibility, street, bikeway, and transportation demand management standards are covered in the mobility and access section. Specifically, this plan's Urban Design/Public Realm chapter defines goals, policies, and design standards for public and private spaces, such as streets, sidewalks, plazas, parks, and community entry points.

Community plans have been adopted as the City's Land Use Element to guide growth and development in each of 35 community areas. The project area is within the Hollywood Community Plan area (and more specifically, the Greater Griffith Park Neighborhood Council). The Hollywood Community Plan was recently updated and passed by the City of Los Angeles City Council as of June 2012 from its former 1988 version. It is intended to guide land use, circulation, and services within the Hollywood community. The Hollywood Community Plan addresses a wide range of planning topics, including land use and housing, parks and open space, urban design, mobility, arts and culture, and history.

## **Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, or Mitigation Measures**

---

### **Affected Environment**

The Riverside Drive Bridge is located in a developed area of Los Angeles near the northern boundary of Griffith Park (see **Figure 6**). The project area is dominated by open space, floodway (Los Angeles River), and transportation facilities. The project area is zoned for Public Facilities (PF). Land use along the Los Angeles River and within the Bette Davis Picnic Area is designated as Open Space (OS). Land use to the south of the bridge includes SR-134 and Griffith Park. Land use to the north includes the Bette Davis Picnic Area (part of Griffith Park). The Bette Davis Picnic Area is used by the public for recreational uses that include biking, picnicking, hiking, and equestrian activities. The nearest residential community is located in the City of Glendale, approximately 660 feet to the northeast of the project area.

### **Environmental Consequences**

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

The No Build Alternative would not require any construction; therefore, there would be no impact on land use.

#### ***Build Alternative***

The Build Alternative would not require permanent changes in land use or zoning designations. The City owns all of the property within the project area; therefore, no right of way acquisition would be required. Construction activities would be limited to the existing bridge, roadways, and bike path, with the exception of a temporary staging area within Bette Davis Picnic Area (which would remain parkland after completion of the Build Alternative). Therefore, there would be no impact on existing land use within the project area.

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

The Build Alternative would not result in impacts on existing or future land uses within the project area; therefore, no avoidance, minimization, and/or mitigation measures are required.

### **Cumulative Impacts**

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed 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 time.

Cumulative impacts on 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.



Source: TetraTech, 2012

No Scale

**Legend**

	= Project Area		= Riverside Drive Bridge
<b>City of Los Angeles Generalized Zoning Designations:</b>			
	= Public Facilities (PF)		= Open Space (OS)



## **Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, or Mitigation Measures**

---

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 Council on Environmental Quality (CEQ) Regulations.

The cumulative setting for land use is considered the Hollywood Community Planning Area, where the project is located. The project would not temporarily or permanently change existing or future land uses beyond what is currently planned in this area; therefore, the project would not contribute to cumulative impacts on land use, and no further analysis is required.

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

#### **Regulatory Setting**

In addition to the General Plan Framework and Hollywood Community Plan discussed in Section 2.2.1, there are several regional and local plans that are applicable to the proposed project.

#### ***Los Angeles River Revitalization Master Plan***

The 2007 Los Angeles River Revitalization Master Plan (LARRMP) provides a framework for restoring the river's ecological function and for transforming it into an amenity for residents and visitors to Los Angeles. The LARRMP includes recommendations for improvements to the river corridor, recommendations at a policy level for managing public access and ensuring public health and safety, recommendations for a river governance and management structure, and recommendations for long-term priority projects and potential funding strategies.

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

The City of Los Angeles Bicycle Plan is a component of the General Plan Transportation Element. The City developed the plan with the purpose of providing a guide to the development of a citywide bicycle transportation system. The plan recognizes the growing needs of the bicycling public and seeks to reduce barriers to better utilization of bicycles for both personal transportation and for recreation. Particular emphasis is placed on bicycling as a commute option. The overall intent is to expand bicycle usage through further development of bicycle riding facilities and improvement of existing facilities along with appropriate support programs.

#### ***Griffith Park Master Plan***

The 1978 Griffith Park Master Plan provides recommendations to enhance the park and associated recreation. It describes regions of the park, and develops a park improvement strategy.

#### **Affected Environment**

The Los Angeles River bike path currently extends along the riverbank from the Riverside Drive Bridge, generally in a southeast direction, to Barclay Street in Elysian Valley. The Class I bikeway currently terminates at Riverside Drive at the southeast corner of the Riverside Drive Bridge. There are currently no bike lanes or shoulders on the bridge, which presents nonstandard conditions for bicyclists travelling through the project area. The proposed project

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would add shoulders to the bridge for the bicyclists and would provide an undercrossing that links the eastern and western segments of the Los Angeles River bike path.

Although the project area is developed, there is a project planned along the Los Angeles River just east of the project area. This project, called the Glendale Narrows Riverwalk (Riverwalk), is proposed by the City of Glendale. Phase I of the project, including installation of 0.5 mile of recreational trail and several small parks along the northern edge of the river, was completed and opened to the public in December of 2012. Phase II and Phase III, which are still in the planning stages, would include the continuing of the trail toward the east, constructing a new park, and building a multi-use bridge that would extend over the Los Angeles River from the Riverwalk to Griffith Park.

Griffith Park is the largest municipal park with an urban wilderness area in the United States (U.S.), with approximately 4,201 acres of natural and landscaped areas. Portions of Griffith Park are located both north and south of the project area. Specifically, the project is located in the northern section of Griffith Park, in an area called the Bette Davis Picnic Area. Griffith Park is owned by the City and is managed by the City's Department of Recreation and Parks.

The Bette Davis Picnic Area is a 14.7-acre area bound by the City of Glendale to the north and east, the Easter Fields area of Griffith Park to the west, and the Los Angeles River and SR-134 to the south. The park can be accessed via Riverside Drive and via Rancho Avenue and Garden Street, residential streets adjacent to the picnic area. The area includes open space, picnic tables, and equestrian trails.

There are several other projects in the city that have also involved bridge widening over the Los Angeles River to retrofit old bridges and improve traffic conditions. Improving bicycle facilities has also been a growing trend within Los Angeles and California as a whole. Funding has been directed towards these projects to improve outdoor spaces, encourage alternatives to auto transportation, and encourage physical exercise. Several local bicycle plans have established policies and programs that encourage ridership.

### **Environmental Consequences**

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

The No Build Alternative would not require any construction, and would therefore not directly conflict with any existing plans for the Los Angeles River or Griffith Park. However, the No Build Alternative would not help to accomplish goals stated within the General Plan Framework that encourage access to open space and extension of bicycle networks.

#### ***Build Alternative***

The General Plan Framework includes policies to connect neighborhoods to open space. The 2010 Bicycle Plan within the General Plan Framework includes policies to upgrade bicycle routes as well as bridges and intersections that impede safe and convenient bicycle passage. The Build Alternative would be consistent with these policies because it would improve connectivity to the Los Angeles bike path and Griffith Park by linking the eastern and western segments of the Los Angeles River bike path, and improving bicycle and pedestrian travel.

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The project would also be consistent with the LARRMP's near-term improvement goals to enhance water quality and enable safe public access to the river. Specifically, the project is consistent with the recommendation to develop non-motorized transportation and recreation elements including bike and pedestrian paths and multiuse trails in the Los Angeles River and tributary rights of way.

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

The project would not result in any impacts on state, regional, and local plans and programs; therefore, no avoidance, minimization, and/or mitigation measures are required.

### **Cumulative Impacts**

The cumulative setting for plans and programs is considered the County of Los Angeles, where applicable regional plans generally take effect. The project would be consistent with state, regional, and local plans and programs during both construction and operation of the project; therefore, the project would not result in cumulatively considerable impacts on plan consistency, and no further analysis is required.

### **2.2.3 Parks and Recreational Facilities**

#### **Regulatory Setting**

##### ***United States Department of Transportation Act***

Section 4(f) of the U.S. DOT Act (49 U.S.C. Section 303) (Section 4(f)) applies to a project whenever a federal action involves the use of a publicly owned park, recreation area, wildlife or waterfowl refuge, or land from a historic site. For these projects, Section 4(f) requires evaluation to ensure that any "use" of the resource does not adversely affect the activities, features, and attributes that qualify the resource for protection under Section 4(f).

Under Section 4(f)(23 CFR 771.135(p)(7)), a minimal and temporary occupancy of land does not constitute a use under Section 4(f) when the following conditions are satisfied:

- Duration (of the occupancy) must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
- Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) resource are minimal;
- There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purpose of the resource, on either a temporary or permanent basis;
- The land being used must be fully restored, i.e., the resource must be returned to a condition which is at least as good as that which existed prior to the project; and
- There must be documented agreement of the appropriate federal, state, or local officials having jurisdiction over the resource regarding the above conditions.

##### ***City of Los Angeles General Plan Open Space and Conservation Element***

The Open Space and Conservation Element aims to take advantage of the existing open space elements of the city, and create a citywide greenway network (City, 2001). The element has an

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economic dimension with the goal of developing open space facilities that will increase property values, attract new investors, and create great economic stability in the area. Socially, the element strives to provide facilities that are distributed and available to all Los Angeles residents, and that connect neighborhoods and people. The element also has ecological goals to improve water quality and supply, reduce flood hazards, improve air quality, and provide ecological corridors for wildlife.

One of the element's policies includes taking advantage of opportunities to enhance the City's open space network along the Los Angeles River. Because the river and its tributaries pass through much of Los Angeles, the element recognizes that the river could become the "spine" of the citywide greenway system, and could be developed for outdoor recreation (City, 2001).

### **Affected Environment**

Los Angeles has open space resources located throughout its many neighborhoods, but is primarily an urbanized area framed by open space (City, 2001). The Pacific Ocean, San Gabriel Mountains, Santa Susana Mountains, Baldwin Hills, and the Santa Monica Mountains are several of the natural open space resources that bound the City, define its geography, and influence its development patterns. Within these open space areas, there are opportunities for a variety of environmental and recreational activities, including hiking, biking, wildlife-watching, and horseback riding.

Griffith Park is the largest municipal park with an urban wilderness area in the U.S., with approximately 4,201 acres of natural and landscaped areas. Portions of Griffith Park are located both north and south of the project area (see **Figure 7**). Specifically, the project is located in the northern section of Griffith Park, in an area called the Bette Davis Picnic Area. Griffith Park is owned by the City and is managed by the City's Department of Recreation and Parks.

The Bette Davis Picnic Area is a 14.7-acre area bounded by the City of Glendale to the north and east, the Easter Fields area of Griffith Park to the west, and the Los Angeles River and Burbank Western Channel to the south. The park can be accessed via Riverside Drive and via Rancho Avenue and Garden Street, residential streets adjacent to the picnic area. The area includes open space, picnic tables, and equestrian trails.

### **Environmental Consequences**

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

The No Build Alternative would not result in any changes to, or use of, the Bette Davis Picnic Area; therefore, there would be no impacts.



No Scale





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### ***Build Alternative***

During construction of the Build Alternative, approximately 25,000 square feet (0.57 acre) of area within the 14.7-acre Bette Davis Picnic Area would be used as a construction staging area, which would result in a temporary occupancy of the park. There would be no grading or ground disturbance necessary to accommodate staging activities within the staging area. There are no picnic tables, equestrian trails, or pedestrian trails within the area proposed for staging. Although the staging area would not be available for recreational use during the construction phase of the proposed project, other areas of the park would remain open, and the area would be restored following project construction. Therefore, the project would not result in any adverse impacts on the Bette Davis Picnic Area.

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

Since the project would not result in adverse impacts on parks or other recreational facilities, no avoidance, minimization, or mitigation measures are required.

### **Cumulative Impacts**

The cumulative setting for parks and recreational resources is considered all of the parks and recreational facilities within Los Angeles. Because there are no picnic tables, equestrian trails, or pedestrian trails within the proposed staging area, the temporary occupancy would not affect access to the Bette Davis Picnic Area amenities. Griffith Park offers additional recreational areas that would be available during the course of project construction; therefore, the project would not result in cumulatively considerable impacts on parks or recreational facilities, and no further analysis is required.

### **2.2.4 Section 4(f) Determination**

The proposed project would constitute a temporary occupancy, according to the criteria included in 23 CFR 771.135(p)(7). The duration of occupancy would be temporary; there would be no change in ownership of the park; the staging work would be minor; there are no anticipated permanent adverse physical impacts, nor would there be interference with the activities or purpose of the resource, on either a temporary or permanent basis; and the land would be fully restored to a condition that is at least as good as the one that existed prior to the project. The City has received concurrence from the officials having jurisdiction over the resource, the City's Department of Recreation and Parks, for the temporary occupancy (see **Appendix B**, Programmatic Section 4(f)); therefore, no further evaluation is required under Section 4(f).

## **2.3 Growth**

This section discusses the potential for the project to influence growth in the surrounding area.

### **2.3.1 Regulatory Setting**

The CEQ regulations, which established the steps necessary to comply with NEPA, 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

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impacts. Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

CEQA also requires the analysis of a project's potential to induce growth. The 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..."

### **2.3.2 Affected Environment**

Growth inducement in terms of transportation projects can be defined as the relationship between the proposed project and future growth within the project area. A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing.

A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it involved a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it removed an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth inducing.

If the improvement is the cause of new development and an influx of residents and economic strength in an area, then it may be growth inducing. The Riverside Drive Bridge is located in a developed area of Los Angeles near the northern boundary of Griffith Park. The project vicinity is already developed or designated open space, and substantial growth in the area is not anticipated.

### **2.3.3 Environmental Consequences**

#### **No Build Alternative**

The No Build Alternative would not require any construction, and would therefore not result in any direct or indirect growth in the project area; therefore, no impact would occur.

#### **Build Alternative**

Although the bridge structure would be widened, the project would not increase the number of traffic lanes or increase capacity. The proposed project is proposed to address existing transportation needs related to surface street circulation on the Riverside Drive Bridge. Specifically, the project is intended to address geometric deficiencies, improve the bridge's structural integrity, provide an undercrossing beneath the Riverside Drive Bridge to allow for the westerly extension of the Los Angeles River Bike Path, and provide adequate shoulder width on the structure to allow bicyclists to cross the bridge safely. This project is not growth inducing because it does not directly cause economic or population increases greater than what is planned by the local agency without the project. The project would not include any elements that would induce growth; therefore, there would be no impact.

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

The project would not result in growth; therefore, avoidance, minimization, and/or mitigation measures are not required.

### **2.3.5 Cumulative Impacts**

The cumulative setting for growth is considered growth in Los Angeles as a whole. The proposed project is in a developed area where substantial growth is not anticipated. The proposed project would not increase capacity of the Riverside Drive Bridge, or induce growth in the project vicinity; therefore, the project would not contribute to cumulative impacts, and no further analysis is required.

## **2.4 Community Impacts**

This section includes a discussion of impacts related to community character and cohesion, and environmental justice populations.

### **2.4.1 Regulatory Setting**

NEPA, as amended, established that the federal government use all practicable means to ensure that all Americans have safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration in its implementation of NEPA (23 USC 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 change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (E.O.) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Clinton on February 11, 1994. This E.O. 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 (HHS) poverty guidelines. For the year 2010, this was \$22,050 for a family of four in the 48 contiguous states and Washington D.C.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans' 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.

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### 2.4.2 Methodology

In order to identify community impacts, a study area must be identified to include relevant populations. The study area identified for the purpose of this IS/EA includes all persons, lands, buildings, and environment located within the boundaries depicted on **Figure 8**, and described more thoroughly below.

A site survey was performed to identify physical characteristics that naturally delineate areas, community buildings and/or community centers, and general neighborhood cohesion. Neighborhood elements such as these generally provide residents with a sense of belonging and are important to consider when identifying the extent of a study area.

Formulation of the study area, and topics included in this section, are based on anticipated impacts and issues. These impacts and issues can be direct or indirect in nature. Direct effects are caused by an action, and occur at the same time and place as the action. Indirect effects are caused by an action, but are later in time or further removed in distance from the action; however, are still reasonably foreseeable.

### **Study Area**

The study area identified for the proposed project encompasses the geographical unit in which direct and indirect impacts are most likely to occur at their greatest intensity. Direct effects from temporary construction (such as construction staging and roadway work) and physical changes (bridge and bike path improvements) were taken into consideration. Potential indirect effects that would affect the regional community and local recreational resources were also considered.

The study area is generally bound by the City of Burbank limits to the northwest, the Interstate Highway 5 (I-5) to the northeast, and Griffith Park Drive to the southwest. The study area includes areas in the jurisdiction of Los Angeles and the City of Glendale. The study area includes portions of Riverside Drive, the Los Angeles River Bike Path, a neighborhood to the north of the bridge, and adjacent recreational facilities that are within and immediately adjacent to the project area.

The neighborhood to the north of the bridge is designated by the City of Glendale as the Riverside Rancho neighborhood. This neighborhood has a generally triangular shape and is bordered by Linden Avenue to the northwest, I-5 to the northeast, and the Bette Davis Picnic Area to the south.

The study area includes a concentration of community and recreational facilities located within the immediate project vicinity, including the Bette Davis Picnic Area, Los Angeles Equestrian center, and a large portion of Griffith Park. While there are no residents in the park and recreational areas (as defined by the U.S. Census Bureau), they have been included to address potential impacts on employees or those using the adjacent recreational areas.

The study area includes U. S. Census Block Groups 1, 2, and 3 within Census Tract 3016.02 (City of Glendale) as well as a portion (22.6 percent) of Block Group 1 within Census Tract 9800.09 (City of Los Angeles).

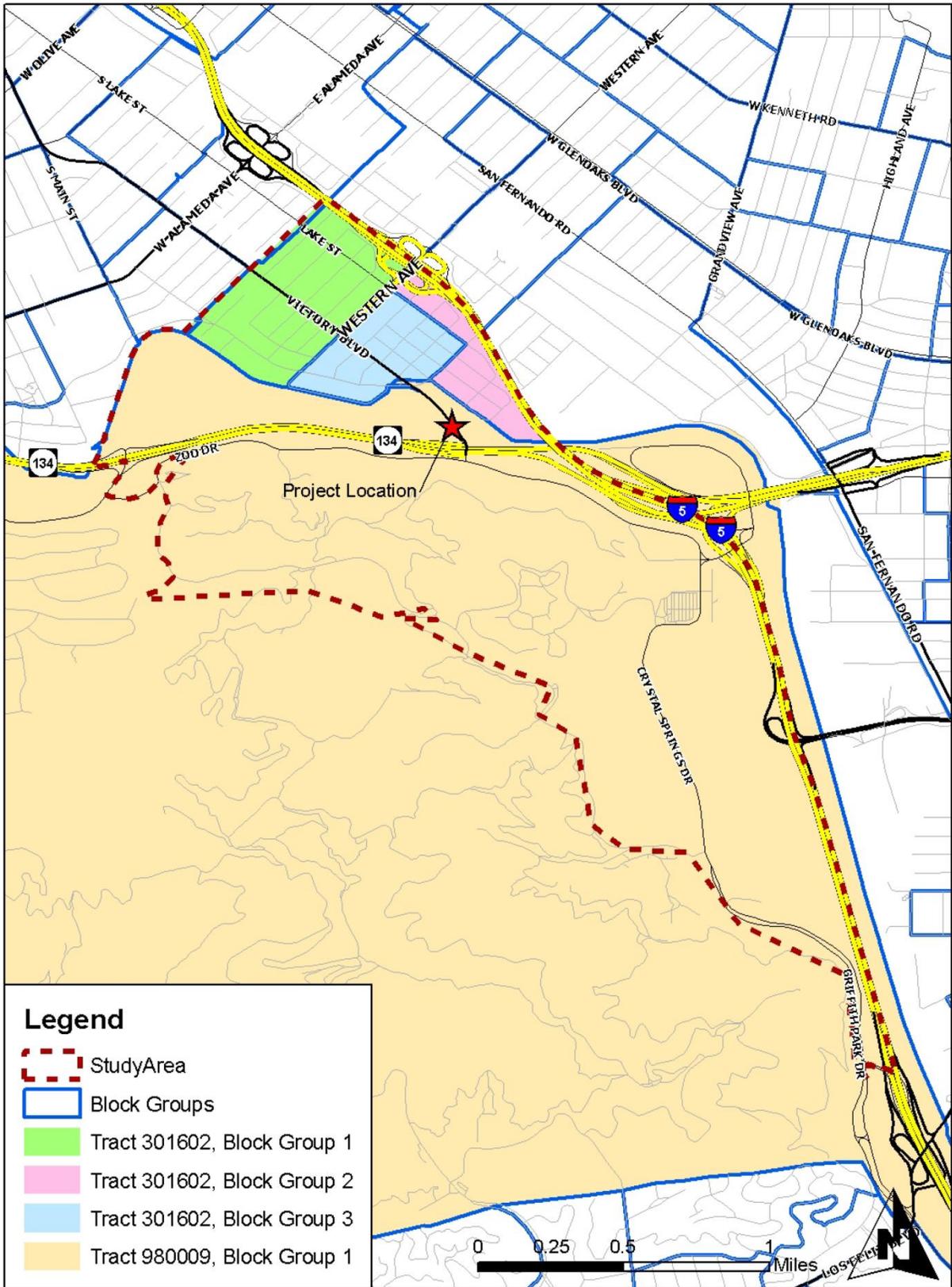


Figure 8 Community Impacts Study Area



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### Regional Area

A regional area has also been identified for comparison against the study area. This is useful for gaining perspective by identifying similarities, differences, and relationships between the two areas. Generally, a region is defined as the jurisdiction that is larger than, but that includes, the study area, although some circumstances may dictate deviations from this standard. Because the study area includes portions of the City of Glendale and the City of Los Angeles, the regional area selected for the purpose of this analysis is the County of Los Angeles.

### **2.4.3 Community Character and Cohesion**

#### Affected Environment

Community cohesion is the degree to which residents have a “sense of belonging” and a level of commitment to their neighborhood, or a strong attachment to neighbors, groups, and institutions, usually because of continued association over time.

The proposed project is located in a suburban setting, which includes adjacent recreational facilities (parklands, equestrian trails, and the Los Angeles bike path), transportation facilities, and a neighboring residential community. To the south of the bridge, Riverside Drive terminates at a T-intersection with Zoo Drive. SR-34 and Griffith Park lie to the south of the project area. The Los Angeles River bike path runs perpendicular along the east side of the bridge.

The Bette Davis Picnic Area and Riverside Rancho neighborhood lie within the northern portion of study area. West of Bette Davis Picnic Area is an area designated as Easter Fields, a horse exercise field, which connects to the Los Angeles Equestrian Center located within the western portion of the study area. The Riverside Rancho neighborhood within Glendale and this portion of Griffith Park is equestrian-oriented with related amenities (trails, riding centers, etc.).

#### **Population Demographics**

The population demographics outlined in this section are used to identify meaningfully greater percentages within the study area, as compared to the regional area. For the purpose of this discussion, the term meaningfully greater is defined as 10 percent or above.

#### *Race and Ethnicity*

**Table 2** shows that there is a meaningfully greater population of White persons in the study area, as compared to the regional area. There are no meaningfully greater populations of any other race/ethnicity in the study area, including minority populations.

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**Table 2  
Racial and Ethnic Characteristics**

	Study Area		Regional Area	
	2010*	Percent of Total Population	2010	Percent of Total Population
Total Population	3,911	100	9,818,605	100
White (NH)	1,490	<b>38.1</b>	2,728,321	27.8
African American (NH)	86	2.2	815,086	8.3
American Indian/ Alaska Native (NH)	5	0.1	18,886	0.2
Asian (NH)	540	13.8	1,325,671	13.5
Native Hawaiian/ Other Pacific Islander (NH)	4	0.1	22,464	0.2
Some Other Race (NH)	20	0.5	25,367	0.3
Two or More Races (NH)	99	2.5	194,921	2.0
Hispanic or Latino	1,667	42.6	4,687,889	47.7

NH = Not Hispanic

Source: U.S. Census Bureau, 2010 SF1 Data Set

\* Calculated based on GIS land area percentages

*Age*

**Table 3** shows that there is a meaningfully greater population of persons aged 35 to 64 in the study area, as compared to the regional area. There are no other meaningfully greater populations of any other age groups in the study area, including elderly populations.

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**Table 3  
Age Characteristics**

	Study Area		Regional Area	
	2010*	Percent of Total Population	2010	Percent of Total Population
Total Population	3,911	100	9,818,605	100
Under 18 Years	731	18.7	2,402,208	24.5
18 to 34 Years	1,043	26.7	2,538,269	25.9
35 to 64 Years	1,712	43.8	3,812,429	38.8
65 Years +	424	10.8	1,065,699	10.9

Source: U.S. Census Bureau, 2010 SF1 Data Set  
\* Calculated based on GIS land area percentages

### **Housing**

**Table 4** shows that there are no differences in housing occupancy rates that represent a meaningfully greater percentage in the study area, as compared to the regional area.

**Table 4  
Housing Occupancy**

	Study Area		Regional Area	
	Total Housing Units*	Percent of Total Housing Units	Total Housing Units	Percent of Total Housing Units
Total Housing Units	1,685	100	3,445,076	100
Occupied Units	1,563	92.7	3,241,204	94.1
Vacant Units	122	7.2	203,872	5.9

Source: U.S. Census Bureau, 2010 SF1 Data Set  
\* Calculated based on GIS land area percentages

### **Transportation**

**Table 5** shows that there are no meaningfully greater differences in the mode of transportation to work between the study area and the regional area.

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**Table 5  
Mode of Transportation (to Work)**

	Study Area		Regional Area	
	2010 5-Year Estimate*	Percent of Estimated Total	2010 5-Year Estimate	Percent of Estimated Total
Total	2,040	100	4,399,339	100
Car, Truck, or Van (alone)	1,568	76.9	3,173,055	72.1
Car, Truck, or Van (carpool)	110	5.4	497,964	11.3
Public Transportation (excludes taxis)	44	2.2	311,701	7.1
Bicycle	45	2.2	32,423	0.7
Walk	144	7.1	125,816	2.9
Worked at home	69	3.4	200,450	4.6
Taxi, Motorcycle, Other	60	2.9	57,930	1.3

Source: U.S. Census Bureau, 2010 5-Year Estimates (2006-2010)

\* Calculated based on GIS land area percentages

### ***Community Facilities***

The recreational facilities located inside of the study area are generally located within Griffith Park. These recreational facilities include a golf course, the Los Angeles Zoo, and museums. Griffith Park is located southeast of the project area. The Bette Davis Picnic Area, Easter Fields, and a horse exercise field, provide additional recreational opportunities to the north of the project area. The Los Angeles Equestrian Center is located within the western portion of the study area. Additional community facilities, including schools and churches, are located within the Riverside Rancho neighborhood.

### ***Businesses***

The study area is dominated by recreational facilities; therefore, there are a limited number of businesses. A small concentration of restaurants and retail services is located along Victory Boulevard in the Riverside Rancho neighborhood.

### **Environmental Consequences**

#### ***No Project Alternative***

The No Build Alternative would involve no changes to existing conditions; therefore, no impact would occur.

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### ***Build Alternative Impacts***

The Build Alternative would not divide or disrupt existing neighborhoods or communities; it is anticipated that implementation of the project would improve overall access in the area, including local access to recreational facilities. Although the structure would be widened, there would not be additional right of way required to construct or implement the project.

During construction, access within the project area would be temporarily affected, including access for bicycles and pedestrians using this route. To minimize these impacts, a traffic management plan would be developed, and would be coordinated with affected groups and individuals. Following construction, access is expected to improve. With implementation of the traffic management plan, the project would not result in adverse impacts on community character and cohesion.

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

With the implementation of standard avoidance and minimization measures, there would be no adverse impacts on community character and cohesion; therefore, no mitigation measures are required.

### **Cumulative Impacts**

The cumulative setting for community character and cohesion is the Hollywood Community Planning Area. The project would contribute to cumulative and beneficial improvements related to local access; therefore, the project's contribution to cumulative impacts would be less than cumulatively considerable.

### **2.4.4 Environmental Justice**

#### **Affected Environment**

As outlined in **Table 2**, there are no meaningfully greater populations of minority persons located in the study area, as compared to the regional area. **Table 6** shows that there are no meaningfully greater low-income populations in the study area, as compared to the regional area.

**Table 6  
Households Below Poverty Level**

	Study Area		Regional Area	
	2010*	Percentage of Total Surveyed Households	2010	Percentage of Total Surveyed Households
Total Surveyed Households	1,706	100	3,217,889	100
Number Surveyed Households with Income in the past 12 months below poverty level	138	8.1	455,018	14.1

Source: U.S. Census Bureau, 2010 5-Year Estimates (2006-2010)

\* Calculated based on GIS land area percentages

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No minority or low-income populations that would be adversely affected by the proposed project have been identified as determined above. Therefore, this project is not subject to the provisions of E.O. 12898.

### **Environmental Consequences**

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

The No Build Alternative would involve no changes to existing conditions; therefore, no impact would occur.

#### ***Build Alternative Impacts***

No minority or low-income populations would be affected by the Build Alternative; therefore, there would be no impact.

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

The project would not result in impacts on environmental justice populations; therefore, avoidance, minimization, and/or mitigation measures are not required.

### **Cumulative Impacts**

The cumulative setting for minority and low-income populations is considered the County of Los Angeles, or regional area. The proposed project would not affect environmental justice populations; therefore, the project would not contribute to cumulative impacts.

## **2.5 Utilities/Emergency Services**

This section discusses the proposed project's potential to affect utilities and emergency services within the project area.

### ***2.5.1 Affected Environment***

#### **Utilities**

There is a six-inch diameter gas line and a 16-inch diameter water line attached beneath the Riverside Drive Bridge. In addition, there is a storm drain outlet structure in the channel embankment below the southernmost bridge span, underground electrical lines, lighting fixtures mounted on concrete poles (six on each side of the bridge), steel transmission towers parallel to the Los Angeles River bike path, and wooden utility poles parallel to the east side of the bridge. The Los Angeles Department of Water and Power (DWP) maintains and operates the electrical power within the project area.

#### **Emergency Services**

The project area is served by Fire Station 56, located in Silver Lake, and by the Northeast Police Station.

### ***2.5.2 Environmental Consequences***

#### **No Build Alternative**

The No Build Alternative would involve no changes to existing conditions; therefore, there would

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be no impact.

### **Build Alternative**

The Build Alternative would not require additional utilities for operation of the project; however, some relocations and extensions would be required. The project would require relocation of the storm drain outlet below the southernmost bridge span. Excavation to a depth of approximately 15 feet would be required along the south abutment of the bridge to renovate the outlet.

The Build Alternative would also include extending underground electrical lines north along the west side Riverside Drive to connect the lines to the series circuit ending at Victory Boulevard. These improvements would likely be accomplished through micro tunneling or jacking pipe at a maximum depth of 36 inches. Power lines within the project area would not be impacted by the Build Alternative.

During construction, the project would require temporary support of the water line that currently hangs beneath the bridge prior to the removal of the existing exterior girder and deck. Intermittent disruptions of the electrical lines could also be required during construction, but this disruption would be temporary and coordinated as part of the City's standard plans and specifications design process. Any disruptions to utility service would be scheduled to ensure they would not adversely affect the surrounding community.

Construction of the proposed project could require temporary lane closures or result in other traffic impacts that could affect emergency access through the project area; however, it is anticipated that one travel lane in each direction would remain open throughout construction, so detours would not be required. Once construction of the proposed project is completed, access in the area would be improved for all users, including emergency services. The project would not generate a need for additional emergency services.

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

A traffic management plan would be implemented during construction to minimize traffic impacts and delays, and the traffic management plans would be coordinated with emergency service providers to ensure that the provision of emergency services is not adversely affected. Therefore, there would be no adverse impacts on utilities or emergency services.

### **2.5.4 Cumulative Impacts**

The cumulative setting for electrical services is considered the portions of the service area for the DWP that could be affected by the project. If other activities that required interruptions to power were to occur within the immediate area during project construction, this could result in cumulative impacts on this service; however, with implementation of a standard traffic management plan project contributions these impacts would be minimal. In addition, no other major construction projects are expected concurrent to proposed project; therefore, project contributions would be less than cumulatively considerable.

The cumulative setting for emergency services is considered the portions of the service area for police and fire service that could be affected by traffic impacts. If other activities that resulted in traffic impacts that could affect emergency services were to occur within the immediate area

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during project construction, this could result in cumulative impacts on these services; however, with implementation of a standard traffic management plan project contributions these impacts would be minimal. In addition, no other major construction projects are expected concurrent to proposed project; therefore, project contributions would be less than cumulatively considerable.

### **2.6 Traffic and Transportation/Pedestrian and Bicycle Facilities**

This section describes the potential impacts on the transportation system near the project area and examines the roadway, transit, and bicycle/pedestrian components that are found in the project area.

#### **2.6.1 Regulatory Setting**

Caltrans, 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.

In July 1999, U.S. DOT issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the U.S. DOT regulations (49 CFR Part 27) implementing Section 504 of the Rehabilitation Act (29 USC 794). FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid projects, including Transportation Enhancement Activities.

#### **2.6.2 Affected Environment**

Existing conditions for the project area are provided below, including the existing roadway system, bicycle/pedestrian facilities, and transit components of the transportation system.

##### **Roadway System**

Within the project area, Riverside Drive is a four-lane roadway. Between Sonora Avenue to the north and the Riverside Drive Bridge, the roadway has no sidewalks, but has a shoulder on the west side of the road. Where it crosses over the bridge, the roadway has two 5-foot sidewalks and no shoulders. South of the bridge, the roadway has four vehicle lanes, no shoulders, a sidewalk on the east side to Zoo Drive, and a sidewalk on the west side on the bridge over SR-134.

Other roadways within the project area and vicinity include Sonora Avenue and Victory Boulevard at the northern project limits, Garden Street to the northeast of the Bette Davis Picnic Area, SR-134 to the south of the bridge, and Zoo Drive at the southern project limits.

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### **Bicycle/Pedestrian System**

Within the project area, the existing Los Angeles River bike path begins/ends in the southeast corner of the bridge and immediately north of the SR-134 overcrossing. The Los Angeles River bike path is a Class I bike facility that parallels the Los Angeles River from Riverside Drive south to Fletcher Drive, where it becomes the Los Angeles Greenway Trail and continues to approximately Interstate 5. A Class I bike path is generally defined as a completely separate path for the exclusive use of bicycles and pedestrians with cross flow by motorists minimized or absent. The existing bridge has two 5-foot sidewalks for pedestrians, but no shoulders or bicycle lanes.

Westbound bicyclists exiting the bike path at Riverside Drive must share the constrained roadway with vehicular traffic. There are currently no bike lanes or shoulders on the bridge. Bicycle counts from 2013 show that there were approximately 375 bicycles crossing the Riverside Drive Bridge on weekdays, including 43 during the AM peak hour and 34 during the PM peak hour. Approximately 610 bicycles crossed the bridge on Saturday, including 110 during the AM peak hour and 89 during the PM peak hour. On Sunday, approximately 796 bikes crossed the bridge, including 158 in the AM peak hour and 77 in the PM peak hour (V&A, Inc., 2013).

### **Transit Service**

The Los Angeles County Metropolitan Transportation Authority (Metro) operates Metro Bus Line 96, called the Downtown LA – Burbank Station via Riverside Drive, LA Zoo. This line, which runs through the project area, runs along Victory Boulevard, Riverside Drive, and Zoo Drive. The approximate frequency for Line 96 is 30 minutes for weekday peak, daytime, and evening hours. Saturday's approximate frequency is 50 to 60 minutes for both the day and evening, and Sunday's approximate frequency is 60 minutes for both the day and evening.

### **2.6.3 Environmental Consequences**

#### **No Build Alternative**

The No Build Alternative would involve no changes to existing conditions, and would not result in any direct impacts on traffic and transportation. However, the No Build Alternative would not implement improvements to vehicle, bicycle, and pedestrian facilities proposed as part of the Build Alternative, and bicyclists and pedestrians would continue to share the constrained roadway with vehicular traffic.

#### **Build Alternative**

The Build Alternative would widen the bridge to provide lane widths, shoulders, and sidewalks required to meet federal, state, and local geometric standards.

#### **Roadway System**

The project area is not on or adjacent to a surface road or street providing access to an airport, and therefore the project would not result in traffic impacts related to airports. The proposed project would be designed to meet current standards and would not result in roadway hazards such as sharp curves, compromised sight lines, or turning radius of non-standard design.

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Because no trip-generating land uses are associated with the project (i.e., residential developments, commercial centers, etc.), the Build Alternative would not result in an increase in existing traffic trips on the roadway; rather, it would accommodate existing and projected traffic levels in the project area. In addition, the project would not increase the number of vehicle lanes on the bridge or surrounding roadway, and would therefore not be capacity increasing.

The widened bridge would be approximately 75 feet wide and would accommodate four 11-foot through lanes, a 2-foot median, two 5-foot shoulders, two 8-foot sidewalks, and two 1-foot barrier railings. To improve visibility for bicyclists, motorists, and pedestrians, the intersection of the SR-134 on-ramp and Riverside Drive would be modified by softening the curve at the bridge's southwest abutment. The project would improve the geometry of the existing bridge to meet current standards (lane width and shoulders), would be expected to improve the flow of traffic through the area, and would provide an emergency parking area for disabled vehicles.

Construction of the proposed project could require temporary lane closures or result in other traffic impacts that could affect vehicle access through the project area; however, it is anticipated that one travel lane in each direction would remain open throughout construction, so detours would not be required. A traffic management plan would be implemented during construction to minimize traffic impacts and delays; therefore, no adverse traffic impacts are anticipated.

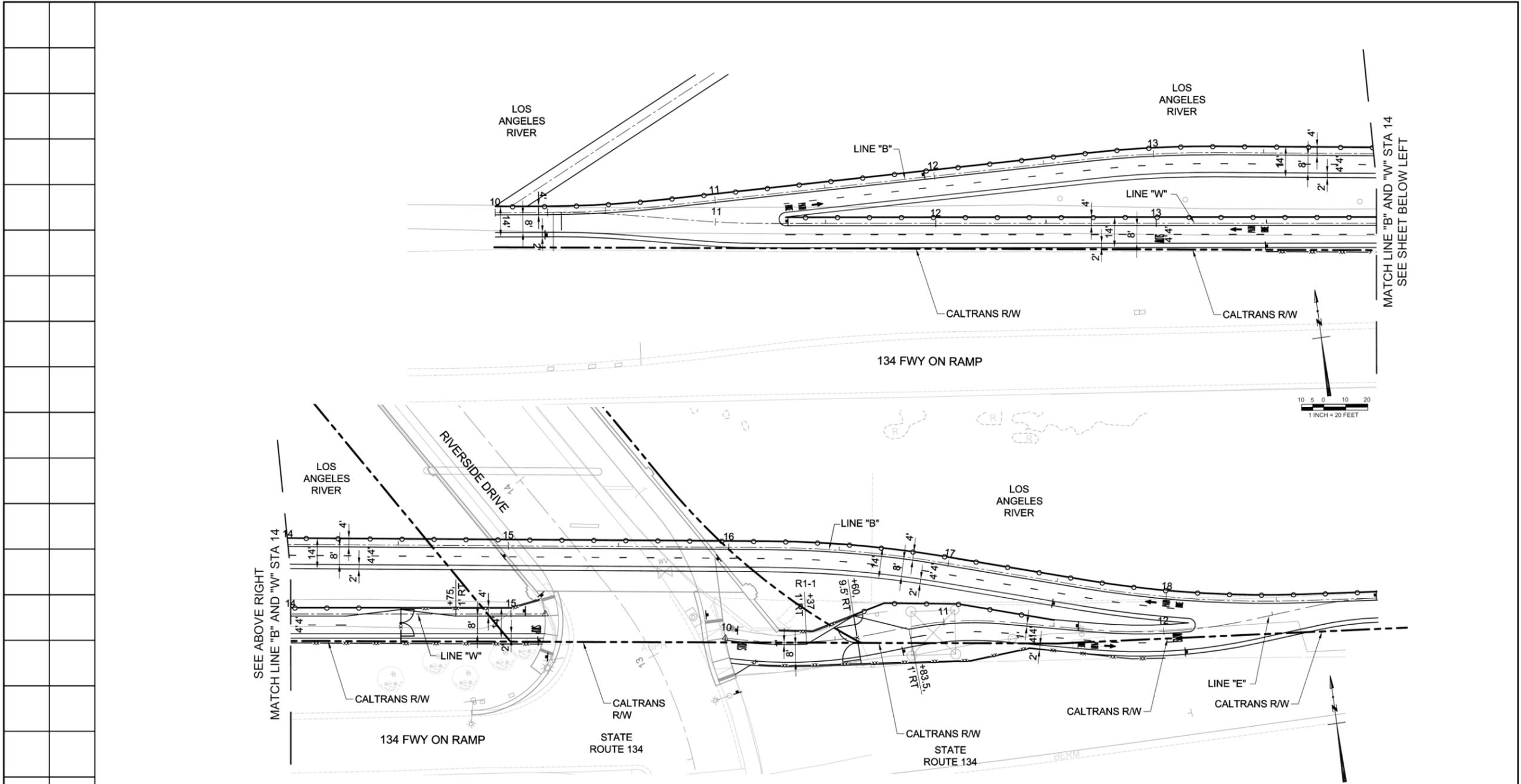
### ***Bicycle/Pedestrian System***

The Build Alternative would include shoulders on both sides of the bridge that could be used by bicyclists. In addition, the project would include wider sidewalks on the bridge, each totaling eight feet in width, which would comply with ADA-required sidewalk widths. Pedestrians would also be able to use the bike path to cross Riverside Drive without crossing vehicle lanes. Additionally, the project would include a new bicycle undercrossing to link the existing eastern segment of the Los Angeles River Bike Path to the proposed western extension of the bike path (see **Figure 9**). A ramp from the western segment of the path to Riverside Drive would also be included, which would provide bicycle access to the western side of Riverside Drive.

These components would have a beneficial effect on the local and regional pedestrian and bike path network, and enable bicyclists and pedestrians to cross the bridge safely, and would allow bicyclists and pedestrians to cross Riverside Drive without crossing the vehicle lanes.

### ***Transit Service***

Construction of the proposed project could require temporary disruption through the project area; however, it is anticipated that one travel lane in each direction would remain open throughout construction, so transit detours would not be required. A traffic management plan would be implemented during construction to minimize traffic impacts and delays; therefore, no adverse impacts on transit service are anticipated.



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Street Use Inspection

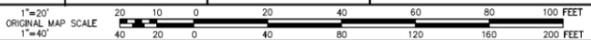
REV	DATE	BY	APP	REG NO	EXPIRES	SEAL HOLDER	DESCRIPTION

DESIGNED BY LN  
DRAWN BY LN  
CHECKED BY MM  
IN CHARGE JOE DIETZ  
DATE 08/16/12



**RIVERSIDE DRIVE NEAR ZOO DRIVE BRIDGE OVER LOS ANGELES RIVER**

PLANS PREPARED BY:  
**TETRA TECH**  
17885 Von Karman Avenue, Suite 500  
Irvine, California 92614  
(949) 809-5000  
(949) 809-5010 FAX



INDEX NUMBER

**WTC NOTES AND LEGEND**

REVIEWED: _____ 20 _____ Transportation Engineer	ACCEPTED: _____ 20 _____ Senior Transportation Engineer	CALTRANS PERMIT NO.
INSTALLATION DATES	CITY OF LOS ANGELES DEPARTMENT OF TRANSPORTATION JAIME DE LA VEGA, GENERAL MANAGER	
MARKOUT BEGAN: _____	BIKEWAY EXHIBIT	
MARKOUT COMPLETED: _____	WORKSITE TRAFFIC CONTROL NOTES AND LEGEND	
STIPING COMPLETED: _____	PROJECT NO. E700030D	
CONTRACT NO. _____	District: CENTRAL	DRAWING NO. _____
Thomas Guide	REV: _____	



Figure 9 Proposed Bike Path Improvements





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

A traffic management plan would be implemented during construction to minimize traffic impacts and delays. Furthermore, pedestrian and bicycle access would be maintained at all times over one side of the bridge throughout the construction process. Pedestrians would be able to use the existing ADA-compliant five-foot sidewalks on one side of the bridge while the other side of the bridge is undergoing construction. After construction is complete, the operation of the bicycle/pedestrian system would be improved from existing conditions. Therefore, there would be no adverse impacts on traffic or transportation.

### **2.6.5 Cumulative Impacts**

The cumulative setting for electrical services is considered the portions of the DWP service area that could be affected by the project. If activities that required interruptions to power were to occur within the immediate area during project construction, this could result in cumulative impacts on this service; however, with implementation of a standard traffic management plan impacts from project contributions would be minimal. In addition, no other major construction projects are expected concurrent to the proposed project; therefore, project contributions would be less than cumulatively considerable.

The cumulative setting for emergency services is considered the portions of police and fire service areas that could be affected by traffic impacts. If other activities resulted in traffic impacts on emergency services within the immediate area during project construction, this could result in cumulative impacts on these services. However, with implementation of a standard traffic management plan impacts from project contributions would be minimal. In addition, no other major construction projects are expected concurrent to the proposed project; therefore, project contributions would be less than cumulatively considerable.

## **2.7 Visual/Aesthetics**

This section discusses the proposed project's potential to affect visual resources within the project area.

### **2.7.1 Regulatory Setting**

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 USC 4331[b][2]). To further emphasize this point, FHWA in its implementation of NEPA (23 USC 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, 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 [PRC] Section 21001[b]).

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### **2.7.2 Affected Environment**

A Visual Impact Assessment (VIA) was prepared for the proposed project. Results of this analysis have been incorporated, as appropriate, in this section.

#### **Visual Setting**

The proposed project is situated in an urbanized setting that is dominated by open space and transportation facilities. Specifically, the proposed project is located in and adjacent to the Bette Davis Picnic Area. The Bette Davis Picnic Area is a 14.7-acre area bound by the City of Glendale to the north and east, the Easter Fields area of Griffith Park to the west, and the Los Angeles River and SR-134 to the south.

Immediately south of the project area is SR-134 and immediately north is the Bette Davis Picnic Area and residences. The Los Angeles River bike path terminates in the southeast quadrant of the bridge. Within the project area, a portion of the Los Angeles River channel bottom is unlined with natural substrates, while the channel slopes are concrete-lined. South of the bridge, Riverside Drive terminates at a T-intersection with Zoo Drive.

The primary visual features of the Los Angeles River corridor, including the Riverside Drive Bridge and the Los Angeles River bike path, consist of the river channel, bordered by the bike trail, maintenance road, concrete banks on either side of the river, a variation of development and vegetation along the slopes and beyond, and additional urban development in the background.

Within the project area, riparian and other vegetation fills the middle portion of the river bottom and reaches above the bridge structure. The river corridor is lined with trees and other vegetation, and additional vegetation adjacent to the corridor is visible. There is a high-voltage transmission tower at southeast corner of the bridge, and transmission lines run from this tower parallel to the existing bike path. Overhead utility lines also run across the Los Angeles River parallel to, and east of, the Riverside Drive Bridge.

Features of the Bette Davis Picnic Area north of the river, as well as the residential properties adjacent to the park, include large trees, grassy recreational areas, and residential structures surrounded by several local roadways, the Los Angeles River embankments to the south, commercial areas to the northwest, and additional vegetation in the background. There are several maintenance buildings within the park area, as well as overhead utility lines.

The SR-134 corridor consists of an 8-lane highway that runs parallel to the south side of the Los Angeles River adjacent to the project area. The primary landscape features include the roadway in the foreground, bordered by a mix of landscaped vegetation, overhead utilities, and additional vegetation within the mountains in the background. Bordering the south side of the freeway are the more steeply sloping hills of Griffith Park, which are mostly undeveloped.

#### **Existing Viewers**

Five viewer groups were considered for the evaluation of viewer response: viewers of and from the bridge while traveling over the bridge; viewers of the bridge from the bike path along the Los Angeles River; viewers from the adjacent residential development; viewers of the bridge from

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the Bette Davis Picnic Area; and viewers of the bridge from SR-134. Views and duration of views range for these viewers, as well as viewer awareness.

For example, drivers traveling over the Riverside Drive Bridge would have clear views of the modified bridge, but exposure to these views would be relatively short in duration as they approach and cross over the bridge. In addition, awareness of the bridge would be expected to be higher for recreational cyclists or pedestrians, but they would not be as sensitive to changes of the visual setting. Local residents and business owners/employees using this route for commuting purposes would be expected to have a higher sensitivity to changes in the visual appearance of the area, due to their familiarity of the area.

Viewers from the Bette Davis Picnic Area would also have a high awareness of, and sensitivity to, the surrounding views, because they are using the park for recreational purposes and are more focused on their surroundings. On the other hand, residents located adjacent to the Bette Davis Picnic Area have minimal exposure to the bridge, since there are a number of trees and other vegetation that screen most of the views from these areas.

### **Identification of Key Views**

Two key viewpoints with high exposure and viewer awareness within the Los Angeles River corridor were selected to illustrate potential project impacts. These views included the Riverside Drive Bridge and the Los Angeles River bike path. Viewpoint 1 (VP1) is the north-facing view as one passes over the Riverside Drive Bridge. The viewshed from VP1 consists primarily of the bridge itself, framed by vegetation within the river and park, with limited views of the residential development in the background (see **Figure 10**).

Viewpoint 2 (VP2) is the view of the existing Riverside Drive Bridge and Los Angeles River corridor from the Los Angeles River bike path, as one approaches the bridge (see **Figure 11**). The viewshed from VP2 includes the pathway in the foreground, framed by the river to the right and chain-link fencing to the left. From the path there are minimal views past the bridge structure, since the bridge is higher in elevation than the pathway.

### **Existing Visual Quality**

Visual quality is evaluated by identifying the vividness, intactness, and unity in the viewshed.

**Vividness:** Vividness is the visual power or memorability of landscape components as they combine in distinctive visual patterns.

**Intactness:** Intactness is the visual integrity of the natural and man-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.

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Viewpoint 1

Source: GPA, 2012





Viewpoint 2

Source: GPA, 2012



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**Unity:** Unity is visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual manmade components in the landscape.

### ***Viewpoint 1 (VP1) – View from Riverside Drive Bridge***

**Vividness:** The design of the bridge itself is attractive, and the arrangement of the light poles creates a focal point that is accentuated by the slight rise and fall of the bridge grade as it crosses over the river. Existing vegetation within the Los Angeles River, the Bette Davis Picnic Area, and in the surrounding hills softens the appearance of the bridge corridor and creates a pleasant view.

**Intactness:** Manmade components such as power lines and highway signs disrupt the integrity of the viewshed. Power lines running along parallel to the bridge are highly visible to viewers, and detract from the views of trees within the Bette Davis Picnic Area. A highway sign and several roadway signs also stand out from the bridge structure and distract the viewer from the overall landscape.

**Unity:** The overall composition of the landscape, centered on the roadway corridor and framed by the bridge rails, lighting poles, and vegetation in the background, is well structured. However, the composition is slightly disrupted by various manmade components visible to the viewer such as overhead utilities and roadway signs. Overall, the visual quality of VP1 is considered moderate to moderately high.

### ***Viewpoint 2 (VP2) – View from Recreational River Trail***

**Vividness:** The right-facing view of the Riverside Drive Bridge set within the Los Angeles River channel is picturesque, as there is a large area of vegetation that can be viewed in passing. However, the left-facing view of the highway and fencing is limited.

**Intactness:** Manmade components dominate this view, including the concrete-lined channel, a large overhead tower that is placed on the pathway, and overhead utility lines running parallel to the bridge. In addition, to the left of the pathway is a chain-linked fence with SR-134 beyond.

**Unity:** The composition of the bike path, river channel, and bridge has some visually pleasing elements but overall lacks unity. In addition, existing manmade components detract from the appearance of this area.

Overall, the visual quality of VP2 is considered low to moderate.

## **2.7.3 Environmental Consequences**

### **No Build Alternative**

The No Build Alternative would not involve any changes to the existing bridge; therefore, no impact would occur.

### **Build Alternative**

During construction of the project, there would be temporary visual impacts associated with on-site storage of construction materials and debris, removal of vegetation, and other construction

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activities that would be visible to viewers in the area. These activities would be visible from both viewpoints. No nighttime work would be required for project construction.

### **Vegetation**

The Build Alternative would require the removal of several trees and other vegetation within the Los Angeles River and along the Los Angeles River corridor. These materials contribute to the visual appearance of the area, and removal would affect the visual character of the area.

### **Bridge Structure**

Bridge modifications required for the Build Alternative have been designed to replicate, to the maximum extent feasible, the existing bridge in appearance, including the bridge railings and lighting (see **Figure 12**). The structure would remain on the same horizontal alignment, and would not be substantially more or less visible from VP1 or VP2.

To construct the project, a portion of the historic building material on the bridge would be removed and replaced, including most of the materials on the east side of the bridge and some of the railing on the west side. In addition, the bridge would be widened by approximately 19 feet on the east side, and spatial relationships between character-defining features would be altered. The abutments would be extended with separate pier structures to support the widened structure.

The project has been designed to minimize effects on the historic integrity of the bridge to the extent feasible. The City has redesigned the project from what was originally proposed (two-sided widening) to a single-sided widening, to preserve existing features to the extent feasible, and the historic materials would be replaced with materials that would be similar to those of the existing bridge, such that the bridge would look essentially the same as the current structure.

One visual change to the existing bridge features is that the inside openings of the railings would be narrowed in a way that would create a distinct shadow line, distinguishing the original opening from the new opening. Although this distinction would be intentional, the overall design of the railings would remain visually compatible with existing bridge design and would remain mostly unnoticeable to the casual observer. The decorative elements on the upstream side, including the ornamented pylons and the horizontal bands of indentations beneath the railings would remain intact and be repaired as necessary.

The project would alter the existing narrow bridge to create a wider expanse of paving visible to viewers crossing over the bridge (VP1). In order to preserve the details of the existing bridge features, the height of the railings would not be increased; therefore, the proportion of width to height (bridge deck to bridge railing) would change, which would alter the character and feel of the bridge. Although many viewers would notice this change, because the other features of the bridge would be maintained it is not expected to substantially affect the appearance of the bridge substantially.



**Viewpoint 1 Prior to Project Implementation**



**Viewpoint 1 After Project Implementation**

*Source: GPA, 2012*



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Visual impacts would result from the replacement of features visible from key viewpoints; however, proposed changes to the bridge would have minimal impacts on the existing views to and from the bridge. Because design measures have already been incorporated to minimize changes to the appearance of the bridge, impacts resulting from modifications to this structure would be considered minimal.

### ***Los Angeles River Bike Path***

The most visible change resulting from the project would be the extension of the Los Angeles River bike path from the east side of the bridge to the west side (see **Figure 13**). The extension would include construction of ramps on the east and west sides of the bridge, as well as a new under crossing along the south abutment of the bridge. However, while new ramps and under crossing along the Los Angeles River bike path would result in a change from the existing concrete slopes, these new features would not substantially alter the visual appearance of this area as to detract from the visual quality of the area, including views from VP1 or VP2.

### ***Interpretive Kiosk***

One of the proposed mitigation measures for impacts on the historic integrity of the Riverside Drive Bridge is an interpretive display or kiosk within the immediate vicinity of the bridge. The interpretive display would include information on the bridge's history and significance, as well as information on the design process of widening the bridge, including the design and construction process and the public outreach efforts.

This interpretive kiosk would likely be a freestanding base with an attached display board. The final design decisions such as exact size would be made during final project design. With an appearance similar to other displays within the city, the interpretive kiosk is expected to occupy an area with minimal square footage. Ideally, the interpretive kiosk would likely be installed south of the bridge along the Los Angeles River bike path; however, the final location has not yet been determined.

### ***Light and Glare***

Primary sources of daytime glare are sunlight reflecting from structures with reflective surfaces such as windows. Building materials (i.e., reflective glass and polished surfaces) are the most substantial sources of glare. The amount of glare depends on the intensity and direction of sunlight, which is more acute at sunrise and sunset because the angle of the sun is lower during these times. Because the bridge is an existing facility, the project would not be expected to result in increased daytime glare in the area.

A source of glare during the nighttime hours is artificial light. The sources of new and increased nighttime lighting and illumination include, but are not limited to, new residential developments, lighting from non-residential uses, lights associated with vehicular travel (i.e., car headlights) street lighting, parking lot lights, and security related lighting for non-residential uses. Implementation of the project would not introduce new sources of nighttime lighting and illumination levels in the project area.

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**Viewpoint 2 Prior to Project Implementation**



**Viewpoint 2 After Project Implementation**

*Source: GPA, 2012*



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Under the Build Alternative, the existing bridge lighting would be replaced as part of the project; however, the replacement lighting would be designed to match the appearance of the existing lighting, and would be of the same approximate type, height, and placement as the existing lighting. The replacement lighting would be designed to meet current City standards, which call for higher levels of illumination at the roadway and sidewalk portions of the proposed project than what currently exists. Lighting would also be installed along the bike trail extension; this lighting would match that of the existing portions of the path.

Although the location of the lighting would be slightly different due to bridge widening and current standards, this change is not anticipated to result in a substantial increase to daytime or nighttime glare in the area. At night, because the bridge would be at the same horizontal alignment, and because the driving lanes would be located in approximately the same location (widening is primarily for shoulders), vehicle headlights would not be expected to add to the overall nighttime glare.

### ***Overall Visual Quality***

The project area includes both recreational and historic resources, which are of particular concern when identifying visual impacts resulting from the project. The existing Riverside Drive, constructed in 1938, was determined to be eligible for the NRHP, and is therefore considered an historic property for the purposes of this analysis. In addition, the Bette Davis Picnic Area is a well-used recreational area; therefore, the visual character and quality of these areas are important when considering project impacts.

The Build Alternative would require temporary use of a small amount of area for construction staging that is part of the Bette Davis Picnic Area. This staging would have minor visual impacts that could temporarily affect park users; however, while the park is considered an important recreation area, because the impacts are so minimal, the proposed project would not be expected adversely affect the visual character or quality of this area.

While visual impacts would result from the replacement of features visible from key viewpoints, because the existing aesthetic features of the bridge would be replaced with the same or similar components, the Preferred Alternative would not be expected to degrade the overall visual character of the site and surroundings. Viewers would likely notice the change in the design features; however, they would be designed to be compatible with the other bridge features. Viewers would also recognize a change in bridge proportion; however, because the other features of the bridge would be maintained it is not expected to affect the appearance of the bridge substantially. Therefore, no adverse impacts to the existing visual character and quality are anticipated.

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

The following avoidance and minimization measures would be implemented as part of the project per standard specifications, permit requirements, and standard construction practices implemented by the City:

VIS-1 Wherever feasible, construction materials and debris would be stored away from highly visible areas within the Riverside Drive corridor, Los Angeles River corridor, and the

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Bette Davis Picnic Area. Storage areas would be fenced and/or covered to minimize visibility of these areas to potential viewers.

VIS-2 The project would be designed to incorporate tree protection during construction for trees included in the City tree protection ordinance. Where feasible, existing trees would be preserved in place, and measures would be incorporated to minimize disturbance around preserved trees. For example, soil and other construction materials would not be stockpiled within three feet of any live tree trunks. Care would be taken to avoid placing stockpiled materials on exposed tree roots when feasible.

VIS-3 Any oaks or other protected trees that are impacted would be relocated or replaced according to the City tree protection ordinances. Replacement trees would be planted within the project area where feasible to maintain visual quality. Re-planting of trees within Caltrans right of way, if required, would be conducted in coordination with Caltrans biologists and landscape architects.

VIS-4 Where vegetation removal is unavoidable, this vegetation would be replaced in accordance with the City and Caltrans landscaping requirements. In addition, sensitive habitats, such as wetland and riparian habitat, would be replaced in accordance with applicable regulatory requirements.

With implementation of these standard measures, visual impacts would be minimized and would not be considered adverse; therefore, no mitigation is required or proposed.

### **2.7.5 Cumulative Impacts**

The cumulative setting for visual/aesthetics is considered the viewshed of the area, including the Los Angeles River corridor, the SR-134 corridor, Griffith Park, and the residential neighborhood to the north of the Riverside Drive Bridge. If other activities that resulted in visual impacts were to occur within the viewshed of the bridge, this could result in cumulative impacts on visual character and quality; however, with implementation of minimization measures, project contributions these impacts would be minimal. In addition, no other projects are expected in the area that would result in visual impact; therefore, contributions to cumulative impacts are considered less than cumulatively considerable.

## **2.8 Cultural Resources**

This section discusses the proposed project's potential to affect cultural resources within the project area.

### **2.8.1 Regulatory Setting**

"Cultural resources" as used in this document refers to all "built environment" resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance. Laws and regulations dealing with cultural resources are described below.

The National Historic Preservation Act of 1966 (NHPA) , as amended 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

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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, the FHWA, State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans 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 Caltrans. The FHWA's responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 USC 327).

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. See Appendix B for specific information regarding Section 4(f).

The Riverside Drive Bridge is listed as Historic-Cultural Monument No. 910.

### **2.8.2 Affected Environment**

A Historic Property Survey Report (HPSR) and Archaeological Study Report (ASR) were prepared for the proposed project. A Historic Resources Evaluation Report (HRER) was prepared for the Riverside Drive Bridge by Myra L. Frank & Associates, Inc. in 2002 to evaluate the eligibility of the bridge for the NRHP. Results of these analyses have been incorporated, as appropriate, in this section.

#### **Methodology**

##### ***Delineation Area of Potential Effects***

An Area of Potential Effects (APE) was delineated for the project that includes areas within which the project may alter the character or use of historic properties, including ground-disturbing activities, staging areas and construction zones (see **Figure 14**). The APE for the proposed project is approximately 9.2 acres. The vertical APE for the project ranges from three feet to 15 feet for areas where utility alterations would be conducted, 17 feet for Piers 2 through 5, 29 feet for Abutment 1, and 28 feet for Abutment 6.

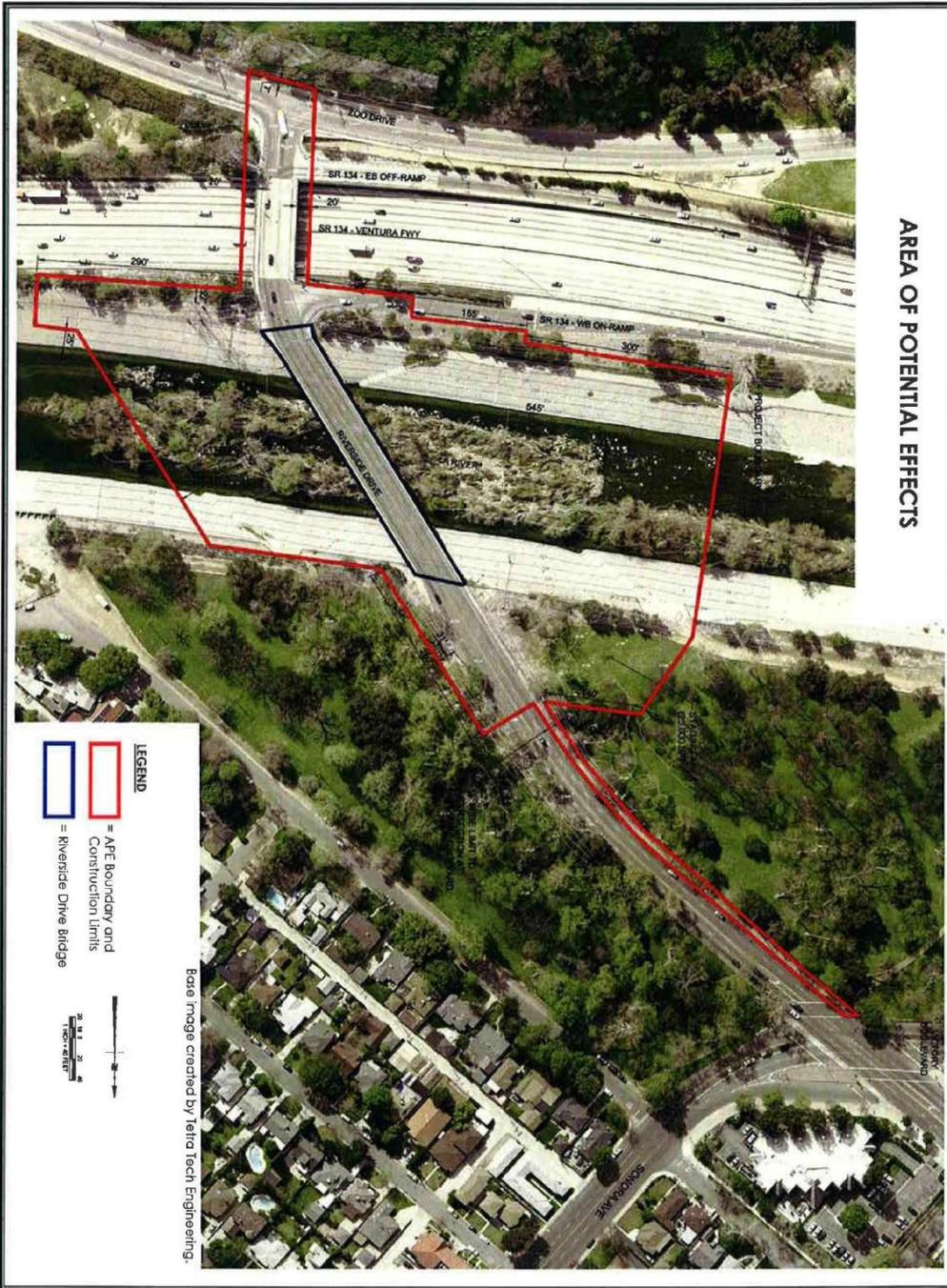
##### ***Records Search***

A records search was conducted at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on February 20, 2007. Steven McCormick, a qualified consulting archaeologist, conducted the records search consisting of a 0.25-mile radius around the Riverside Drive Bridge, including a review of all known cultural resource surveys and reports. The changes to the APE in 2012 were all within the 0.25-mile radius record search; therefore no additional record searches were needed (Cogstone, 2012). The City's list of cultural-historic monuments was also searched.

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**AREA OF POTENTIAL EFFECTS**

**PROJECT NAME:**  
 Riverside Drive Bridge Rehabilitation and Widening Project (Bridge #53C1298)

**LOCATION:**  
 Over the Los Angeles River at the north end of Griffith Park, Los Angeles, Los Angeles County

*Paula Herbst, Pin Arch Historian* 9-25-12  
 Caltrans District 7 PGS Date

*[Signature]* 9/25/12  
 Caltrans District 7 Local Assistance Engineer Date



**Figure 14 Area of Potential Effects Map**





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### ***Native American Consultation***

A request to search for known sacred lands was made to the Native American Heritage Commission (NAHC) on June 28, 2012. The NAHC recommended nine tribes or individuals be contacted for further information. Letters were mailed to each of the nine NAHC recommended contacts. All who did not respond received follow-up phone calls (Cogstone, 2012).

### ***Pedestrian Survey***

An intensive pedestrian survey of the APE was conducted on August 11, 2012 (Cogstone, 2012). The pedestrian survey was conducted in transects when terrain permitted. The survey transects were generally 10 meters in width. Visibility varied from zero percent to 25 percent depending on vegetation cover and hardscaping. When available, rodent burrows and bare ground were closely inspected. Riverside Drive is completely paved and was excluded from the survey. The pedestrian survey did not reveal any archaeological resources. Most of the APE is covered with paving or other manmade elements, and the area has been subjected to intensive modification associated with the Los Angeles River and other development over the years.

### **Project Site History**

#### ***Pre-Historic Setting***

Archaeologists define a material complex consisting of an abundance of milling stones (for grinding food items) dating from about 7,000 and 3,000 thousand years ago as the Encinitas Tradition, with various regional variations including Topanga and La Jolla (Cogstone, 2012). The Encinitas Tradition characteristics are abundant metates and manos, which are crudely made core and flake tools, bone tools, shell ornaments. During this era, there were very few projectile points and subsistence focused on collecting plants, shellfish, and other food items. Animal remains vary by location but include shellfish, land animals, marine mammals, and fish. The Encinitas Tradition has been redefined to consist of four patterns, and the project area is in the Greven Knoll pattern area.

About 3,500 years ago, the Encinitas Tradition was replaced by a new archaeological entity in the greater Los Angeles Basin, called the Del Rey Tradition. This new entity has been generally assigned to the Intermediate and Late Periods. The Intermediate Period was characterized by new settlement patterns, economic foci, and artifact types that coincided with the arrival of a new, biologically distinctive population. There are two regional patterns within the Del Rey Tradition, including the Angeles and Island patterns, and the project is in the Angeles pattern area. The Del Rey Tradition represents the arrival, divergence, and development of the Gabrielino in southern California.

#### ***Site Ethnography***

The Native American people described as inhabiting the region surrounding the project area were the Tongva (Gabrielino and/or Fernandeno). These people occupied Los Angeles County south of the Sierra Madre, portions of Orange County, as well as San Clemente and Santa Catalina. Populations of the Tongva associated with Mission San Gabriel Archangel and San Fernando were known as Gabrielino and Fernandeno Indians historically; however, both were populations of the Tongva Nation and the distinction is primarily geographical. Tongva villages

## **Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, or Mitigation Measures**

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near the project area were Maawnga near Los Feliz and Griffith Park, and Kawe (or Kaweenga), located near where the Tujunga Wash joins the Los Angeles River.

### *Gabrielino Tongva*

The Gabrielino speak a language that is part of the Takic language family. Their territory encompassed a vast area stretching from Topanga Canyon in the northwest, to the base of Mount Wilson in the north, to San Bernardino in the east, Aliso Creek in the southeast and the Southern Channel Islands, in all an area of more than 2,500 square miles. At European contact (approximately 1542) the tribe consisted of more than 5,000 people living in various settlements throughout the area. Some of the villages could be quite large, housing up to 150 people.

The Gabrielino are considered to have been one of the wealthiest tribes and to have greatly influenced tribes within whom they traded. Houses were domed, circular structures thatched with tule or similar materials. The best-known artifacts were made of steatite and were highly prized. Many common everyday items were decorated with inlaid shell or carvings reflecting an elaborately developed artisanship.

The main food zones utilized were marine, woodland, and grassland. Plant foods were the greatest part of the traditional diet, and acorns were the most important single food source. Villages were located near water sources necessary for the leaching of acorns. Grass seeds were the next most abundant plant food used along with chia. Seeds were parched, ground, and cooked as mush in various combinations according to taste and availability. Greens and fruits were eaten or sometimes dried for storage. Bulbs, roots, and tubers were dug in the spring and summer and usually eaten fresh. Mushrooms and tree fungus were prized as delicacies. Various teas were made from flowers, fruits, stems, and roots for medicinal cures as well as beverages.

The principal game animals were deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, antelope, quail, dove, ducks, and other birds. Most predators were avoided as food, as were tree squirrels and most reptiles. Trout and other fish were caught in the streams, while salmon were available when they ran in the larger creeks. Marine foods were extensively utilized. Sea mammals, fish, and crustaceans were hunted and gathered from both the shoreline and the open ocean, using reed and dugout canoes. Shellfish were the most common resource, including abalone, turban, mussels, clams, scallops, bubble shells, and others.

### **Site History**

Juan Cabrillo was the first European to sail along the coast of California in 1542 and was followed in 1602 by Sebastian Vizcaino. Between 1769 and 1822, the Spanish had colonized California and established missions, presidios and pueblos. In 1821, Mexico won its independence from Spain and worked to reduce the wealth and power held by the missions. The Secularization Act was passed in 1833, giving the vast mission lands to the Mexican governor and downgrading the missions' status to that of parish churches. The governor then redistributed the former mission lands, in the form of grants, to private owners. Ranchos in California numbered over 500 by 1846, all but approximately 30 of which resulted from land grants.

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California was granted statehood in 1850 and although the U.S. promised to honor the land grants, the process of defining rancho boundaries and proving legal ownership became time consuming and expensive. Legal debts led to bankruptcies and the rise in prices of beef, hide, and tallow. This combined with flooding and drought was detrimental to the cattle industry, and ranchos were divided up and sold for low prices.

The project area is at the southern boundary of the former Rancho San Rafael, immediately adjacent to the former Rancho Los Feliz. Rancho San Rafael, issued to Corporal Jose Maria Verdugo in 1784. The land grant was then passed to his children Julio Antonio Verdugo and Maria Catalina Verdugo in 1831. By the late 1860s, several parcels of the Rancho San Rafael had been sold or lost due to foreclosures. In 1871, a lawsuit known as “The Great Partition” established the validity of multiple property claims on the rancho. Ultimately, Rancho San Rafael was divided into 31 sections and given to 28 different people.

Rancho Los Feliz was a land grant issued to Jose Vicente Feliz in 1795. In 1843, the grant was given to Maria Ygnacia Verdugo de Feliz, the wife of one of the sons of Jose Vicente Feliz. Antonio F. Coronel acquired ownership of Rancho Los Feliz in 1863. Coronel then sold the Rancho to James Lick. In 1882, Colonel Griffith Jenkins Griffith purchased 4,071 acres of the Rancho for \$50,000. Griffith utilized the land for ranching, growing crops, and raising livestock. On December 16, 1896, Colonel Griffith donated 3,015 acres to the City, which became Griffith Park.

The Riverside Drive Bridge was planned in 1936 and constructed in early 1938. It was designed in an Art Deco style, as evidenced by a verticality suggested by the pylons and corresponding light standards, the usage of chevrons, and the streamline, smooth nature of the materials used in its construction. The bridge was designed by the City of Los Angeles Bureau of Engineering (BOE) and endorsed or implemented by the Federal Emergency Administration of Public Works (Project No. Calif. 1461-D).

### **Existing Setting**

The records search revealed one previously recorded archaeological survey, but did not identify any previous archaeological sites within a 0.25-mile radius (see **Table 7**). No previous surveys were conducted within the APE. Other than the Riverside Drive Bridge, no other historic properties were identified during the records searches completed for the project.

**Table 7  
Previous Archaeological Studies within a 0.25-Mile Radius**

Author	Ref(LA-)	Title	Date	Quad
Beroza, Barbara	845	Prehistoric Cultural Resource Survey and Impact Assessment for a Portion of Griffith Park, Los Angeles, California	1980	Burbank
Cottrell, Marie G.	1219	Archaeological Resources Assessment Conducted for the Expansion Area of the Toyon Landfill Located in the Northwest Sector of Griffith Park, City of Los Angeles	1983	Burbank

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Frierman, Jay D.	2210	Archaeological Survey Report and Assessment of the Riverdale Parcel, Griffith Park Los Angeles, California	1989	Burbank
Anonymous	2950	Consolidated Report: Cultural Resource Studies for the Proposed Pacific Pipeline Project	1992	Burbank
Dillon, Brian D.	3501	Archaeological Record Search and Impact Evaluation for the Los Angeles Wastewater Program Management (NOSNCOS) Project Los Angeles, California	1990	Los Angeles, Pasadena, Venice, Beverly Hills, Burbank, Hollywood, Inglewood
Farmer, T. Reid	6006	Cultural Resources Technical Report City of Glendale Water & Power Grayson Unit 9 Project	2003	Burbank
Ostashay, Janet	6722	Historic Property Survey Report State Route 134/San Fernando Road Access and Safety Improvement Program	2000	Burbank
Harbert, Claudia	6723	Historic Property Survey Report for 15/Western Avenue Access Improvement Program City of Glendale Los Angeles County, CA	2000	Burbank
Duke, Curt	6729	Cultural Resource Assessment Cingular Wireless Facility No. VY144-01 Los Angeles County, California	2002	Burbank
Srior, Adam	6738	Highway Project to Construct a New Maintenance Station Under the Ventura Freeway (134) in the City of Glendale, the Doran Street Station at 943 W. Doran Street	2001	Burbank
Kyle, Carolyn E.	7263	Cultural Resource Assessment for Cingular Wireless Facility VY-183-01 City of Glendale, California	2002	Burbank
Hope, Andrew	7429	Caltrans Statewide Historic Bridge Inventory Update: Survey and Evaluation of Common Bridge Types	2004	Burbank, Hollywood, San Pedro, Laguna Beach
Sylvia, Barbara	7840	Negative Archaeological Survey Report for the Beautification and Modernization Along Route 134 from the 134/170 Separation to Shoup Ave UC, and along Route 101 from the 101/170 Separation to Concord Street UC	2001	Burbank, Van Nuys, Canoga Park

Source: Cogstone, 2012

During the records search, no properties were found that have been listed on the NRHP, CRHR, California Historical Landmarks, or California Points of Historical Interest; however, the San

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Juan Bautista de Anza National Historic Trail is speculated to have run just beyond the 0.25-mile radius. In 1775 to 1776, this trail led from what is today Nogales, Arizona to San Francisco. In addition, the Riverside Drive Bridge, constructed in 1938, was determined eligible for the NRHP by the SHPO on December 7, 2005.

Mr. Alvarez from the Gabrielino-Tongva Tribes responded via telephone on July 12, 2012 that his organization would like onsite monitors during project construction. Mr. Salas from the Gabrieleno Band of Mission Indians responded via email on July 10, 2012 stating that the proposed project is located within a highly culturally sensitive area and requested that a Native American monitor be on site during ground disturbance. Mr. Rosas from the Tongva Ancestral Territorial Tribal Nation responded to consultation by Linda Moore of the City on July 26, 2012. He thanked Ms. Moore for her correspondence but did not make any statements regarding the proposed project. No other responses have been received.

Consultation with the NAHC revealed that no sacred sites, traditional cultural properties, or native plant gathering areas are known to exist within or near the project. Three Native American contacts stated that the area was sensitive due to the close proximity to the Los Angeles River, and that Native American monitors were recommended.

The Riverside Drive Bridge was identified as a historic resource. The bridge was formally determined eligible for the NRHP by Caltrans in December 2005. It was designed in an Art Deco style, as evidenced by a verticality suggested by the pylons and corresponding light standards, the usage of chevrons, and the streamline, smooth nature of the materials used in its construction. The bridge was designed and constructed by the BOE.

The Riverside Drive Bridge is one of 15 bridges in the downtown Los Angeles area that have been identified as historically significant for their unique architecture, including the length and height of their span, and lighting and pier design quality (Myra L. Frank & Associates, Inc., 2002). A 2000 report by the Historic American Building Survey/Historic American Engineering Report (HABS/HAER) identified the bridges as playing an important role in the development of Los Angeles by constructing bridges that improved transportation but also "harmonized architectural beauty and structural integrity, creating structures that unified the city and created pride in public works." The period of significance for these bridges extends from 1923 to 1961, the period during which the bridge engineer Merrill Butler was at the BOE.

The bridge was determined eligible for its association with urban planning policies in Los Angeles during the first half of the twentieth century; as a significant example of a master designer, the BOE, and for its type, period, and method of construction. The bridge's period of significance was defined as 1938, the year it was constructed by the BOE. The structure was also designated a HCM (HCM 910) by the City in January 2008. The bridge is one of about 45 monumental concrete bridges designed by the BOE between 1900 and 1950.

### **2.8.3 Environmental Consequences**

#### **No Build Alternative**

The No Build Alternative would not result in any changes to the existing bridge; therefore, there would be no impact.

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### **Build Alternative**

#### ***Archaeological Resources***

There are no known archaeological resources within the project APE, and based on the disturbed nature of the APE, the discovery of such resources is not anticipated. In addition, if cultural materials were to be discovered during construction, it is the policy of Caltrans that all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find. If human remains were to be discovered, State Health and Safety Code (HSC) Section 7050.5 requires that further disturbances and activities cease in any area or nearby area suspected to overlie remains, and the County Coroner be contacted.

Pursuant to Public Resources Code Section 5097.98, if human remains were to be found that could be Native American, the coroner would notify the NAHC who would then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains would contact the Caltrans Division of Environmental Planning so that they can work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 would be followed as applicable.

#### ***Historic Resources***

According to 36 CFR 800.5(a)(1), an adverse effect on a historic property may occur when a project would alter, directly or indirectly, any of the characteristics of the property that qualify it for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

The Build Alternative would include removing the historic railings and pylons on the downstream side in order to widen the bridge, and removing the concrete railing atop the southwest abutment to improve the SR-134 westbound on-ramp and to construct the western ramp to the Los Angeles River bike path. These actions would physically destroy portions of the bridge's historic fabric (materials), and would result in an adverse effect on the historic integrity of the Riverside Drive Bridge.

The City and Caltrans have designed the project in a manner that minimizes the overall effects to the character defining features of the bridge. The currently proposed project, which includes a single-sided widening, was designed specifically to be consistent with the Secretary of Interior Standards for Rehabilitation (Rehabilitation Standards) and to minimize impacts on the historic bridge by allowing for the geometric improvement while maintaining most of the historic features on the upstream side.

The new portion of the deck would be supported by cast-in-place concrete box girders, rather than matching the existing concrete T-beams. The box girders would be supported by new, separate, concrete piers, rather than extending the existing piers. Utilizing a different girder type and separate piers would create differentiation between the historic portion of the bridge and the new portion. While not visible from the deck, this differentiation would be visible from the bike path and Los Angeles River.

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The new piers would be similar in design to the original piers, but smaller in scale, indicating that they are part of an addition and not the original design. The new girders would incorporate the same arch profile as the original girders, but would be box-shaped instead of T-shaped. This strategy of differentiating historic fabric and features from new materials and features through the introduction of compatible but distinguishable elements is consistent with the Rehabilitation Standards.

The bridge was designed to be widened the least amount possible to achieve project objectives but without altering its sense of small scale to the degree that it would affect the bridge's eligibility for the NRHP.

The railings on the upstream side would be reconstructed to match the existing railings. The only change in design would occur at the pointed arch openings, the interior dimensions of which would be narrowed to meet current code requirements. The opening would be narrowed in such a way that a distinct shadow line is created, distinguishing the original width from the new width to avoid creating a false impression of the original design. The decorative elements on the upstream side, including the ornamented pylons and the horizontal bands of indentations beneath the railings would remain intact and be repaired as necessary.

The non-original concrete light standards atop the pylons would remain in place and be refurbished, if possible, or be replaced with replicas. The non-original lanterns would either be refurbished on the exterior and modified on the interior to house LED lights, or replaced with replicas of the original 1938 lanterns, which would also be modified on the interior to house LED lights.

The non-original concrete light standards would be salvaged, reused, and refurbished, if possible, on the new widened side to provide visual continuity with the non-widened side. If reuse is not possible, the light standards would be replaced with replicas. The non-original lanterns would either be refurbished on the exterior and modified on the interior to house LED lights, or replaced with replicas of the original 1938 lanterns, which would also be modified on the interior to house LED lights.

The new railing, horizontal bands, and pylons on the downstream side would be designed to be compatible with the historic elements of the bridge, yet subtly differentiated as such: the new railing and horizontal bands would match the reconstructed railing and existing bands on the upstream side to create a sense of continuity, but the pylons would be differentiated through simplified ornamentation. The three elements together would create a compatible yet not identical overall design. The new ornamentation would reference the historic ornamentation without mimicking it exactly by incorporating similar chevron patterns, but eliminating the horizontal bands located on each side of the vertically stacked chevrons.

According to the Section 4(f) Evaluation (see **Appendix B**), the Build Alternative would result in a direct use of the Riverside Drive Bridge. The City has incorporated all feasible measures to minimize impacts on the bridge. In light of analysis completed to date, and taking into consideration the input of City and Caltrans staff, SHPO, members of the public, and other stakeholders, it has been determined that the Build Alternative would succeed at meeting the purpose and need of the project while minimizing environmental impacts to the extent feasible.

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Although the project has been designed in a manner that minimizes impacts, the project would still directly destroy portions of the bridge's historic fabric, and would result in an adverse effect on the historic integrity of the Riverside Drive Bridge.

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

Mitigation measures will be presented in a memorandum of agreement document that will be submitted to SHPO under separate cover, pursuant to Section 106 PA Stipulation XI, 36 CFR 800.6(a) and 800.6(b)(1). Potential mitigation measures could include the preparation of Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation of the bridge before any work begins, and then making the information available to the public for a minimum of five years. Because HABS/HAER documentation alone is not sufficient mitigation, additional measures may be considered. For example, Caltrans Professionally Qualified Staff (PQS) could review proposed plans to ensure that they comply with the Secretary of the Interior's Standards for Rehabilitation, and the City could prepare and implement a mitigation monitoring plan for the period of construction. In addition, the City could install new informative permanent metal plaques at both ends of the bridge.

### **2.8.5 Cumulative Impacts**

The cumulative setting for archaeological resources is considered the area in which similar archaeological resource, including Native American resources, could be found. The project would not impact archaeological resources, and would therefore not contribute to cumulative impacts on archaeological resources.

The cumulative setting for historic resources is considered the monumental concrete bridges that were designed during the period of significance by the BOE between 1923 and 1961. The City is currently considering improvements for several older bridges within the city, including several of the monumental concrete bridges, as many of these bridges are either structurally deficient or functionally obsolete due to existing traffic numbers.

The proposed project would require the physical destruction of part of the Riverside Drive Bridge, which would result in an adverse effect on the historic integrity of the bridge. While there are other surviving examples of this type of bridge within Los Angeles, the City is planning to improve several of them, which would result in cumulative impacts on the existing monumental bridges.

While the project would contribute to cumulative impacts on these monumental bridges, the project has been designed to minimize the effects on character-defining features of the bridge. In addition, mitigation measures have been identified as part of the Section 106 process that would further reduce impacts; therefore, the project's contribution to cumulative impacts would be considered less than cumulatively considerable.

## **PHYSICAL ENVIRONMENT**

### **2.9 Hydrology and Floodplain**

This section discusses surface hydrology and water quality characteristics of the project area.

#### **2.9.1 Regulatory Setting**

E.O. 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 FHWA 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; and
- 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.”

#### **City of Los Angeles General Plan Framework Infrastructure and Public Services Chapter**

The Infrastructure and Public Services Chapter includes goals to manage infrastructure and public service systems in the city, including flood control systems, in a manner that will not deplete or damage natural resources. The element proposes to achieve this by re-examining the viability of the existing infrastructure relative to sustainability, maintain a balance between population and economic growth and the infrastructure and public services necessary to support that growth, correct deficiencies in existing support systems, and coordinate with implementing agencies so they may better support each other (City, 1974).

#### **2.9.2 Affected Environment**

A Location Hydraulic Study (LHS) was prepared for the proposed project in 2007 by Schaaf & Wheeler, and the hydrological analysis was updated by Tetrattech, Inc. in 2013. The results of this analysis have been incorporated into this section.

The Riverside Drive Bridge crosses over the Los Angeles River in Los Angeles. The bridge crossing is located approximately 1,400 feet upstream of the I-5 river crossing.

#### **Los Angeles River Watershed**

The Los Angeles River basin emerges from the Santa Monica Mountains, Simi Hills, and Santa Susana Mountains. The highest point in the watershed is San Fernando Peak, with an elevation of 3,741 feet (Schaaf & Wheeler, 2007). The upper portion of the watershed (approximately 85

## Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, or Mitigation Measures

square miles) is relatively steep and mountainous terrain, while the rest of the basin is relatively flat and highly urbanized.

The Los Angeles River Basin is regulated by several reservoirs. The nearest reservoir, Sepulveda Dam, was completed in 1941 for the purpose of flood control and provides 17,425 acre-feet of storage. The drainage area of the basin at Sepulveda Dam is 152 square miles (Schaaf & Wheeler, 2007). The drainage area at the Riverside Drive Bridge crossing is approximately 465 square miles (Schaaf & Wheeler, 2007).

There are two major inflows to the Los Angeles River near the Riverside Drive Bridge. The Burbank Western Channel joins the Los Angeles River 1,800 feet upstream of the bridge, and the Verdugo Wash confluence is 5,100 feet downstream of the bridge.

### **National Flood Insurance Maps**

The proposed project is located on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 1345 of 2350 for Los Angeles County, California and Incorporated Areas (Map Number 06037C1345F). The FIRM indicates that a portion of the project area is directly within the floodway of the Los Angeles River channel (see **Figure 15**). The remainder of the project area outside the channel is shown as Zone X, defined as an area outside the 0.2 percent annual chance floodplain.

### **Existing Hydrology**

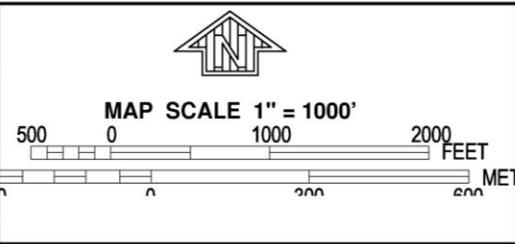
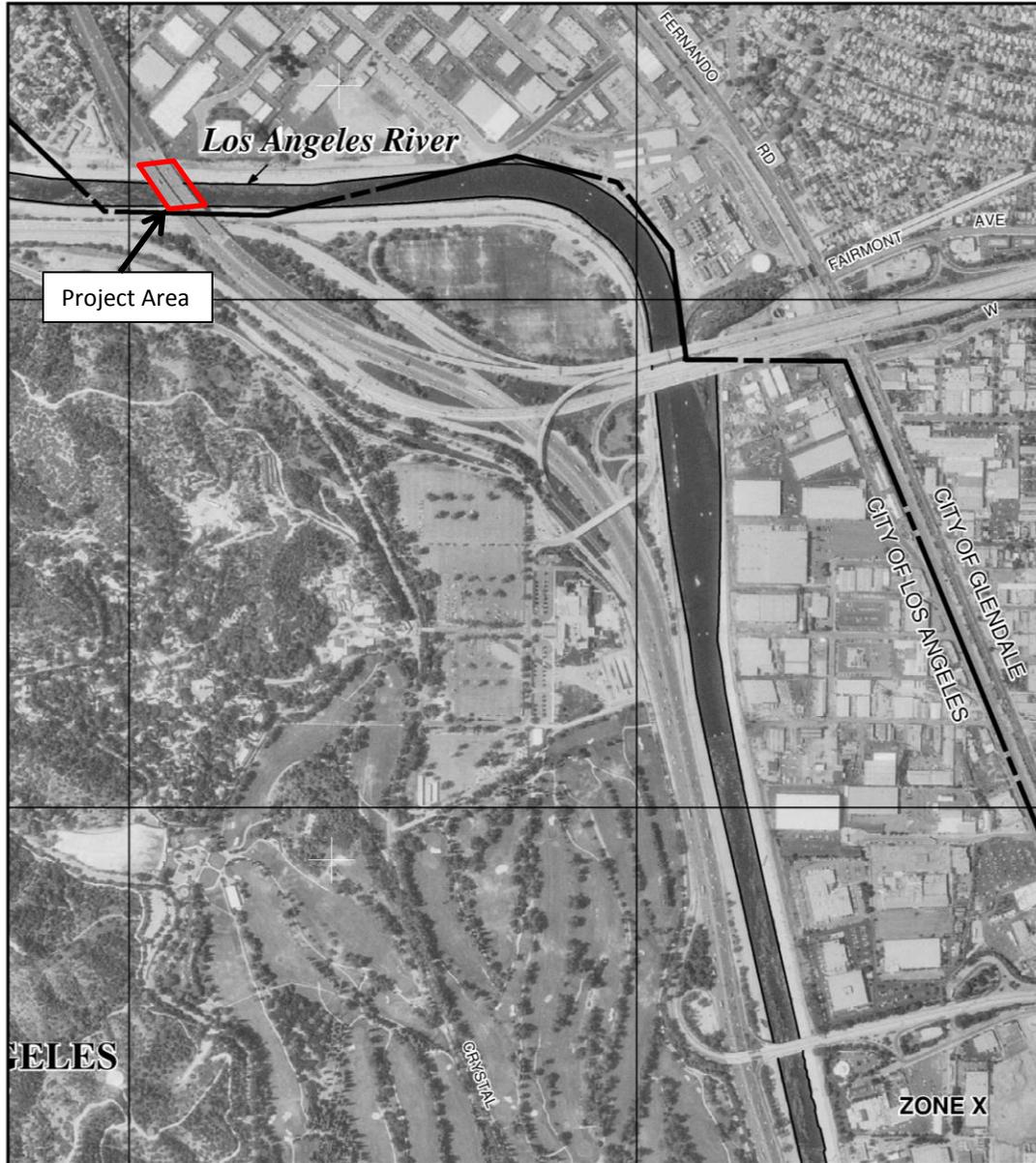
The USACE completed a hydrologic study of the Los Angeles River in 1991 (Schaaf & Wheeler, 2007). As part of that study, discharges were computed for the 10-, 25-, 50-, 100-, 200-, and 500-year floods at various locations. Flood frequency flows nearest the location of the bridge (upstream of Verdugo Wash) are shown in **Table 8**.

**Table 8**  
**USACE Flood Discharge Values Upstream of Verdugo Wash**

Return Interval (Years)	Discharge (cfs)
10	40,300
25	53,900
50	63,400
100	83,900
200	96,300
500	105,000

Source: USACE, 1991

The USACE hydrologic study estimates the revised design channel capacity with freeboard of the Los Angeles River above Verdugo Wash to be 40,000 cubic feet per second (cfs), which is approximately the 10-year flow. The USACE estimated channel capacity is for a greater extent of the Los Angeles River than the river segment modeled in the project-level bridge hydraulics study.



### LEGEND

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

**ZONE A** No Base Flood Elevations determined.

**ZONE AE** Base Flood Elevations determined.

**ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

**ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

**ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

**ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

**ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

— 1% annual chance floodplain boundary  
 — 0.2% annual chance floodplain boundary

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



Figure 15 FEMA Flood Map



## Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, or Mitigation Measures

The 10-, 25-, 50-, 100-, 200-, and 500-year flows were modeled for the project using the USACE HEC-RAS Version 3.0 computer program. The cross sections for the model were produced from recent topographic data provided by Tetrattech.

The Los Angeles River has levees on both sides of the channel. The levee elevations are also based on recent topographic data. The top of levee elevation at a point 450 feet upstream of the existing bridge is 470 feet on the left bank and 471.2 feet on the right bank. The top of levee elevation at a point 376 feet downstream of the existing bridge is 466.1 feet on the left bank and 466 feet on the right bank. The levees maintain a relatively constant slope, except near the bridge where they slope upward to meet the road elevation.

The low chord elevation of the bridge (where the lowest structural element is) varies from approximately 467 feet to 471 feet because of the arched bridge superstructure. The top of curb elevation at the bridge varies slightly, but is approximately 475 feet. Because the top of levee elevation is lower than the top of bridge elevation, during a flood event the levees would be overtopped before the flow would overtop the bridge.

According to the model, the 100-year flow of 83,900 cfs would reach the lower part of the arched superstructure of the bridge, but would not overtop the bridge. However, the 100-year flow would exceed the left bank levee elevation. The extent and location of flooding that would occur if the levees were to be overtopped is unknown and has not been analyzed.

The 50-year flow of 63,400 cfs would be below the entire superstructure of the bridge and would also overtop the levees, but would have a freeboard of less than two feet. Due to sedimentation in the river, the 10-year flow of 40,300 cfs would be within two feet of the top of the levee (see **Table 9**).

**Table 9  
Bridge Hydraulics Summary**

	Channel Capacity Flood	Minimum Design Flood	Base Flood
Frequency (years)	10	50	100
Discharge (cfs)	40,300	63,400	83,900
Water Surface Elevation at Upstream Bridge Face (feet)	468.83	469.82	476.08
Minimum Levee Freeboard (feet)	0.99	Overtop	Overtop
Bridge Freeboard at Upstream Bridge Face* (feet)	5.64	-0.8	Overtop

Source: Tetrattech Inc., 2013

\*Distance between water surface and bottom of arched superstructure.

A comparison of the 50-year water surface elevation for the proposed and existing bridges is shown in **Table 10**.

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**Table 10  
Upstream Water Surface Comparison**

	Minimum Design Flood		
	Existing	Proposed	Difference
Frequency (years)	10	10	10
Discharge (cfs)	40,300	40,300	N/A
Water Surface Elevation at Upstream Bridge Face (feet)	468.83	468.91	.08

*Source: Tetrattech Inc., 2013*

### **2.9.3 Environmental Consequences**

#### **No Build Alternative**

The No Project Alternative would not include any changes to existing conditions; therefore, there would be no impact.

#### **Build Alternative**

The proposed project does not include construction of any housing, and would therefore not place housing in a 100-year flood hazard area. In addition, the project area is located inland on a well-established alluvial plain that is considerably distant from any coastal zone and is not subject to inundation by seiche, tsunami, or mudflow.

The proposed project would widen the existing Riverside Drive Bridge utilizing a similar design structure as the existing bridge, and therefore the elevation of the proposed bridge is constrained. The grade of the existing approach road is also constrained because the approaches must remain at the same grade as the existing bridge. There would be no change to the existing low chord elevation, which is approximately 0.25 feet lower than the existing bridge, and the project would result in an increase in surface elevation of the Los Angeles River under and directly adjacent to the bridge of less than 0.1 foot.

The proposed project would not result in a longitudinal encroachment in the base floodplain. In addition, the proposed widening would not result in a substantial encroachment into the floodplain, because the bridge spans the entire river channel from levee to levee and is higher than the levee elevation. The low chord elevation of the widened bridge would be higher than the top of levee elevations in the project area; therefore, levee overtopping would occur before the bridge is overtopped.

The USACE and project-level hydraulic analysis indicate that during a 50- or 100-year flood event, the levees would be overtopped within the project area. There are residences and other buildings outside of the levees that could be impacted; however, flooding that may occur in these areas would not be caused by the proposed bridge widening. Therefore, the proposed project would have no impact related to flooding.

The bottom portion of the river channel is cobble-lined with substrates and vegetated; however, the channel banks are concrete lined for flood protection. The proposed project would include

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widening the bridge deck and extending the piers on the downstream side of the bridge. This widening would slightly increase the area shaded by the bridge deck, and the area of the river bottom covered by piers; however, because the majority of the river channel is concrete lined, only minimal vegetation exists and there is minimal floodplain value in this portion of the Los Angeles River. Therefore, the project would not result in adverse impacts on natural and beneficial floodplain values.

The City is working closely with the USACE to identify impacts related to hydrology and flooding, and ensure that the project is designed in a manner that would not result in adverse impacts on hydrology of the river channel. The City would apply for a 408 Permit prior to project construction.

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

This alternative is not expected to have adverse effects related to hydrology or the floodplain; therefore, avoidance, minimization, and/or mitigation measures are not required.

### **2.9.5 Cumulative Impacts**

The cumulative setting for hydrology and floodplains is considered the Los Angeles River watershed. Existing and continuing development, as well as flood control measures and structures, contribute to cumulative hydrology and flooding impacts. The project would contribute to cumulative hydrology impacts in the Los Angeles River watershed; however, the proposed bridge widening would have only minor impacts on the hydrology of the river, and would not have any adverse flooding impacts; therefore, project contributions to would be less than cumulatively considerable.

## **2.10 Water Quality and Storm Water Run-Off**

### **2.10.1 Regulatory Setting**

#### **Federal Requirements: Clean Water Act**

In 1972 Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the U.S. from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. Known today as the Clean Water Act (CWA), Congress has amended it several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. Important CWA sections are:

- Sections 303 and 304 require states to promulgate water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity, which may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).

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- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The objective of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

USACE issues two types of 404 permits: Standard and General permits. There are two types of General permits, Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE’s Standard permits. For Standard permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency’s Section 404 (b)(1) Guidelines (U.S. EPA CFR 40 Part 230), and whether permit approval is in the public interest. The Section 404(b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA), to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

### **State Requirements: Porter-Cologne Water Quality Control Act**

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This Act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits

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discharges of “waste” as defined and this definition is broader than the CWA definition of “pollutant”. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA, and regulating discharges to ensure compliance with the water quality standards. Details regarding water quality standards in a project area are contained in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions, and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants, which are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

### **State Water Resources Control Board and Regional Water Quality Control Boards**

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

### ***National Pollution Discharge Elimination System (NPDES) Program***

#### ***Municipal Separate Storm Sewer Systems (MS4)***

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). The U.S. EPA defines an MS4 as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that are designed or used for collecting or conveying storm water.” The SWRCB has identified Caltrans as an owner/operator of an MS4 pursuant to federal regulations. Caltrans’ MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

Caltrans’ MS4 Permit, under revision at the time of this update, contains three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);

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2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
3. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices (BMPs). The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

### *Construction General Permit*

Construction General Permit (Order No. 2009-009-DWQ), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges from construction sites which result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with Caltrans' Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

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### *Section 401 Permitting*

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project would comply with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

### **2.10.2 Affected Environment**

#### **Surface Water**

The Los Angeles River is an intermittent river flowing through Los Angeles County from Canoga Park in the west end of the San Fernando Valley, 51 miles southeast to the Pacific Ocean in Long Beach. The river basin emerges from the Santa Monica Mountains, Simi Hills, and Santa Susana Mountains. The highest point in the watershed is San Fernando Peak, with an elevation of 3,741 feet (Schaaf & Wheeler, 2007). The upper portion (approximately 85 square miles) of the watershed is relatively steep and mountainous terrain, while the rest of the basin is relatively flat and highly urbanized.

The drainage area at the Riverside Drive Bridge crossing is approximately 465 square miles (Schaaf & Wheeler, 2007). For most of its length, the river flows through a narrow concrete channel. There are many large and small drainages flowing into the river upstream of the bridge. Substantial amounts of polluted runoff enter the river from garbage, urban runoff, and treated sewage.

Storm runoff from the existing bridge currently flows from the middle of the bridge to each end where it drains into catch basins situated behind the abutments. These catch basins deliver the runoff to storm drain out-falls located beneath the bridge. An existing storm drain system conveys runoff from the existing bridge and nearby vicinity to the Los Angeles River, which subsequently empties into the Pacific Ocean.

The Los Angeles Regional Water Quality Control Board (LARWQCB), acting on behalf of the SWRCB, has jurisdiction over water quality at the project area. The *Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (LARWQCB, 1995) (Basin Plan), is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan:

- Designates beneficial uses for surface water and groundwater;

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- Sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; and
- Describes implementation programs to protect all waters in the region.

The beneficial uses identified for the Los Angeles River in the Basin Plan include agricultural supply (AGR), water contact recreation (REC 1), non-contact water recreation (REC 2), warm freshwater habitat (WARM), wildlife habitat (WILD), and wetland habitat (WET). In addition, the Basin Plan identifies municipal and domestic supply (MUN) and industrial service supply (IND) as potential beneficial uses.

The reach of the Los Angeles River within the project area, Reach 3 – Figueroa Street to Riverside Drive, is listed as an impaired water body for several constituents on the CWA Section 303(d) list of water quality limited sections.

### **Groundwater**

The project area is within the San Fernando Valley Groundwater Basin (SFVGB), located within the Upper Los Angeles River Area (Acacia Consulting Engineers, 2012), and consists of the eastern portion of the San Fernando Valley and the entire Verdugo Basin. The SFVGWB encompasses approximately 112,000 acres of alluvial valley fill deposits and provides enough water to serve approximately 600,000 residents.

Groundwater quality in the region is generally degraded by infiltration of contaminants from surrounding land uses, including volatile organic compounds from industry and nitrates from subsurface sewage disposal and past agricultural activities.

### **2.10.3 Environmental Consequences**

#### **No Build Alternative**

The No Project Alternative would not include any changes to existing conditions; therefore, there would be no impact.

#### **Build Alternative**

The Build Alternative would require grading, excavation, paving, staging, and equipment maintenance adjacent to the river channel. The project would also require work over the river channel and within the channel itself, including vegetation removal, excavation, installation of new piers, slope protection work, and water diversion.

Grading, excavation, paving, and staging adjacent to the river channel could potentially result in increased erosion and polluted storm water runoff that could enter the Los Angeles River, affecting water quality. Soils from stockpiles, fuel, and other chemical pollutants would be of particular concern, as they could result in direct impacts on aquatic resources.

Vegetation removal would require that construction personnel enter the river channel and would include the use of motorized and hand-held equipment in the channel. These activities could potentially result in increased erosion and polluted storm water runoff that could enter the Los Angeles River, affecting water quality.

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Water flow in the Los Angeles River is perennial; therefore, in order to work in the channel, water flow in the channel would need to be diverted around the work area. Water diversion activities would have the potential to impact water quality, especially during installation of the diversion and when the diversion system is removed.

The project would include work on the bridge deck, including widening, which would require activities over the river channel, creating the potential for construction debris to fall into the channel, resulting in water quality impacts. Work on the deck would also require temporary measures to redirect storm water flow on the bridge, which could potentially affect water quality.

The widened bridge would be supported by new concrete piers measuring approximately 21 feet in length and three feet in width. The new piers would be separated with the existing pier walls by up to four feet. Construction of the new piers would require work within the river channel, including excavation and placing of piers in the river channel bottom, which could potentially affect water quality.

The Build Alternative would slightly increase the amount of impervious paved roadway surfaces, including the widened bridge deck and new bike path access ramp. Runoff from these surfaces could potentially increase the amount of runoff, including polluted runoff from motor vehicles and other roadway debris.

The City would comply with the requirements of the statewide Construction General Permit and the City's NPDES permit, in coordination with the LARWQCB and SWRCB. In addition, a SWPPP and water diversion plan would be prepared and submitted to the LARWQCB for approval prior to construction.

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

To ensure that erosion and runoff does not result in adverse impacts on water quality in the Los Angeles River, the City would comply with the requirements of the statewide Construction General Permit and the City's NPDES permit. Prior to construction, the City would submit the appropriate notifications to the LARWQCB and SWRCB, as required by the NPDES permits. Staging areas would be outside the river channel to reduce direct and indirect impacts on the Los Angeles River.

The Build Alternative would include soil disturbance of an area greater than one acre; therefore, a SWPPP would be required. The SWPPP would include appropriate BMPs to avoid or minimize impacts on water quality to the extent feasible. BMPs would be implemented during construction to reduce dust, dirt, and construction debris from leaving the construction area, and to minimize sedimentation and turbidity within the Los Angeles River. BMPs would be implemented to reduce potential impacts associated with leaks and spills of oil, fuel or machinery fluids. Appropriate post-construction stormwater BMPs would be implemented to accommodate the additional drainage discharges generated by the project and avoid adverse effects such as offsite erosion, sedimentation, and water quality impairments. The contractor's SWPPP would be submitted to the LARWQCB and to the City for review and approval prior to construction.

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As part of the permitting for the project, a water diversion plan would be required and would be approved by the LARWQCB. This would ensure that the water diversion system would be designed in a manner that would effectively divert the water without resulting in adverse impacts on water quality. Drainage would be provided on the widened bridge deck to accommodate existing and increased runoff, in accordance with NPDES requirements.

With the implementation of BMPs and other measures required by regulatory permitting, impacts on water quality are avoided or substantially minimized, and the project would not result in adverse impacts on water quality in the Los Angeles River.

### **2.10.5 Cumulative Impacts**

The cumulative setting for water quality and storm water runoff is considered the Los Angeles River watershed. Existing and continuing development, and resulting storm water runoff, contribute to water quality impairments in the watershed. For much of its length, the Los Angeles River runs through urban areas, and currently water quality is degraded by trash, illegal dumping, and untreated, urban runoff.

The project could contribute to cumulative water quality and storm water runoff impacts in the Los Angeles River watershed; however, with implementation of standard BMPs and compliance with regulatory permitting requirements, project contributions would be less than cumulatively considerable.

## **2.11 Geology/Soils/Seismic/Topography**

This section discusses the potential for the project to impact the existing geology, soils, and topography of the project area, and the potential to create seismic hazards.

### **2.11.1 Regulatory Setting**

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Unique topographic and geologic features are also protected under CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans’ Office of Earthquake Engineering is responsible for assessing the seismic hazard for Department projects. Structures are designed using the Department’s Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge’s category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, please see the Caltrans’ Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

The City of Los Angeles General Plan Safety Element discusses tools for mitigating geologic hazards. The principal tool for mitigation of these hazards is the City Grading Code. Under the code, the City’s Department of Building and Safety has the authority to withhold building permit issuance if potential hazards associated with a project cannot be resolved.

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### **2.11.2 Affected Environment**

A Geotechnical Engineering Investigation was completed for the project in April of 2002 by Parikh Consultants. ENGEO Inc. reviewed and updated that investigation, which was summarized in a subsequent report dated May 2012. The results of this analysis are incorporated in this section.

#### **Site Geology**

Los Angeles is a part of the Pacific Coastal Region geological region, a large region that stretches from Alaska to the tip of South America. The region consists of young geologic areas where mountains are continuing to grow and shape the landscape. Los Angeles is bisected by the Santa Monica Mountains, and is bounded by the Santa Susana Mountains, Verdugo Mountains, and the Palos Verdes Hills.

The project area extends across the Los Angeles River in a generally flat area in the northern part of Griffith Park. This area is in the eastern extent of the Santa Monica Mountains, where Mount Hollywood rises to an elevation of 1,625 feet. According to the NPS, there are no outstanding natural features listed on the national registry of natural landmarks in the project area. In addition, there are no known mineral resources in the project area.

#### **Subsurface Information**

Based on borings drilled in 2001 and 2012, the subsoils in the project area consist of concrete overlying native granular/sandy deposits. The embankment material consists of dense clayey sand and silty sand. The native sandy deposits are generally dense and range from poorly graded sand with gravel to silty sand with gravel and cobbles. The top elevation of the borings is shown as 472 feet. The material at depths between 25 to 33 feet below the ground surface (elevations of 447 feet and 439 feet) appears to be loose to medium dense and subject to liquefaction. At a depth of 62 feet (410 feet elevation), cobbles were encountered in the borings, and the consistency was generally very dense. The natural groundwater level appears to be approximately 45 feet depth (elevation 427 feet) below the existing roadway grade (Parikh Consultants, Inc. 2001).

#### **Liquefaction**

Liquefiable soils are low-density soils that, when saturated and subjected to high intensity ground shaking, expand and behave as a liquid. Factors that are considered when evaluating for liquefaction potential include soil type, soil density, groundwater depth, and the duration and intensity of shaking. Liquefaction is most likely to occur in water-saturated alluvium (deposits of clay, silt, sand, and gravel left by flowing streams) or similar deposits of artificial (manmade) fill.

The 1999 Seismic Hazard Zones Map for the Burbank USGS 7 ½-minute quadrangle indicates that the project area is within an area that is susceptible to liquefaction. The preliminary seismic study conducted in 2001 also noted that liquefaction potential is high for materials at depths of 25 to 33 feet below the ground surface (elevation of 447 feet to 439 feet).

According to the *As-Built Riverside Drive Bridge over the Los Angeles River General Plan*, several layers within the test soil borings in the Los Angeles River were classified as “quick sand” (ENGEO, 2012). This could indicate loose granular deposits susceptible to liquefaction

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during a seismic event. It is possible that loose granular soils exist under the pier wall footings of the bridge.

### **Seismic Hazards**

The project area is within the seismically active Southern California region where there are numerous faults of various types and magnitude potential. An analysis of the historic earthquake database developed by the California Department of Conservation, California Geological Survey (CGS) shows that the project area has experienced numerous low-magnitude earthquakes between the years of 1932 to 2000.

The governing fault in this area is the Malibu Coast-Santa Monica-Hollywood-Raymond Fault. The major faults in proximity to the project area are the Hollywood Fault, approximately 2.6 miles from the project area, and the Verdugo Fault, approximately 0.6 mile from the project area. There are other small, discontinuous fault traces recorded in the project vicinity, but their exact locations are uncertain because they are concealed by younger geologic materials. The 1979 Alquist-Priolo Earthquake Fault Zone Map for the Burbank USGS 7 ½-minute quadrangle shows no fault traces through, or in proximity to, the project area.

According to the Alquist-Priolo Special Study Zones and Fault Rupture Study Areas Map in the Safety Element of the City's General Plan, the project is located in a Fault Rupture Study Area. This requires that additional soils and geology reports be prepared to help assess potential hazards. A geotechnical report was prepared in 2002 and updated in 2012, and states that the potential for fault rupture in the project area is relatively low (Parikh Consultants, Inc. 2002).

The current policy is to use the anticipated maximum credible event (MCE) from young faults in and near California for assessing the seismic hazard. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period. The Riverside Drive Bridge has been determined to be vulnerable to a seismic-induced failure in the event of the newly defined MCE earthquake activity. The Riverside Drive Bridge was seismically retrofitted in 1992; however, since that time, the engineering estimates for the MCE have increased, and the previous retrofit has been determined to be inadequate.

### **Landslides**

The project area is relatively flat, and is not adjacent to any hillsides. The Landslide Inventory and Hillside Areas map from the City of Los Angeles General Plan Safety element shows that the project area is outside of, but approximately 500 feet from, areas of potential earthquake-induced landslides. Areas at risk for earthquake-induced landslides are on the hillsides to the south of the project area.

### **2.11.3 Environmental Consequences**

#### **No Build Alternative**

The No Build Alternative would involve no changes to existing conditions; therefore, it would not result in direct impacts on seismic vulnerability. However, this alternative would not include seismic retrofit proposed as part of the Build Alternative, and would not achieve improved seismic safety and bridge stability in the event of seismic activity.

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### **Build Alternative**

According to the General Plan Safety Element, the proposed project is not within an Alquist-Priolo Special Study Zone; therefore, the project would not expose people or structures to substantial adverse effects related to the rupture of a known earthquake fault.

Ground shaking is motion that results from energy released during faulting. The intensity of shaking and its potential impact on structures is determined by the physical characteristics of the underlying soil and rock, building materials and workmanship, earthquake magnitude and location of epicenter, and the character and duration of ground motion. The project area is located in the seismically active Southern California region, and there are existing and historic earthquake data showing that the project area has experienced numerous low-magnitude earthquakes in the past.

The existing Riverside Drive Bridge has been determined to be vulnerable to a seismic-induced failure in the event of the newly defined MCE earthquake activity. The project area is also within an area that is susceptible to liquefaction. The project would include seismic retrofit improvements to the bridge that would meet current standards, and would reduce the vulnerability of the bridge to damage during seismic activity, including liquefaction. Therefore, the Build Alternative would not result in adverse impacts to the existing risk of seismic activity.

The project area is relatively flat, and is not adjacent to any hillsides. The project area is approximately 500 feet from the nearest areas of potential earthquake-induced landslides, and the risk for seismically induced landslides is not anticipated.

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

The proposed project would not expose people or structures to hazards related to geology, seismicity, soil, or topography; therefore, no mitigation measures are required.

### **2.11.5 Cumulative Impacts**

The cumulative setting for the project is considered the transportation system in the Southern California region. The project would contribute to cumulatively beneficial impacts by reducing the vulnerability of the bridge to damage caused by seismic activity, including liquefaction; therefore, no further analysis is required.

## **2.12 Hazardous Waste/Materials**

This section discusses the potential for hazardous materials within the project area, and the potential for the project would result in a release of any such materials.

### **2.12.1 Regulatory Setting**

Hazardous materials and hazardous wastes are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource

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Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as “Superfund,” is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous waste generated by operating entities. 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 (OSH Act)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

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

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires clean-up of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean up contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is encountered, disturbed during, or generated during project construction.

### **2.12.2 Affected Environment**

An Initial Site Assessment (ISA) Report was prepared by Acacia Consulting Engineers in September 2012. Results of this analysis have been incorporated, as appropriate, in this section.

As part of the ISA for the project, local, state and federal environmental record sources, standard historical sources, aerial photographs, fire insurance maps and physical setting sources were reviewed. In addition, the project area was surveyed and interviews were conducted with public officials.

A recognized environmental condition (REC) is the presence or likely presence of a hazardous substance or petroleum product on a property that indicates a release or threat of release into

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structures, the ground, groundwater, or surface water on the property. Three RECs were identified within the project area that could potentially affect the project.

The project area is located within the southern portion of the San Fernando Valley Superfund Site, which is listed primarily for trichloroethylene and hexavalent chromium impacts on groundwater at multiple depths; however, none of the areas of concern within the Superfund site are mapped within the immediate vicinity of the project area. In addition, the existing bridge was constructed at a time when asbestos containing materials may have been utilized during the construction and could be found in areas including, but not limited to, bridge joints and concrete piping. The yellow and white thermoplastic pavement striping and markings in the project area also may contain lead-based paint.

### **2.12.3 Environmental Consequences**

#### **No Build Alternative**

The No Build Alternative would not result in any changes to the existing bridge; therefore, there would be no impact.

#### **Build Alternative**

There are no existing or proposed daycare/preschools, or educational facilities within 0.25 mile of the project area; therefore, the project would not result in adverse impacts to any schools from hazardous emissions or the handling of hazardous materials. In addition, the proposed project is not located within an airport plan area or within two miles of a public or private airport; therefore, the project would not result in a safety hazard for people residing or working in proximity to an airport.

The Build Alternative would require removal of existing paving and portions of the existing bridge structure. Because there is the potential for asbestos containing materials or lead-based paint may be present in the project area, construction activities could increase exposure to these hazards during construction activities. Construction would also require excavation activities in the Los Angeles River, which could potentially result in encounters with groundwater. Because there is the potential for trichloroethylene and hexavalent chromium contamination associated with the Superfund site, encounters with groundwater could result in release of these materials or exposure of workers to these materials.

During preparation of the ISA, a Senior Scientist with the DTSC was contacted regarding the San Fernando Valley Superfund site. Mr. Yargeau stated that it is unlikely that shallow construction dewatering would be impacted by the known regional groundwater plumes associated with the Superfund site. In addition, Mr. Yargeau stated that shallow and deep groundwater plumes near the proposed project are likely below the depths of the foundations that may be utilized as part of the bridge construction and that shallow groundwater is unlikely impacted by the regional plumes. Mr. Yargeau recommended that once final construction documents are prepared, the design and construction team should meet with DTSC staff to verify that there remains little risk to worker health and safety and that there is no cross plume contamination or materials handling issues with the proposed project. A mitigation measure is included in Section 2.12.4 below requiring coordination with the DTSC.

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Small amounts of hazardous materials would also be used during construction activities (i.e. fuel, solvents, roadway resurfacing and re-striping materials, and equipment maintenance materials). Construction activities would also include the use of diesel and gasoline powered equipment. These materials would be used and stored in accordance with all applicable local, state, and federal regulations governing the handling of hazardous materials.

Following project construction, the Riverside Drive Bridge would continue to be used in its existing capacity. Operation of the project would not include the routine transport, use, or disposal of hazardous materials that could create a hazard to the public. With implementation of the mitigation measures below, no adverse impacts related to hazardous waste or materials would be expected to occur.

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

The following mitigation measures would reduce the potential for impacts related to hazardous materials:

- HAZ-1 The City would coordinate with the DTSC to assess the potential for construction impacts on regional groundwater, including contamination plume migration and cross plume contamination associated with the Superfund site. This coordination would include an assessment of potential for worker health and safety impacts; specifically, the need for volatile organic compound monitoring during project area excavations would be explored and identified.
- HAZ-2 A pre-demolition lead and asbestos survey would be completed prior to the commencement of construction. Lead and asbestos containing materials found during this process would be disposed of in a manner approved by the Cal OSHA.
- HAZ-3 Prior to construction, a hazardous materials compliance plan would be prepared by a Certified Industrial Hygienist to address the metals content of the yellow and white roadway striping found in the project area. This plan would be prepared in accordance with Caltrans Guidance for SSP 15-301.
- HAZ-4 If it is determined that groundwater would likely be encountered during construction, a groundwater quality assessment would be completed during the final design phase. If construction dewatering is required, groundwater management may be covered under the City's NPDES Permit.

### **2.12.5 Cumulative Impacts**

The cumulative setting for hazardous waste and materials is considered a one-mile radius from the project area. If other activities that resulted in the release of hazardous materials were to occur within the immediate area during project construction, this could result in cumulative impacts; however, with implementation of mitigation measures and compliance with applicable regulations, contributions these impacts would be minimal. In addition, no other major construction projects are expected concurrent to proposed project; therefore, project contributions would be less than cumulatively considerable.

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### 2.13 Air Quality

This section discusses the project's potential to affect air quality implementation of applicable air quality plans and regulations.

#### 2.13.1 Regulatory Setting

The Federal Clean Air Act (FCAA), as amended in 1990 is the federal law that governs air quality while the California Clean Air Act of 1988 is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and California Air Resources Board (CARB), 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). NAAQS and state ambient air quality standards (CAAQS) have been established for six transportation-related 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), broken down for regulatory purposes into particles of 10 micrometers or smaller—(PM<sub>10</sub>) and particles of 2.5 micrometers and smaller—(PM<sub>2.5</sub>), lead (Pb), and sulfur dioxide (SO<sub>2</sub>). In addition, CAAQS exist for visibility reducing particles, sulfates, hydrogen sulfide (H<sub>2</sub>S), and vinyl chloride. The NAAQS and CAAQS are set at a level that protects public health with a margin of safety, and are subject to periodic review and revision (see **Table 11**).

**Table 11  
Summary of Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards (CAAQS)	National Standards (NAAQS)	
			Primary <sup>(a)</sup>	Secondary <sup>(b)</sup>
Ozone (O <sub>3</sub> )	1-hour	0.09 ppm	–	Same as Primary
	8-hour	0.070 ppm	0.075 ppm	
Particulate Matter (PM <sub>10</sub> )	AAM	20 µg/m <sup>3</sup>	–	
	24-hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	
Fine Particulate Matter (PM <sub>2.5</sub> )	AAM	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>	
	24-hour	No Standard	35 µg/m <sup>3</sup>	
Carbon Monoxide (CO)	1-hour	20 ppm	35 ppm	None
	8-hour	9 ppm	9 ppm	
	8-hour (Lake Tahoe)	6 ppm	–	
Nitrogen Dioxide (NO <sub>2</sub> )	AAM	0.030 ppm	0.053 ppm	Same as Primary
	1-hour	0.18 ppm	100 ppb	
Sulfur Dioxide (SO <sub>2</sub> )	–	–	–	–
	24-hour	0.04 ppm	–	–
	3-hour	–	–	0.5 ppm
	1-hour	0.25 ppm	75 ppb	–
Lead	30-day Average	1.5 µg/m <sup>3</sup>	–	–

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	Calendar Quarter	–	1.5 µg/m <sup>3</sup>	Same as Primary
	Rolling 3-Month Average	–	0.15 µg/m <sup>3</sup>	
Sulfates	24-hour	25 µg/m <sup>3</sup>	No Federal Standards	
Hydrogen Sulfide	1-hour	0.03 ppm		
Vinyl Chloride	24-hour	0.01 ppm		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient of 0.23 per kilometer—visibility of 10 miles or more (0.07—30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70%		

(a) Levels necessary to protect the public health

(b) Levels necessary to protect the public welfare from known or anticipated adverse effects

AAM = Annual Arithmetic Mean; µg/m<sup>3</sup> = Micrograms per cubic meter; ppm = parts per million; ppb = parts per billion

Source: California Air Resources board (ARB), June 2012

Both state and federal regulatory schemes also cover toxic air contaminants (air toxics). Some criteria pollutants are also air toxics or may include certain air toxics within their general definition.

Federal and state air quality standards and regulations provide the basic scheme for project-level air quality analysis under NEPA and the CEQA. In addition to this type of environmental analysis, a parallel “Conformity” requirement under the FCAA also applies.

The Federal Clean Air Act Section 176(c) prohibits U.S. DOT and other federal agencies from funding, authorizing, or approving plans, programs or projects that are not first found to conform to State Implementation Plan (SIP) for achieving the goals of Clean Air Act requirements related to the NAAQS. “Transportation Conformity” takes place on two levels: the regional—or, planning and programming—level and the project level. The proposed project must conform at both levels to be approved. Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 CFR 93 govern the conformity process.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the standards set for carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and in some areas sulfur dioxide (SO<sub>2</sub>). California has attainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO<sub>2</sub>, and also has a nonattainment area for lead (Pb). However, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (TIPs) that include all of the transportation projects planned for a region over a period of at least 20 years for the RTP) and 4 years (for the TIP). RTP and TIP conformity is based on use of travel demand and air quality models to determine whether the implementation of those projects would conform to emission budgets or other tests showing that requirements of the

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Clean Air Act and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), FHWA, and Federal Transit Administration (FTA), make determinations that the RTP and TIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or TIP must be modified until conformity is attained. If the design concept, scope, and “open to traffic” schedule of a proposed transportation project are the same as described in the RTP and TIP, 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 (PM<sub>10</sub> or PM<sub>2.5</sub>). A region is “nonattainment” if one or more of the monitoring stations in the region measures violation of the relevant standard and U.S. EPA officially designates the area nonattainment. Areas that were previously designated as nonattainment areas but subsequently meet the standard may be officially re-designated to attainment by U.S. EPA and are then called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific procedural and documentation standards for projects that require a hot spot analysis. In general, projects must not cause the “hot spot” related standard to be violated, and must not cause any increase in the number and severity of violations in nonattainment areas. 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.

### **2.13.2 Affected Environment**

This section describes the affected environment as it relates to air quality, and includes the existing climate and meteorological conditions in the project area, the project region’s ambient air quality attainment status, and the project’s transportation conformity status. In addition, information on naturally occurring asbestos (NOA) is also provided.

#### **Local Climate and Meteorological Conditions**

An air basin is an area of land with generally similar meteorological and geographic conditions. California is geographically divided into 15 air basins. Los Angeles is in the South Coast Air Basin (SCAB), a 6,600 square mile area that includes all of Orange County and portions of surrounding Los Angeles, San Bernardino, and Riverside Counties. SCAB contains the largest urban area in the western U.S.

The SCAB is located in a coastal plain with broad valleys and low hills. The Pacific Ocean is to the west, and high mountain ranges are to the north and east (the San Gabriel, San Bernardino, and San Jacinto Mountains). The proximity of the Pacific Ocean results in a mild climate tempered by cool sea breezes with light average wind speeds. Annual average temperatures in SCAB vary little, averaging approximately 62 degrees Fahrenheit (°F). Occasionally, the usually mild climate is interrupted by periods of extremely hot weather, winter storms, or Santa Ana winds (strong, extremely dry offshore winds known for bringing in hot weather in the fall).

Because of light average wind speeds, the potential for horizontal dispersion of air pollutants within the SCAB’s atmosphere is limited. Vertical dispersion of air pollutants is also hindered by an upper layer of dry air that warms as it descends, which restricts the mobility of cooler marine-

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influenced area near the ground surface. This is referred to as a temperature inversion, which can lead to pollution being trapped close to the ground. Combined with strong sunlight and low wind speeds, these conditions lead to the greatest concentration of air pollutants in the SCAB.

### **Ambient Air Quality Attainment Status**

**Table 12** summarizes the state and federal attainment status in SCAB for criteria pollutants. The SCAB is currently designated as a nonattainment area for state and federal O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> standards, and the state NO<sub>2</sub> standard. Los Angeles County is also currently designated as nonattainment for the state and federal lead standard. For the remaining state and federal standards, The SCAB is designated as an attainment or unclassified area.

**Table 12  
State and Federal Ambient Air Quality Attainment Designations for the SCAB**

Criteria Pollutant	State Designation	Federal Designation
Ozone (O <sub>3</sub> )	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter (PM <sub>10</sub> )	Non-Attainment	Non-Attainment (Serious)*
Fine Particulate Matter (PM <sub>2.5</sub> )	Non-Attainment	Non-Attainment
Carbon Monoxide (CO)	Attainment	Attainment /Maintenance
Nitrogen Dioxide (NO <sub>2</sub> )	Non-Attainment	Attainment /Maintenance
Sulfur Dioxide (SO <sub>2</sub> )	Attainment	Attainment
Lead**	Non-Attainment	Non-Attainment
Sulfates	Attainment	No Federal Standards
Hydrogen Sulfide (H <sub>2</sub> S)	Unclassified	
Visibility-Reducing Particle Matter	Unclassified	

\* Federal PM<sub>10</sub> attainment re-designation request submitted.

\*\* State nonattainment designation for lead is based on monitoring data for a new site near a lead acid battery reclamation facility in the Los Angeles County portion of the South Coast Air Basin (SCAB), effective December 31, 2010; the remainder of the SCAB is in attainment with the state standard for lead.

Source: South Coast Air Quality Management District (SCAQMD), May 2012; California Air Resources Board (ARB), June 2011; U.S. Environmental Protection Agency (U.S. EPA), March 2012.

### **Regional Conformity Statement**

The proposed project is included in SCAG's 2013 Federal Transportation Improvement Program and is listed in a group of projects for bridge rehabilitation and reconstruction (SCAG, 2013). The 2013 FTIP received federal approval on December 14, 2012.

The U.S. EPA regulations also allow certain projects listed in Table 2 of 40 CFR 93.126 to be exempt from conformity requirements. Projects that fall under the categories listed in Table 2 may proceed toward implementation even in the absence of a conforming transportation plan. The proposed project falls under the "safety" category of Table 2 for "widening narrow pavements or reconstructing bridges (no additional travel lanes)," and is therefore exempt from conformity requirements.

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### **Project Level Conformity**

On March 10, 2006, the U.S. EPA published a final rule (71 FR 12468) establishing transportation conformity requirements for analyzing the project-level, localized PM and CO air quality impacts of transportation projects. The project-level, localized air quality impacts associated with mobile-source CO and PM are evaluated as follows.

### ***CO Analysis***

The Transportation Project-Level Carbon Monoxide Protocol, UCD-ITS-97-21 (CO Protocol), University of California, Davis, December 1997, provides procedures and guidelines for use by agencies to evaluate the potential local level CO impacts of a transportation project. The CO Protocol poses inquiries through decision flow charts that are designed to assist the lead agency in evaluating requirements that specifically apply to a proposed action. An evaluation of the flow chart inquiry pertaining to the proposed project is discussed below.

*Is the project exempt from all emissions analyses?*

Yes. The proposed project is exempt from all emission analyses as it meets the criteria for projects exempt from analyses in the CO Protocol. The project meets the criteria for Safety (safety improvement program, shoulder improvements, guardrails) and Air Quality (bicycle and pedestrian facilities). Therefore, a project-level CO analysis is not required.

### ***Particulate Matter Analysis***

Qualitative PM hot spot analysis is required under the U.S. EPA Transportation Conformity rule for Projects of Air Quality Concern (POAQC), as described in the U.S. EPA's Final Rule of March 10, 2006. Projects that are not POAQC do not require detailed PM hot spot analysis.

According to the final rule, the following types of projects are considered POAQC:

1. New or expanded highway projects that have a significant number of or significant increase in diesel vehicles (significant number is defined as greater than 125,000 Annual Average Daily Traffic (AADT), and eight percent or more of such AADT is diesel truck traffic), or in practice 10,000 truck AADT or more regardless of total AADT; significant increase is defined in practice as a 10 percent increase in heavy duty truck traffic).
2. Projects affecting intersections that are at an LOS D, E, or F, with a significant number of diesel vehicles, or 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.
3. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.
4. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.
5. Projects in or affecting locations, areas, or categories of sites which are identified in the PM<sub>2.5</sub> or PM<sub>10</sub> implementation plan or implementation plan submission, as appropriate, as sites of possible violation.

The Build Alternative would not increase the number of traffic lanes on the bridge, and would not increase the capacity of the bridge; therefore, the project would not be expected to increase diesel vehicles. The proposed project would not affect any intersections that are at an LOS D, E,

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or F, or that has the potential to change to LOS D, E, or F. The project does not involve new or expanded bus and rail terminals, or transfer points, and the project area is not identified in the PM<sub>2.5</sub> or PM<sub>10</sub> implementation plan as a site of possible violation. Furthermore, the project would be expected to improve circulation in the area, which could potentially reduce pollutant emissions in the area. Therefore, the proposed project is not a POAQC, and a PM hot spot analysis is not required.

### **Naturally Occurring Asbestos**

In California, NOA is most frequently associated with serpentine or ultramafic rock, which often appears in veins near earthquake faults and in the coastal ranges and foothills of the Sierra Nevada Mountains. According to the California Department of Conservation, the project area is not located within or in proximity to areas that are likely to contain NOA (California Department of Conservation, 2000).

### **2.13.3 Environmental Consequences**

#### **No Build Alternative**

The No Build Alternative would involve no changes to existing conditions; therefore, no impact would occur.

#### **Build Alternative**

The Build Alternative would not increase the number of traffic lanes on the bridge, and would not increase the capacity of the bridge; therefore, the project would not be expected to increase mobile source emissions. The project would be expected to improve circulation in the area, which could potentially reduce pollutant emissions in the area. The proposed project is included in SCAG's 2013 FTIP, and is therefore consistent with the SIP. The project also falls under the "safety" category of Table 2 (40 CFR 93.126) for "widening narrow pavements or reconstructing bridges (no additional travel lanes)," and is therefore exempt from the requirement to demonstrate conformity.

The Build Alternative would result in temporary air quality impacts associated with construction activities. Construction-related emissions vary, depending on the level of activity, the specific type of operation, and the prevailing weather conditions. The types of construction emissions that could result from the project are fugitive dust emissions and mobile source emissions, including mobile source air toxics (MSAT). As stated previously, the project area is not located within or in proximity to areas that are likely to contain NOA; therefore, the project is not anticipated to result in adverse impacts related to NOA.

#### ***Fugitive Dust Emissions***

Fugitive dust emissions include any solid PM that is lifted into the ambient air. Construction activities with the potential to result in fugitive dust emissions include demolition activities, equipment traveling over temporary roads, and earth moving operations, such as land clearing, ground excavation, and cut and fill of soils. Unless properly controlled, vehicles leaving the construction area could also deposit mud on local streets, which could result in additional fugitive dust.

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To minimize air pollutants during construction, the proposed project would comply with CARB, South Coast Air Quality Management District (SCAQMD), and City requirements, including CARB's In-Use Off-Road Diesel Vehicle Regulation, SCAQMD's Rule 403 Fugitive Dust, and City measures to limit fugitive dust from staging areas and construction equipment.

### ***Mobile Source Emissions***

Mobile source emissions include primarily NO<sub>x</sub>, CO, volatile organic compounds (VOC), PM<sub>10</sub> and PM<sub>2.5</sub>, and mobile source air toxics (MSAT). Emissions could also lead to the formation of O<sub>3</sub>, which is a regional pollutant that is derived from NO<sub>x</sub> and VOCs in the presence of sunlight and heat. Construction activities that have the potential to result in mobile source emissions include the use of construction equipment, such as bulldozers, trucks, and scrapers, as well as vehicle trips by construction workers to and from the project area. Mobile source emissions from construction equipment are highest during use of heavy-duty, diesel-fueled equipment.

### ***Mobile Source Air Toxics***

Research into the health impacts of MSATs is ongoing. Diesel particulate matter (DPM) is an MSAT of primary concern. In 1998, following an exhaustive 10-year scientific assessment process, CARB identified particulate matter from diesel-fueled engines as an air toxic. Subsequent to this determination, the SCAQMD initiated a comprehensive urban toxic air pollution study, called MATES-II (for Multiple Air Toxics Exposure Study). MATES-II showed that average cancer risk in the SCAB ranges from 1,100 in a million to 1,750 in a million, with an average regional risk of about 1,400 in a million. Moreover, DPM accounts for more than 70 percent of the cancer risk. Because of uncertainties in the process of assessing the risks of various kinds of exposures to these pollutants, a quantitative assessment of the existing effects of MSAT emissions impacts on human health cannot be made at the project level.

Emissions of DPM may also occur from truck traffic on local streets and arterials in transit to or from the project area, and truck idling and movement in the project area. Because of uncertainties in the process of assessing the risks of various kinds of exposures to these pollutants, a quantitative assessment of the potential effects of MSAT emissions impacts on human health cannot be made at the project level. However, given the temporary and short-term nature of the construction period, construction activities for the Build Alternative would have no potential for meaningful MSAT effects.

The purpose of the project is to rehabilitate and widen an existing bridge. This project has been determined to generate minimal air quality impacts for FCAA criteria pollutants and has not been linked with any special MSAT concerns. As such, this project would not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the No Build Alternative.

In addition, U.S. EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with U.S. EPA's MOVES model forecasts a combined reduction of over 80 percent in the total annual emission rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 100 percent. This will both

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reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from the Build Alternative.

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

CARB has passed numerous regulations to reduce the public's exposure to DPM and NOx emissions. For example, the In-Use Off-Road Diesel Vehicle Regulation includes enforceable elements, such as limits on vehicle idling to no more than five consecutive minutes, and equipment reporting and labeling. Construction activities for the proposed project would be required to comply with these regulations.

Construction activities would also comply with SCAQMD's Rule 403 Fugitive Dust, which requires implementation of measures to prevent, reduce, or mitigate fugitive dust emissions. Measures include maintaining the stability of soil through pre-watering the site before any clearing or grubbing activities.

The City also has developed standard measures to minimize emissions of air pollutants, which would be implemented during construction. These measures include establishing an equipment staging area near public access routes, locating the staging area on paved or stabilized areas, and controlling access to the area by limiting curb cuts/driveways. Measures also require that non-vehicular equipment engines be properly maintained to minimize the volume of exhaust emissions, and that construction equipment be inspected prior to leaving the project area and that loose dirt be washed off with wheel washers, as needed.

Construction activities would be short-term and would be completed in approximately 18 months. With the implementation of standard measures and compliance with applicable regulations, the Build Alternative would not result in adverse air quality impacts.

### **2.13.5 Cumulative Impacts**

The cumulative setting for air quality is considered the SCAB, which is currently a nonattainment area for state and federal O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> standards, and the state NO<sub>2</sub> standard. Los Angeles County is also currently designated as nonattainment for the state and federal lead standard. If other activities that resulted in the increase in pollutant emission were to occur within the SCAB during project construction, this could result in cumulative impacts; however, with implementation of standard pollutant control measures and compliance with applicable regulations, contributions these impacts would be minimal. In addition, no other major construction projects are expected concurrent to proposed project; therefore, project contributions would be less than cumulatively considerable.

### **Climate Change**

Climate change is analyzed at the end of this chapter. Neither the U.S. EPA nor FHWA has promulgated explicit guidance or methodology to conduct project-level greenhouse gas analysis. As stated on FHWA's climate change website (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and

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will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

Because there have been more requirements set forth in California legislation and executive orders regarding climate change, the issue is addressed in a separate CEQA discussion at the end of this chapter and may be used to inform the NEPA decision. The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts that the State has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours travelled.

### **2.14 Noise**

This section discusses the project's potential to result in a temporary and/or permanent increase in noise levels within and adjacent to the project area.

#### **2.14.1 Regulatory Setting**

##### **Terminology**

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium to the ear. Continuous sound can be described by frequency and amplitude. Frequency (or the rate of vibration) is the property of sound that most determines pitch and is expressed in terms of cycles per second, or Hertz (Hz). The audible frequency range for humans is generally between 20 Hz and 20,000 Hz. The amplitude (or degree of change) of pressure waves generated by a sound source determines the loudness of the source.

A logarithmic scale is used to describe sound pressure level in terms of decibels (dB). The scale is logarithmic to represent the wide range of sounds audible to the human ear. The dB scale alone does not adequately characterize how humans perceive noise, as the loudness or human response is determined by the characteristics of the human ear. The increased sensitivity of the human ear to certain frequencies is approximated by skewing or weighing the dB scale towards those frequencies. The weighted dB scale which best approximates the response of the human ear is known as the A-weighted scale (dBA) and all sound levels in this section are reported in terms of dBA.

In traffic noise analysis, the equivalent sound level (Leq) represents an average of the sound energy occurring over a specified period. The 1-hour-A-weighted equivalent sound (Leq(h)) is the energy average of A-weighted sound levels occurring during a one-hour period and is the basis for noise abatement criteria used by Caltrans and FHWA, as described below. In traffic noise analysis, the Leq(h) is the energy average of A-weighted sound levels occurring during a one-hour period, and is the basis for noise abatement criteria used by the FHWA, as described below.

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### Applicable Regulations

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

### **California Environmental Policy Act**

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed 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. The rest of this section will focus on the NEPA-23 CFR 772 noise analysis; please see Chapter 4 of this document for further information on noise analysis under CEQA.

### **National Environmental Policy Act**

For highway transportation projects with FHWA (and Caltrans, as assigned) involvement, 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 NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the NEPA-23 CFR 772 analysis.

**Table 13  
Noise Abatement Criteria**

Activity Category	NAC, Hourly A-Weighted Noise Level, dBA $L_{eq}(h)$	Description of Activities
A	57 Exterior	Lands on which serenity and quiet are of 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, properties, or activities not included in Categories A or B above.
D	–	Undeveloped lands.
E	52 Interior	Residence, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: Caltrans, 2012

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**Table 14** lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise-levels discussed in this section with common activities.

**Table 14  
Common Noise Levels**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	<b>110</b>	Rock Band
Gas Lawn Mower at 1 m (3 ft)	<b>100</b>	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	<b>90</b>	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	<b>80</b>	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft) Commercial Area	<b>70</b>	Vacuum Cleaner at 3 m (10 ft) Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	<b>60</b>	Large Business Office
Quiet Urban Daytime	<b>50</b>	Dishwasher Next Room
Quiet Urban Nighttime	<b>40</b>	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	<b>30</b>	Library
Quiet Rural Nighttime	<b>20</b>	Bedroom at Night, Concert Hall (Background)
	<b>10</b>	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	<b>0</b>	Lowest Threshold of Human Hearing

Source: Caltrans, 2012

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### 2.14.2 Affected Environment

#### Existing Noise Sources

The Riverside Drive Bridge is in a fully developed area of Los Angeles near the northern boundary of Griffith Park. The primary noise source in the area is traffic noise from SR-134, which is directly south of the project area. Other sources of noise include vehicle traffic on Riverside Drive and Zoo Drive, and intermittent airplanes that may fly over the project area. There are no other major noise sources in the area.

#### Sensitive Receptors

The Bette Davis Picnic Area and Los Angeles River bike path, which are used for recreation purposes, are considered noise-sensitive uses. There is also a residential community beyond the Bette Davis Picnic area, which is about 660 feet northeast of the project area. There are no other noise-sensitive land uses within or adjacent to the project area.

### 2.14.3 Environmental Consequences

#### No Build Alternative

The No Build Alternative would involve no changes to existing conditions; therefore, no impact would occur.

#### Build Alternative

The proposed project is not located within an airport planning area or near a private airstrip; therefore, the project would not expose people residing or working in proximity to an airport or private airstrip to excessive noise levels.

The Build Alternative would temporarily increase noise levels in the project area and immediate vicinity. Noise levels would vary, depending on the type of equipment, the construction phase, the activities being performed, and the condition of the equipment being used. Noise levels from typical construction equipment range from approximately 71dBA to 107 dBA at a distance of 50 feet (see **Table 15**).

**Table 15**  
**Noise Level Ranges of Typical Construction Equipment**

Equipment	Noise Levels (dBA) at 50 feet <sup>1</sup>
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
Jackhammers	81-98

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Pumps	68-72
Generators	71-83
Compressors	75-87
Concrete Mixers	75-88
Concrete Pumps	81-85
Back Hoe	73-95
Pile Driving (peaks)	95-107
Tractor	77-98
Scraper/Grader	80-93
Paver	85-88

<sup>1</sup> Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of emissions as that shown in this table. *Source: EPA, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.*

Noise levels vary for each construction phase, with excavation and finishing phases typically resulting in the highest noise levels (see **Table 16**).

**Table 16  
Outdoor Construction Noise Levels**

Construction Phase	Noise Level (dBA Leq)	
	50 feet	Noise Levels at 50 feet with Mufflers (dBA)
Ground Clearing	84	82
Excavation, Grading	89	86
Foundations	78	77
Structural	85	83
Finishing	89	86

*Source: EPA, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971.*

Factors that influence noise impacts are the location of sensitive receptors, existing noise at sensitive receptors, the time of day that construction activities occur, and the site layout.

Temporary noise from construction of the Build Alternative would vary in intensity and duration. For the types of construction equipment that are commonly used on roadway construction projects, expected noise levels range from 77 to 86dBA at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about six dBA per doubling of distance (FTA, 2006).

Construction of the project would be required to comply with the City's Noise Ordinance, which requires that construction noise remain under 75 dBA at a distance of 50 feet, except where

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compliance is technically infeasible. Based on typical noise levels identified in Table 2.1404, the project would be expected to exceed 75 dBA at 50 feet from the project area at times during construction. This could result in temporary impacts on users of the Bette Davis Picnic Area or the Los Angeles River bike path.

The Build Alternative would not increase the number of traffic lanes on the bridge, and would not increase the capacity of the bridge; therefore, the project would not be expected to increase ADT or the ambient noise levels. The bridge widening would shift the lanes of the bridge slightly to the east; however, because there are no existing sensitive receptors adjacent to the bridge, this shift would not move a noise source closer to a sensitive receptor. Therefore, the project would not result in any permanent adverse noise impacts.

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

Noise impacts are expected to occur during the construction period. The City's noise ordinance and standard specifications for public works construction identify several measures designed to minimize noise impacts. In addition, the following mitigation measure should be implemented to minimize construction related impacts:

NOI-1 As practicable, noise-attenuating "jackets" or portable noise screens would be used to provide shielding for pavement breaking, jack hammering or other similar type activities when work is close to noise sensitive areas.

With implementation of the above measure, the project would not be expected to result in adverse noise impacts.

### **2.14.5 Cumulative Impacts**

The cumulative setting for noise is considered to be the open space, recreational, and residential areas surrounding the project area where noise from the Riverside Drive Bridge and other activities could combine to create a nuisance. If other activities that resulted in the increased noise levels were to occur within the Bette Davis Picnic Area during project construction, this could result in cumulative impacts; however, with implementation of standard noise control measures and compliance with applicable regulations, contributions these impacts would be minimal. In addition, no other major construction projects are expected concurrent to proposed project; therefore, project contributions would be less than cumulatively considerable.

## **BIOLOGICAL ENVIRONMENT**

### **2.15 Natural Communities**

This section discusses natural communities of concern. The focus of this section is biological communities, rather than individual plant or animal species. This section also includes information on wildlife corridors, fish passage, 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 (FESA) are discussed below in the Threatened and Endangered species section, Section 2.19. Wetlands and other waters are also discussed below in Section 2.16.

#### **2.15.1 Regulatory Setting**

##### **California Fish and Game Code Section 1602**

Section 1602 of the California Fish and Game Code governs construction activities that substantially divert or obstruct natural stream flow or substantially change the bed, channel, or bank of any river, stream, or lake under jurisdiction of CDFW. Under Section 1602, a discretionary SAA must be issued by the CDFW prior to the initiation of construction activities within waters and wetlands under CDFW's jurisdiction. Under the California Fish and Game Code, the limits of CDFW's jurisdiction within streams and other drainages extends from the top of the stream bank to the top of the opposite bank, to the outer drip line in areas containing riparian vegetation, and/or within the 100-year floodplain of a stream or river system containing fish or wildlife resources.

#### **2.15.2 Affected Environment**

A Natural Environmental Study (NES) was prepared by GPA Consulting in October 2012. Results of this analysis have been incorporated, as appropriate, in this section.

##### **Methodology**

The Biological Study Area (BSA) includes areas that could be impacted by the proposed project (see **Figure 16**). The BSA encompasses approximately 10 acres and includes the footprint of the Riverside Drive Bridge and 300 feet on either side of the bridge, and extends from the top of the south bank to 275 feet north of the adjacent bank west of the bridge. This location corresponds to portions of the San Rafael Land Grant, within the Burbank USGS 7.5-minute topographic quadrangle. The BSA is in an urban setting dominated by residential neighborhoods, parkland, and transportation facilities, and is not considered a wildlife corridor.

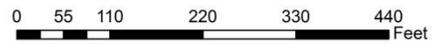
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Source: USGS National Map Seamless Server



- |                          |   |                                |
|--------------------------|---|--------------------------------|
| BSA                      | Landscaped Urban Vegetation             | Areas of Permanent Impacts     |
| Willow Riparian Wetland  | Temporarily Impacted Wetlands           | Construction Access            |
| Other Waters of the U.S. | Migratory Bird and Wildlife Impact Area | Extended Bridge Deck Footprint |





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### Los Angeles River Corridor

The Los Angeles River watershed is large, covering approximately 827 square miles within the Los Angeles Hydrologic Unit in Los Angeles County. The Los Angeles River begins in the Simi Hills and Santa Susana Mountains in the western end of the San Fernando Valley, and flows approximately 48 miles from its headwaters through the Los Angeles area and into the Pacific Ocean at the Port of Long Beach.

The river runs west to east in the San Fernando Valley, and then turns southeast through the cities of Los Angeles, Burbank and Glendale in its northern reaches, before flowing south through the Cities of Vernon, Commerce, Maywood, Bell, Bell Gardens, South Gate, Lynwood, Compton, Paramount, Carson, and Long Beach, respectively. Tributaries to the Los Angeles River include Bell Creek, Browns Canyon Wash, Aliso Creek, Big Tujunga Creek, Tujunga Wash, Verdugo Wash, Arroyo Seco, Rio Hondo, Arroyo Calabasas, and Compton Creek.

The Riverside Drive Bridge runs north-south and crosses over the Los Angeles River, and is perennial within the BSA. Riverflow is variable, ranging from a maximum of approximately 129,000 cfs to a minimum of two cfs, with an average of approximately 200 cfs.

There is a vegetated mid-channel bar in the project area with a natural bottom in the center of the river channel, with the concrete-lined portions of the channel invert on either side. The habitat quality in most of the river corridor is marginal, in particular where the river channel is completely lined with concrete; however, there are higher value habitats containing native riparian vegetation and wetlands in mid-channel areas within the BSA where there is no concrete lining.

### Riparian Habitat

The mid-channel bar appears to have been in its present location for an extended period, as it is covered with vegetation and large riparian tree species. Native riparian species observed within the BSA during an April 23, 2012, reconnaissance survey (GPA Consulting, 2012) include red willow (*Salix laevigata*), Fremont cottonwood (*Populus fremontii*), blue elderberry (*Sambucus nigra*), white alder (*Alnus Rhombifolia*), and California sycamore trees (*Platanus racemosa*). These native species were interspersed with non-native plant species, including giant reed (*Arundodonax*), castor bean (*Ricinus communis*), eucalyptus trees (*Eucalyptus* sp.), California fan palms (*Washingtonia filifera*), and cocklebur (*Xanthium* sp.). Understory species include native species such as cattails and bulrush, and non-native species such as blackberry, cocklebur, fig, and other landscaped ornamental species.

### **2.15.3 Environmental Consequences**

#### No Build Alternative

The No Build Alternative would involve no changes to existing conditions; therefore, no impact would occur.

#### Build Alternative

Under the Build Alternative, approximately 0.46 acre of willow riparian habitat would be temporarily impacted by construction activities and vegetation removal. Vegetation removal

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would be minimized to the extent feasible, and vegetation regrowth would be expected to occur naturally following construction. The bridge widening would create a slightly larger bridge footprint and result in a small decrease in the area available for vegetation growth (0.09 acre) resulting from direct (bridge footprint) and indirect (shading) effects of the widened bridge; however, this area would be minimal, and would not be expected to result in an adverse impact to the existing natural communities.

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

To avoid and minimize potential impacts to riparian areas, the following measures would be implemented:

- NAT-1 Work areas would be minimized to the extent feasible to avoid the Los Angeles River.
- NAT-2 Staging areas would be restricted to areas outside of the river channel to avoid indirect impacts on the Los Angeles River and sensitive natural resources.
- NAT-3 Areas of vegetation where individual trees and shrubs have a diameter at breast height (dbh) of four inches or fewer and do not require complete removal, would be cut at ground level with hand tools to allow for regrowth. These areas would be included on the project plans.
- NAT- 4 Legally protected trees that have a dbh of five inches or greater would be protected in place if possible, and would be included on the project plans.

The following mitigation measures could reduce potential impacts on riparian habitat:

- NAT-5 A re-vegetation plan would be developed to replace affected willow riparian vegetation at a minimum 1:1 mitigation ratio. The re-vegetation plan would include a summary of impacted vegetation, a planting plan, mitigation ratios, and success criteria based on resource agency requirements. The re-vegetation plan would be developed in coordination with and approved by resource agencies prior to implementation.
- NAT-6 All invasive plant species in the BSA, including, but not limited to giant reed, tree tobacco, castor bean, and cocklebur, would be removed and disposed of in a manner that minimizes the potential for their reestablishment. Invasive plants would be identified by a biologist and removal procedures would follow the recommendations of the California Invasive Plant Council (Cal-IPC). Application of herbicides would strictly adhere to all applicable state and federal laws.

With implementation of proposed avoidance, minimization, and mitigation measures, the Build Alternative would not result in adverse impacts on natural communities.

### **2.15.5 Cumulative Impacts**

The cumulative setting for natural communities is considered areas within the Los Angeles region where similar natural communities may exist. Habitat removal from current and future developments in the area is the biggest threat to riparian habitats. In addition, the establishment of non-native and invasive plant species such as giant reed and castor bean are considered

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threats to this habitat. The Build Alternative would require vegetation removal; however, with the implementation of avoidance, minimization, and mitigation measures, vegetation removal would be minimized and there would be no net loss of riparian vegetation. In addition, removal of invasive species would improve conditions for wetlands in the project area; therefore, project contributions would be less than cumulatively considerable.

### **2.16 Wetlands and Other Waters**

This section discusses the potential for wetlands and other waters of the U.S. within the project area, and the potential for the project to impact these resources.

#### **2.16.1 Regulatory Setting**

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 USC 1344) is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. 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 CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army of Engineers (USACE) with oversight by the United States Environmental Protection Agency (U.S. EPA).

USACE issues two types of 404 permits: Standard and General permits. There are two types of General permits, Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to authorize a variety of minor project activities with no more than minimal effects.

There are two types of Standard permits: Individual permits and Letters of Permission. Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. For Standard permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (U.S. EPA 40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines were developed by the U.S. EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

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E.O. 11990 for the Protection of Wetlands also regulates the activities of federal agencies with regard to wetlands. Essentially, this E.O. states that a federal agency, such as FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Wildlife (CDFW), the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issues water quality certifications for impacts to wetlands and waters in compliance with Section 401 of the CWA. Please see the Water Quality section for additional details.

### **2.16.2 Affected Environment**

A Wetland Delineation (WD) was prepared by GPA Consulting in September 2012. Results of this analysis have been incorporated, as appropriate, in this section.

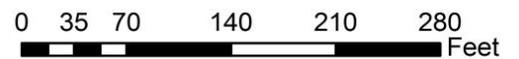
#### **Methodology**

GPA conducted the field survey for the jurisdictional wetland delineation on May 9, 2012, and analyses contained in this report are based on the results of that field survey. As described above, the technical methods and guidelines used for determining the presence of waters of the U.S. and wetland resources in the Wetland Study Area (WSA) were found in the *Corps of Engineers Wetlands Delineation Manual* and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (see **Figure 17**). The field survey included an analysis of vegetation, soils, and hydrologic data from throughout the WSA and collection of soil data from soil test pits within the project area.

To perform the survey, GPA measured and delineated the WSA with orange flag markers. The WSA was visually inspected for the three wetland indicators. General physical and biological characteristics such as topography, flowing water, drainage patterns, and presence of wetland plants were noted and photographed. After a general inspection of the study area, sampling points were chosen and assessed for wetlands features using USACE methods. This information was recorded on the USACE Wetland Determination Data Forms, which are included in the WD report.



Source: USGS National Map Seamless Server



- Wetland Study Area (2.70 acres)
- Willow Riparian Wetlands (1.47 acres)
- Open waters - Other Waters of the U.S. (1.23 acres)
- Soil Test Pit Sites





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### Existing Setting

An area must exhibit all three wetlands diagnostic characteristics, as described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* and the *Corps of Engineers Wetlands Delineation Manual*, to be considered a USACE jurisdictional wetland. All of the wetlands diagnostic characteristics, including hydrophytic vegetation, hydric soils, and wetland hydrology, were observed at the sampling points within the BSA during a field survey on May 9, 2012 (GPA Consulting, 2012).

Based on site conditions during field surveys and aerial photography analyzed using Geographic Information System (GIS) software, there are approximately 1.47 acres of USACE jurisdictional wetlands within the WSA (see **Figure 17**). The wetlands consist mostly of mid-channel willow riparian habitat, with non-native giant reed being a secondary component.

The USACE has jurisdiction over the Los Angeles River within the BSA because of perennial flows that would be considered navigable, relatively permanent waters. The limits of the waters of the U.S. within the BSA are defined by the ordinary high water mark (OHWM), which extends several feet farther up the banks than the surface flows present during the May 9, 2012 surveys, as indicated by drift deposits observed on mid-channel vegetation. Based on site conditions during the field survey on May 9, 2012, and aerial photographs analyzed using GIS software, there are approximately 1.23 acres of waters of the U.S. within the BSA.

### **2.16.3 Environmental Consequences**

#### **No Build Alternative**

The No Build Alternative would involve no changes to existing conditions; therefore, no impact would occur.

#### **Build Alternative**

The Build Alternative in the Los Angeles River would result in approximately 1.69 acres of temporary impacts on USACE jurisdictional areas (see **Table 17**). Temporary impacts on wetlands (0.46 acre) include disturbance from construction activities in wetland areas beneath and adjacent to the bridge, and from temporary vegetation removal (mostly on the downstream side of the bridge to provide access). Temporary impacts on waters of the U.S. (1.23 acres) include water diversion and dewatering of the construction area and vicinity to allow for construction and prevent work in flowing water.

**Table 17  
Total Acres of Jurisdictional Impacts within the WSA**

<b>Jurisdictional Feature Type</b>	<b>Acres within Project Study Area</b>	<b>Temporary Impacts</b>	<b>Permanent Impacts</b>
Willow Riparian Wetland	1.47 acres	0.46 acres	0.08 acres
Non-wetland Waters of the U.S.	1.23 acres	1.23 acres	0.01 acres
<b>Total</b>	<b>2.70 acres</b>	<b>1.69 acres</b>	<b>0.09 acres</b>

Source: GPA, 2012

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The Build Alternative would also result in approximately 0.09 acres of permanent impacts on jurisdictional areas (see **Table 17**). Permanent impacts on wetland areas (0.08 acre) include shading the portions of the river from the extended bridge deck, permanent removal of riparian vegetation in the locations of the new bridge piers, and placement of new bridge pier sections within wetland areas. Permanent impacts on waters of the U.S. (0.01 acre) include the construction of the new bridge piers within the river channel at the bank-channel interface.

To ensure that erosion and runoff does not result in adverse impacts on water quality in the Los Angeles River, the City would comply with the requirements of the statewide Construction General Permit and the City's NPDES permit. Staging areas would be outside the river channel to reduce direct and indirect impacts on the Los Angeles River. The project SWPPP would address erosion control, spill prevention, and pollutant collection. The water diversion plan would ensure that the water diversion system would be designed in a manner that would effectively divert the water without resulting in adverse impacts on water quality.

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

The proposed project has been designed to minimize the area impacted to the extent feasible by implementing a single-sided widening alternative, minimizing vegetation removal, and minimizing work areas in the Los Angeles River to the extent feasible.

To avoid and minimize potential impacts to USACE jurisdictional wetlands and waters of the U.S., the following measure would be implemented:

WET-1 Vegetation to be preserved would be identified and flagged to avoid accidental disturbance and removal.

In addition, measures NAT-1 through NAT-5 would be implemented to avoid and minimize impacts on jurisdictional wetlands and other waters of the U.S and state. To mitigate impacts on wetlands and waters of the U.S., the following mitigation measures would be implemented:

WET-2 The City would develop a mitigation plan detailing mitigation for the loss and disturbance of USACE jurisdictional wetlands within the BSA to ensure that there is "no net loss" of wetlands and/or other waters of the U.S. The City would compensate for permanent loss of wetlands and/or other waters of the U.S., either onsite or offsite, at a minimum 1:1 ratio (one acre restored for every acre affected). The plan would be developed in coordination with, and approved by, the USACE.

In addition, MM NAT-5 would be implemented to mitigate for impacts on wetlands. With implementation of proposed avoidance, minimization, and mitigation measures, the Build Alternative would not result in adverse impacts on wetlands or other waters of the U.S.

### **2.16.5 Cumulative Impacts**

The cumulative setting for wetlands and other waters is considered areas within the Los Angeles region where similar natural communities may exist. Urban runoff from current and future developments near the project area is one of the biggest threats to the Los Angeles River and its habitats. In addition, the establishment of non-native and invasive plant species, such as giant reed and tamarisk, contribute to the degradation of habitat within the river channel.

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The Build Alternative would require vegetation removal; however, with the implementation of avoidance, minimization, and mitigation measures, vegetation removal would be minimized and there would be no net loss of willow riparian wetland. In addition, removal of invasive species would improve conditions for wetlands in the project area; therefore, project contributions would be less than cumulatively considerable.

### **2.17 Plant Species**

This section discusses the potential for special-status plant species within the project area, and the potential for the project to impact these species.

#### **2.17.1 Regulatory Setting**

USFWS and CDFW have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected 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 FESA and/or the California Endangered Species Act (CESA). Please see the Threatened and Endangered Species Section 2.19 in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 USC, 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, Section 1900-1913, and CEQA, CA PRC, Sections 2100-21177.

#### **2.17.2 Affected Environment**

An NES was prepared by GPA Consulting in October 2012. Results of this analysis have been incorporated, as appropriate, in this section. Threatened and endangered species are discussed in Section 2.19.

#### **California Native Plant Society**

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive plant species in California. This organization has compiled an inventory comprised of information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California (GPA Consulting, 2012). The inventory serves as the CDFW candidate list for designating plants as threatened and endangered. The CNPS has developed five categories of rarity:

List 1A: Presumed extinct in California

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- List 1B: Rare, threatened, or endangered throughout their range (1B.1 = seriously threatened in California, 1B.2 = fairly threatened in California)
- List 2: Rare, threatened, or endangered in California, but more common in other states
- List 3: Plant species for which additional information is needed before rarity can be determined
- List 4: Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.

### **Methodology**

The BSA includes areas that could be impacted by the proposed project (see **Figure 16**). The BSA encompasses approximately 10 acres and includes the footprint of the Riverside Drive Bridge and 300 feet on either side of the bridge, and extends from the top of the south bank to 275 feet north of the adjacent bank west of the bridge. This location corresponds to portions of the San Rafael Land Grant, within the Burbank USGS 7.5-minute topographic quadrangle. The BSA is in an urban setting dominated by residential neighborhoods, parkland, and transportation facilities, and is not considered a wildlife corridor.

The California Natural Diversity Database (CNDDDB), which is managed and updated monthly by CDFW, was queried for a list of special-status wildlife, botanical, and fisheries species that have been observed within the project vicinity. The database search was performed for special-status species within the Burbank U.S. Geological Survey (USGS) 7.5-minute quadrangle as well as the surrounding quadrangles including, San Fernando, Sunland, Condor Park, Van Nuys, Pasadena, Los Angeles, Hollywood, and Beverly Hills.

A search of the CNPS Online Inventory was conducted for special-status plants. This query was performed for CNPS Lists 1A, List 1B, and List 2 special-status plants occurring within the same USGS quadrangles listed above. List 1A species are presumed extinct in California. List 1B species are considered rare or endangered in California, but are more common elsewhere.

### **Existing Setting**

According to the CNDDDB and the CNPS Online Inventory, there are several special status plant species with the potential to be in the BSA based on geographical range (see **Table 18**). During biological reconnaissance surveys on April 21, 2012, no special-status plant species were observed. In addition, based on the existing habitat and levels of disturbance, special-status plant species are not expected to be in the BSA.

**Table 18  
Special-Status Plant Species with the Potential to Be in the BSA**

Common and Scientific Names	CNPS Status	General Habitat Requirements	Habitat Present /Absent	Potential for Occurrence in the BSA
<i>Arctostaphylos glandulos</i> assp. <i>gabrielensis</i>	1B	Perennial evergreen shrub found in rocky chaparral habitat.	A	No suitable habitat is present in the BSA and there is no potential for

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San Gabriel manzanita		Blooming period: March Elevation: 1,952 – 4,921 feet		this species to occur.
<i>Atriplex parishii</i> Parish's brittle scale	1B	Annual herb found in playas and vernal pools in alkaline or clay soils. Blooming period: June - October Elevation: 82 -6,234 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Atriplex serenana</i> var. <i>davidsonii</i> Davidson's salt scale	1B	Annual herb found in alkaline flats and in association with coastal bluff scrub and coastal scrub. Blooming period: April - October Elevation: 32 – 656 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>California macrophylla</i> Round-leaved filaree	1B	Annual herb found in valley grassland and foothill woodland in clay soils. Blooming period: March -May Elevation: 50-3,937 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Calochortus clavatus</i> var. <i>gracilis</i> Slender mariposa-lily	1B	Perennial herb found in foothill canyons, chaparral, and coastal scrub. Blooming period: March -June Elevation: 1050 – 3,281 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Calochortus plummerae</i> Plummer's mariposa lily	1B	Perennial herb found in chaparral, foothill woodland, yellow pine forest, coastal sage scrub, and valley grassland. Blooming period: May –July Elevation: 328-5,577 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Calystegia sepium</i> ssp. <i>binghamiae</i> Santa Barbara morning-glory	1A	Perennial herb found in coastal marshes and wetland-riparian areas. Blooming period: April - May Elevation: Zero – 66 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Castilleja gleasoni</i> Mt. Gleason paintbrush	1B	Perennial herb found in yellow pine forests. Blooming period: May – June Elevation: 3,806 – 7,119 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Centromadiaparryi</i> ssp. <i>australis</i> Southern tarplant	1B	Annual herb found in seasonally moist grasslands and lowlands near the coast. Blooming period: May - November	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.

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		Elevation: Zero – 1,394 feet		
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	1B	Annual herb found in chaparral and coastal sage scrub communities. Blooming period: April - June Elevation: 902 – 4,003 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Dudleya multicaulis</i> Many-stemmed dudleya	1B	Perennial herb found in chaparral, valley grassland, and coastal sage scrub in clay soils. Blooming period: April - July Elevation: 49 – 2,592 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Harpagonella palmeri</i> Palmer's grapplinghook	4	Annual herb found in chaparral, coastal scrub and valley and foothill grassland habitats. Blooming period: March – May Elevation: 65 – 3,133 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	1A	Perennial herb found in freshwater and salt marshes. Blooming period: August - October Elevation: 32-5,495 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Horkelia cuneata</i> ssp. <i>puberula</i> Mesa horkelia	1A	Perennial herb found in cismontane woodland, chaparral, and coastal sage scrub in sandy or gravelly soils. Blooming period: February - September Elevation: 230 – 2,657 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Imperata brevifolia</i> California satintail	2	Perennial rhizomatous herb found in chaparral, coastal scrub, meadows and seeps, and riparian scrub. Blooming period: September – May Elevation: Zero- 3,986 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	1B	Annual herb found in salt marshes, playas, and vernal pools and associated with alkali sinks. Blooming period: February - June Elevation: 3 – 4,003 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.

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<i>Lepidium virginicum</i> <i>var. robinsonii</i> Robinson's pepper-grass	1B	Annual herb found in chaparral and coastal scrub habitats. Blooming period: January – July Elevation: 3 – 2,904 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Malacothamnus davidsonii</i> Davidson's bush-mallow	1B	Perennial shrub found in chaparral and riparian woodland. Blooming period: June - January Elevation: 607 – 2,805 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Namasteno carpum</i> Mud nama	2	Found in riparian habitat along lake margins and stream banks. Blooming period: January - July Elevation: 16 – 1,640 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Pseudognaphalium leucocephalum</i> White rabbit-tobacco	2	Perennial herb associated with sandy or gravelly slopes, stream bottoms, and riparian vegetation. Blooming period: July - December Elevation: Zero - 6,890 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Ribes divaricatum</i> var. <i>parishii</i> Parish's gooseberry	1A	Perennial shrub found in riparian woodland and associated with coastal sage scrub. Blooming period: February - April Elevation: 213 – 984 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Sidalcea neomexicana</i> Salt Spring Checkerbloom	2	Perennial herb found in chaparral, coastal scrub, and playas in alkaline soils. Blooming period: March - June Elevation: 49 – 5,020 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Symphotrichum defoliatum</i> San Bernardino aster	1B	Perennial herb found in woodlands, coastal scrub, marshes and swamps, grassland and meadow habitat and in disturbed areas. Blooming period: July - November Elevation: 7 – 6,693 feet	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Symphotrichum greatae</i> Greata's aster	1B	Perennial herb found in damp areas in chaparral canyons. Blooming period: June-	A	No suitable habitat is present in the BSA and there is no potential for

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		October Elevation: 984 -6,594 feet		this species to occur.
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Source: GPA, 2012

### 2.17.3 Environmental Consequences

#### No Build Alternative

The No Build Alternative would involve no changes to existing conditions; therefore, no impact would occur.

#### Build Alternative

No special-status plants are expected to be within the BSA; therefore, the Build Alternative would have no impact on special-status plants.

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

The Build Alternative would not have adverse effects; therefore, avoidance, minimization, and/or mitigation measures are not required.

### 2.17.5 Cumulative Impacts

The cumulative setting for special-status plant species is considered areas within the Los Angeles region where similar plant communities may exist. The Build Alternative would not result in impacts on special-status plant species, and would not contribute to cumulative impacts.

## 2.18 Animal Species

This section discusses the potential for protected animal species within the project area, and the potential for the project to affect these species.

### 2.18.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. USFWS, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) and CDFW are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.19 below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations pertaining to wildlife include the following:

- NEPA
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations pertaining to wildlife include the following:

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- CEQA
- Sections 1600 – 1603 of the California Fish and Game Code
- Section 4150 and 4152 of the California Fish and Game Code

### **2.18.2 Affected Environment**

An NES was prepared by GPA Consulting in October 2012. Results of this analysis have been incorporated, as appropriate, in this section. Threatened and endangered species are discussed in Section 2.19.

#### **Methodology**

The BSA includes areas that could be impacted by the proposed project (see **Figure 16**). The BSA encompasses approximately 10 acres and includes the footprint of the Riverside Drive Bridge and 300 feet on either side of the bridge, and extends from the top of the south bank to 275 feet north of the adjacent bank west of the bridge. This location corresponds to portions of the San Rafael Land Grant, within the Burbank USGS 7.5-minute topographic quadrangle. The BSA is in an urban setting dominated by residential neighborhoods, parkland, and transportation facilities, and is not considered a wildlife corridor.

The CNDDDB, which is managed and updated monthly by CDFW, was queried for a list of special-status wildlife, botanical, and fisheries species that have been observed within the project vicinity. The database search was performed for special-status species within the Burbank USGS 7.5-minute quadrangle as well as the surrounding quadrangles including, San Fernando, Sunland, Condor Park, Van Nuys, Pasadena, Los Angeles, Hollywood, and Beverly Hills.

Several biological surveys, reconnaissance surveys, protocol level species surveys, and technical surveys have been conducted within the BSA. A general biological survey and habitat assessment was conducted by a GPA senior biologist on April 23, 2012. An aquatic species and aquatic habitat survey was performed by a GPA senior biologist on May 9, 2012. A wetland delineation survey was performed by GPA biologists on May 9, 2012.

#### **Existing Wildlife Species**

Because the BSA is located in an urbanized area, most wildlife species in the BSA are expected to be well adapted to human disturbance. The Los Angeles River is inhabited by native fish species, including the arroyo chub (*Gila orcuttii*) and three-spined stickleback (*Gasterosteus aculeatus*). Three-spined stickleback have also been observed a few miles downstream (GPA, 2012). Non-native fish species observed in the BSA include the common carp (*Cyprinus carpio*), common goldfish (*Carassius auratus*), and mosquitofish (*Gambusia affinis*).

Amphibians that may be in the Los Angeles River include the pacific tree frog (*Psuedacris regilla*) and the non-native bullfrog (*Rana catesbeiana*). The western pond turtle (*Emys marmorata*) is also known to be in the Los Angeles River. A turtle was observed at the site during reconnaissance surveys, but the species was not identified. Some native terrestrial reptiles that may be in the project area include side-blotched lizards (*Uta stansburiana*) and western fence lizards (*Sceloporus occidentalis*).

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Bird species observed during the April 23, 2012 survey include mallard duck (*Anas platyrhynchos*), great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), northern rough-winged swallow (*Stelgidopteryx serripennis*), house finch (*Carpodacus mexicanus*), song sparrow (*Melospiza melodia*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), black phoebe (*Sayornis nigricans*), European starling (*Sturnus vulgaris*), Brewer's blackbird (*Euphagus cyanocephalus*), common yellowthroat (*Geothlypis trichas*), Anna's hummingbird (*Calypte anna*), and acorn woodpecker (*Melanerpes formicivorus*). Most of the bird species observed in the BSA are common in developed areas and tolerant of human activity and disturbed habitats.

Raptors have been observed within the Los Angeles River corridor and BSA, although their abundance is expected to be low in the BSA due to the urban setting and disturbance from nearby freeway traffic. There are large trees suitable for raptor nesting and abundant prey for raptors along the river corridor and in the Bette Davis Picnic Area. Raptors that have been observed in the Los Angeles River corridor in or near the BSA include the red-tailed hawk (*Buteo jamaicensis*), and North American osprey (*Pandion haliaetus*) (GPA Consulting, 2012).

Non-native mammal species that may be in the BSA include domestic dog (*Canis familiaris*), domestic cat (*Felis catus*), Virginia opossum (*Didelphis virginiana*), Norway rat (*Rattus norvegicus*), house mouse (*Mus musculus*), and eastern fox squirrel (*Sciurus niger*). Native mammal species that would be expected to be within the Los Angeles River corridor and in the BSA would be species known to be tolerant of human activity and disturbed habitats, including raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*).

According to the CNDDDB, several special-status wildlife species have the potential to be in the BSA, based on geographical range (see **Table 19**). Based on the existing habitat in the BSA, it has been determined that there is potential for the following special status wildlife species to be within the BSA.

**Table 19  
Special-Status Wildlife Species with the Potential to Be in the BSA**

Common and Scientific Names	Status		General Habitat Requirements	Habitat Present/Absent	Potential to be in the BSA
	Federal USFWS	State CDFW			
<b>Invertebrates</b>					
<i>Carolella busckana</i> Busck's gallmoth	--	--	Found in coastal scrub dunes.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Cicindela hirticollis gravida</i> Sandy beach tiger beetle	--	S1	Found along rivers, large lakes, and seashores in areas of soft sandy substrates.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Coelus globosus</i> Globose dune	--	S1	Found in coastal dunes, tunneling	A	No suitable habitat is present in the BSA and

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beetle			through sand underneath dune vegetation.		there is no potential for this species to occur.
<i>Danaus plexippus</i> Monarch butterfly	--	S3	Found roosting in eucalyptus, Monterey pines, and Monterey cypresses in California. Adult monarchs require milkweed for breeding and as a food source for larvae.	A	Eucalyptus trees are present in the BSA; however, habitat in the BSA considered unsuitable for this species.
<i>Socalchemmis gertschi</i> Gertsch's socialchemmis spider	--	--	Found in sage scrub, chaparral, oak woodland, coniferous forest, and rocky habitats in non-arid climates.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<b>Amphibians</b>					
<i>Spea hammondi</i> Western spadefoot toad	--	CSC	Normally found in grasslands with shallow temporary pools, although they may also occur in valley-foothill woodlands, orchards, and vineyards.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Tarichato rosa</i> Coast range newt	--	CSC	Found in chaparral, oak woodland, and grasslands (CalHerps). In the terrestrial phase, they are found in rock crevices, under plant debris in moist to dry habitats. In the aquatic phase, they inhabit are found ponds, reservoirs, lakes, and slow moving streams.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<b>Fish</b>					
<i>Gila orcuttii</i> Arroyo chub	--	CSC	Found in slow-moving or backwater sections of warm to	P	Although this species was not observed onsite, there is marginal potential for

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			cool (50° F to 75.2°F) streams with mud or sand substrates. Typically found at depths greater than 15 inches.		this species to occur in the BSA.
<i>Rhinichthys osculus</i> ssp. Santa Ana speckled dace	--	CSC	Found in small springs or streams with permanent flowing water and gravel or cobble substrates.	P	Although this species was not observed onsite, there is potential for this species to occur in the area.
Reptiles					
<i>Anniella pulchra pulchra</i> Silvery legless lizard	--	CSC	Found in moist, loose soils with plant cover. May be found in chaparral, desert scrub, and near streams with sycamores, cottonwoods, or oaks.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Aspidoscelis tigris stejnegeri</i> Coastal whiptail	--	--	Found in chaparral, woodland, and riparian habitats in open, dry areas.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Emys marmorata</i> Western pond turtle	--	CSC	Found in slow moving rivers, streams, lakes ponds, wetlands, reservoirs, and brackish estuarine waters. Prefers areas that provide logs, algae or vegetation for cover, and boulders for basking.	P	Marginal habitat is present in the BSA and there is potential for this species to occur.
<i>Phrynosoma blainvillii</i> Coast horned lizard	--	CSC	Found in grassland, coniferous forests, woodlands, and chaparral in areas of loose soil and low vegetation. May be found at elevations from sea level to 8,000 feet.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Thamnophis hammondi</i>	--	CSC	Found around pools, creeks, and other water resources,	A	No suitable habitat is present in the BSA and there is no potential for this

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Two-striped garter snake			often in oak woodland, chaparral, brushland, coniferous forest, and rocky areas.		species to occur.
Birds					
STRIGIFORMES (owls)					
<i>Athene cunicularia</i> Burrowing owl	--	CSC	Found in open areas with low ground cover and underground burrows that have been dug out by small mammals.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
Mammals					
<i>Antrozous pallidus</i> Pallid bat	--	CSC	Found in caves, crevices, mines, and occasionally hollow trees or buildings. Prefers rocky outcrops, cliffs, and crevices with access to open habitat for foraging.	P	There is marginal habitat in the BSA and low potential for this species to occur. Species not observed in Griffith Park during 2009 focused bat surveys (Remington and Cooper 2009).
<i>Eumops perotis californicus</i> Western mastiff bat	--	CSC	Found in crevices in cliff faces, high buildings, trees, and tunnels.	P	Species not observed in Griffith Park during 2009 focused bat surveys (Remington and Cooper 2009). There is low potential for this species to occur.
<i>Lasionycteris noctivagans</i> Silver-haired bat	--	--	When roosting found generally in trees, but occasionally found in rock crevices, under woodpiles, under foundations, in buildings, mines, and caves. Forages in open meadows, above the canopy, and in the riparian zone along waterways	A	This bat resides primarily in the forests of Northern California, and is not likely to be found in Southern California. No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Lasiurus cinereus</i> Hoary bat	--	--	When roosting found generally in the foliage of coniferous and deciduous trees; also observed in	P	Species observed in Griffith Park during 2009 focused bat surveys (Remington and Cooper 2009).

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			caves, beneath rock ledges, and in buildings.		
<i>Lasiurus xanthinus</i> Western yellow bat	--	CSC	When roosting generally found in trees. Often forage in open grassy areas and scrub, and riparian habitats.	P	Species not observed in Griffith Park 2009 focused bat surveys (Remington and Cooper 2009). There is low potential for this species to occur.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	--	CSC	Generally found in grasslands, agricultural fields, or areas of sparse coastal scrub.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Microtus californicus stephensi</i> South coast marsh vole	--	CSC	Found in chaparral, oak woodland, grasslands, saltwater and freshwater locations, coastal wetlands, and dry grassy hillsides.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	--	CSC	Found in high desert areas, chaparral, sagebrush flats, pinyon-juniper pine, and Joshua trees.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Nyctinomops macrotis</i> Big free-tailed bat	--	CSC	Found in arid, rocky habitats, desert shrub, woodlands, and evergreen forests. Generally roosts in crevices of cliffs, but has been documented in buildings, caves, and tree cavities.	A	Species not observed in Griffith Park during 2009 focused bat surveys (Remington and Cooper 2009). There is no suitable habitat present in the BSA and there is no potential for this species to occur in the BSA.
<i>Onychomys torridus Ramona</i> Southern grasshopper mouse	--	CSC	Found in low to moderate shrub cover and nests in abandoned burrows. Feeds on scorpions and other arthropods.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Perognathus longimembris brevin asus</i> Los Angeles pocket mouse		CSC	Found in lower elevation grassland, alluvial sage scrub, and coastal sage scrub.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.

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<i>Taxidea taxus</i> American badger	--	CSC	Found in open, arid habitats of grasslands, savannas, mountain meadows, and desert scrub.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
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Source: GPA, 2012

Code Designations

State Status CDFW Listing

CSC= Species of Concern as identified by CDFW

S1 = less than 1,000 individuals

S3 = 3,000 – 10,000 individuals

### **Southwestern Pond Turtle**

The southwestern pond turtle is a CDFW species of concern. This turtle species occupies ponds or slow-water habitat similar to what is present in the BSA. Western pond turtles prefer aquatic habitat with areas of refuge such as undercut banks, submerged vegetation, rocks, logs and mud banks, and have been known to avoid areas with open water that lack these elements.

Being ectotherms (an animal whose body temperature varies with the temperature of its surroundings), pond turtles require basking sites to regulate their body temperature, and may take advantage of mud banks, rocks, logs, root wads, and floating debris to sun themselves. There is suitable habitat for the western pond turtle within the BSA, and potential for this species to be present. No pond turtles were observed in the BSA during April 23, 2012, biological surveys. A turtle was observed in the BSA during a site on May 17, 2012; however, the species was not identified.

### **Arroyo Chub**

The arroyo chub is a California species of concern. Populations are limited to southern California, and have historically been found in many southern California watersheds, including Malibu Creek, Piru Creek, the Santa Clara River, San Gabriel River, and Santa Margarita River. This minnow species is adapted to the naturally fluctuating hydrologic conditions of these streams, which change annually from muddy torrents in the winter to clear, intermittent flows during the summer. This species has been reported to be relatively common in the Los Angeles River (GPA Consulting, 2012).

In July 2002, fishery biologists conducted presence/absence surveys for the arroyo chub within the BSA. No arroyo chubs or other native fish were observed during the survey. Numerous mosquitofish and gold fish were found during the surveys. Both of these species are non-native and do not have any special federal or state protection. On April 23, 2012, and May 9, 2012, presence/absence surveys were conducted for arroyo chub within the BSA. No arroyo chub were observed during the 2012 surveys.

### **Migratory Birds**

Because there are dense areas of trees and other vegetation within and adjacent to the BSA, there is a potential for migratory birds to nest within BSA.

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During nesting bird surveys performed in 2007, 91 non-sensitive bird species were observed within the survey area, which encompassed 8.42 acres surrounding the bridge. Thirty-five or more species were confirmed as breeders and an additional six species were possibly nesting. Among the breeding species were four or more pairs of the yellow warbler, which is listed by the CDFW as a bird species of special concern. The black phoebe, northern rough-winged swallow, cliff swallow, and barn swallow were observed nesting on the bridge structure. Because the surveys were conducted during migration, many of the species were likely transients.

During biological reconnaissance surveys performed on April 23, 2012, 16 non-sensitive bird species were observed within the BSA. Five bird species were observed nesting or exhibiting nesting behavior within the BSA. The rock pigeon, northern rough-winged swallow, and barn swallow were observed nesting beneath the bridge structure.

### ***Bats***

Bats may use bridges, buildings, culverts, hollow trees, caves, and other structures as maternity sites. A variety of bat species, such as the pallid bat, western mastiff bat and big free-tailed bat, have the potential to be in the BSA. Trees located within the BSA offer potential roosting and nursery habitat for bats, as well as foraging habitat. Bats generally need open water to drink, and bankside vegetation provides habitats for insect prey and valuable cover while foraging.

Surveys for roosting bats and habitat were performed during April 23, 2012, reconnaissance surveys. No bats were observed beneath the bridge, or within trees in the BSA. No suitable bat roosting habitat (e.g., cracks seams, or gaps in the bridge infrastructure) was observed on the bridge structure; however, there are several large trees with the potential to serve as roosting habitat for bat.

### ***2.18.3 Environmental Consequences***

#### **No Build Alternative**

The No Build Alternative would involve no changes to existing conditions; therefore, no impact would occur.

#### **Build Alternative**

##### ***Southwestern Pond Turtle***

Although not observed during surveys, there is the potential for western pond turtles to be present within the BSA during project construction. The proposed project could impact the western pond turtle directly when vehicles, equipment, and/or construction personnel enter the river channel. Indirect impacts could result from degradation of aquatic habitats, including removal of basking sites, water quality degradation, and changes in river hydrology. With the incorporation of avoidance and minimization measures, the proposed project is not anticipated to adversely affect the western pond turtle.

##### ***Arroyo Chub***

Although not observed during surveys, there is the potential for arroyo chub to be present within the BSA during project construction. The proposed project could affect the arroyo chub directly if vehicles, equipment, and/or construction personnel enter the river channel when flowing water

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is present. With the incorporation of avoidance and minimization measures, the proposed project is not anticipated to adversely affect the arroyo chub.

### ***Migratory Birds***

Because there are dense areas of trees and other vegetation within and adjacent to the BSA, there is a potential for migratory birds to nest within BSA. Construction activities associated with the proposed project may directly impact migratory birds if vegetation is removed or in-channel construction occurs while birds are nesting adjacent to or on the bridge structure. Construction may also result in indirect impacts if nesting birds abandon their nests because of disturbance from increased noise and other construction impacts. With the incorporation of avoidance and minimization measures, the proposed project is not anticipated to adversely affect migratory birds.

### ***Bats***

Construction activities may directly affect bats if vegetation is removed while occupied by roosting bats. Indirect impacts could occur if bats are roosting immediately adjacent to the BSA and noise and human activity were to result in roost abandonment. With the incorporation of avoidance and minimization measures, the proposed project is not anticipated to adversely affect bats.

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

To avoid and minimize potential impacts on wildlife species, the following avoidance and minimization measures would be implemented:

- WLD-1 Construction activities within the stream channel would be completed during the dry season, to the extent feasible, when aquatic species are more likely to be out of the river or easier to identify for relocation.
- WLD-2 A qualified biologist would conduct pre-construction surveys for western pond turtles within the construction area within 48 hours prior to construction, channel excavation, and riparian vegetation removal. If western pond turtles are discovered, they would be relocated upstream or downstream of the construction area to an area of suitable habitat.
- WLD-3 Vegetation removal would be performed outside of the nesting season (March 1-September 1) to the extent feasible.
- WLD-4 If vegetation clearing must occur during the nesting season, pre-construction surveys would be completed by a qualified biologist within 48 hours of clearing, grubbing or grading activities to determine the presence/absence of nesting birds within 300 feet of the construction area. Surveys would be repeated if construction activities were suspended for five days or more.
- WLD-5 If nesting birds are found in the project area, appropriate buffer areas (300 feet) would be implemented, in coordination with the appropriate resource agencies, to ensure that the birds and/or their nests are not harmed.

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- WLD-6 Between March 1 and July 31, bat surveys would be conducted by a qualified wildlife biologist and prior to the removal of any trees or work on the bridge structure. If no bat roosts are detected, then no further action would be required provided the vegetation removal and ride demolition activities are conducted prior to the next bat-breeding season. If removal is delayed, then an additional pre-demolition survey would be conducted no more than seven days prior to removal to ensure that a new colony has not been established.
- WLD-7 If a colony of bats is found roosting within the BSA, then the following measures would be implemented to reduce the potential disturbance:
- If a maternity colony of bats is found in the construction area and the project can be constructed without the disturbance of the colony, appropriate buffer zones, either physical or timed, would be identified by a qualified biologist and implemented to ensure the continued success of the colony.
  - If an active nursery roost is known to occur within the construction area and the project cannot be conducted outside of the maternity roosting season, bats would be excluded from the site after July 31 and before March 1 to prevent the occupation of the site by maternity colonies. Non-breeding bats shall be safely evicted under the direction of a bat specialist.

In addition, NAT-1 through NAT-5 would be implemented to avoid and minimize impacts on wildlife species. To mitigate potential impacts on arroyo chub, the following avoidance and minimization measures would be implemented:

- WLD-8 No work would be conducted in flowing or ponded water except as necessary to construct a water diversion. All river flows within the construction area would be diverted by placing flows in a culvert or diversion channel to ensure no work in flowing water occurs.
- WLD-9 Prior to water diversion, block netting would be placed approximately 200 feet upstream of the bridge to prevent the arroyo chub from entering the project area during the water diversion process. Prior to and during the installation of the water diversion, the wetted areas of the BSA would be surveyed by a qualified fisheries biologist and all arroyo chub within the diversion area would be captured and relocated downstream of the project area.
- WLD-10 After the water diversion is in place, the diversion area would be surveyed for several hours to ensure that no arroyo chub are stranded in drying areas of the river. Block netting would be cleaned and maintained regularly to ensure proper function during water diversion to avoid impacts to arroyo chub. After the water diversion process is complete, the upstream block nets would be removed to allow arroyo chub to pass through the water diversion to downstream habitat.
- WLD-11 If a water diversion is not necessary but the river is still flowing through the work area, block nets would be placed upstream and downstream of the work area

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following surveys for chub and other fish species, and all fish are removed from the project area. Block netting would be removed when project work is completed.

With implementation of avoidance, minimization, and mitigation measures, the Build Alternative would not result in any adverse effects on wildlife species.

### **2.18.5 Cumulative Impacts**

The cumulative setting for animal species is considered areas within the Los Angeles region where similar animal species may exist. Current and future developments within the area the Los Angeles region present a threat to native and migratory animal species, both through direct harm and through the destruction of habitat. The Build Alternative would require vegetation removal and activities within the river channel; however, with the implementation of avoidance, minimization, and mitigation measures, vegetation removal would be minimized and potential direct impacts on animal species would be avoided or substantially minimized; therefore, project contributions would be less than cumulatively considerable.

## **2.19 Threatened and Endangered Species**

This section discusses the potential for threatened or endangered species within the project area, and the potential for the project to impact these species.

### **2.19.1 Regulatory Setting**

#### **Federal Endangered Species Act**

The primary federal law protecting threatened and endangered species is FESA: 16 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 this act, federal agencies, such as FHWA, are required to consult with USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) 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 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a no effect finding. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

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 to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats. CDFW is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise

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lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

### **2.19.2 Affected Environment**

An NES was prepared by GPA Consulting in October 2012. Results of this analysis have been incorporated, as appropriate, in this section.

For purposes of this assessment, the following acronyms are used for federal status species:

- FE: Federal Endangered
- FT: Federal Threatened
- FPE: Federal Proposed Endangered
- FPT: Federal Proposed Threatened
- FC: Federal Candidate for Listing

For the purposes of this assessment, the following acronyms are used for State status species:

- SE: State Endangered
- ST: State Threatened
- SCE: State Candidate Endangered
- SCT: State Candidate Threatened
- SFP: State Fully Protected
- SP State Protected
- SR State Rare
- CSC California Species of Special Concern

### **Methodology**

The BSA includes areas that could be impacted by the proposed project (see **Figure 16**). The BSA encompasses approximately 10 acres and includes the footprint of the Riverside Drive Bridge and 300 feet on either side of the bridge, and extends from the top of the south bank to 275 feet north of the adjacent bank west of the bridge. This location corresponds to portions of the San Rafael Land Grant, within the Burbank USGS 7.5-minute topographic quadrangle. The

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BSA is in an urban setting dominated by residential neighborhoods, parkland, and transportation facilities, and is not considered a wildlife corridor.

The CNDDDB, which is managed and updated monthly by CDFW, was queried for a list of special-status wildlife, botanical, and fisheries species that have been observed within the project vicinity. The database search was performed for special-status species within the Burbank USGS 7.5-minute quadrangle as well as the surrounding quadrangles including, San Fernando, Sunland, Condor Park, Van Nuys, Pasadena, Los Angeles, Hollywood, and Beverly Hills.

Several biological surveys, reconnaissance surveys, protocol level species surveys, and technical surveys have been conducted within the BSA. A general biological survey and habitat assessment was conducted by a GPA senior biologist on April 23, 2012. An aquatic species and aquatic habitat survey was performed by a GPA senior biologist on May 9, 2012. A wetland delineation survey was performed by GPA biologists on May 9, 2012.

Previously, a presence-absence survey for arroyo chub was performed on July 12, 2002. A botanical survey, wetlands delineation, and wildlife habitat assessment were conducted by a PMC biologist on March 14, 2007. Protocol level surveys for least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) were conducted in spring 2002 and between April and June 2007. No least Bell's vireos or southwestern willow flycatchers were observed during any of the surveys.

### Existing Setting

According to the CNDDDB, several threatened and endangered species have the potential to be in the BSA, based on geographical range (see **Table 20**). Based on the existing habitat in the BSA, it has been determined that there is potential for the following species to be within the BSA.

**Table 20  
Special Status Wildlife Species with Potential To Be in the BSA**

Common and Scientific Names	Status		General Habitat Requirements	Habitat Present/Absent	Potential to be in the BSA
	Federal USFWS	State CDFW			
Invertebrates					
Amphibians					
<i>Rana muscosa</i> Sierra Madre yellow-legged frog	FE	CSC	Found in rocky, cool streams in mountainous areas from elevations of 7,513 feet to 1,214 feet.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
Fish					

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<i>Catostomus santaanae</i> Santa Ana sucker	FT	CSC	Usually found in pools and runs of small to medium-size streams (less than 23 feet wide), with shallow depth and cool (less than 71.7 °F), unpolluted water that may flood periodically and have high turbidity during high flows. Generally associated with coarse substrates of boulder, rubble, and sand, but sometimes occurs on sand/mud bottom. Typically prefers perennial streams with high water quality, pools, and riparian vegetation that provide cover and refuge from floods.	A	There is no potential for this species to occur in the BSA. Santa Ana suckers are believed to have been extirpated from the Los Angeles River.
Birds					
CUCULIFORMES (cuckoos)					
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	FC	SE	Found in riparian, woodland, and forest habitats.	A	No suitable habitat in the BSA and there is no potential for this species to occur.
PASSERIFORMES (perching birds)					
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	FE	SE	Found in riparian habitats along rivers, streams, or wetlands with vegetation present for nesting and foraging.	P	Southwestern willow flycatchers have not been observed near the Los Angeles River since 1906. There is marginal habitat for this species present but potential for this species to occur onsite is considered minimal.
<i>Poliotila californica californica</i> Coastal California gnatcatcher	FT	CSC	Found in chaparral, grassland, and riparian areas near coastal sage scrub.	A	No suitable habitat is present in the BSA and there is no potential for this species to occur.
<i>Riparia riparia</i> Bank swallow	--	ST	Found in low areas along rivers, streams, ocean coasts, or reservoirs. Nests located in vertical banks or bluffs.	A	Bank swallows were not observed onsite. The river banks are concrete lined, so there is no potential habitat for this species in the BSA.

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<i>Vireo bellii pusillus</i> Least Bell's vireo	FE	SE	Found in dense, willow dominated riparian habitat with lush understory vegetation.	P	No least Bell's vireos have been observed onsite during protocol level surveys performed in 2002 and 2007; however, there is marginal habitat present in the BSA and a low potential for this species to occur in the BSA.
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Source: GPA, 2012

### **Least Bell's Vireo**

The least Bell's vireo is a small migratory songbird listed as endangered by both the USFWS and CDFW. The least Bell's vireo prefers riparian habitats, and typically breeds in willow riparian forest supporting a dense, shrubby understory of seral stage willow and mulefat (*Baccharis salicifolia*). This bird species once was found throughout much of lowland California, but its range has since been reduced to a several watersheds and riparian systems in southern California.

The decline of the vireo population is attributed to widespread loss and degradation of riparian habitat, combined with brood parasitism by the brown-headed cowbird (*Molothrus ater*). Aggressive recovery efforts, including cowbird trapping and restoration of riparian habitat across coastal southern California, has resulted in increases in population abundance of vireo, with the species recolonizing several riparian systems in Los Angeles County and other areas of southern California.

There is marginal riparian habitat in the BSA that could support least Bell's vireo. Protocol level surveys were conducted according to USFWS standards in 2002, and between April and July of 2007. No least Bell's vireo were observed during the two protocol-level surveys.

### **Southwestern Willow Flycatcher**

The southwestern willow flycatcher (*Empidonax traillii extimus*) is listed as endangered by both the USFWS and CDFW. The flycatcher is a small, insectivorous songbird that migrates in the spring from South America, Mexico, and Central America to breed in the southwestern desert riparian habitats of California, Arizona, New Mexico, and Texas. The flycatcher prefers mature riparian habitat along flowing streams with a dense understory of young willows (*Salix* spp.) and mulefat, California primrose (*Rosas californica*), and a variety of other shrubby species.

Riparian habitat within and adjacent to the BSA has low potential to support this species. No southwestern willow flycatchers have been observed in or near this portion of Los Angeles since 1906 (GPA Consulting, 2012). USFWS protocol-level surveys were conducted in 2002 and between April and July of 2007, and no southwestern willow flycatchers were observed.

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### **2.19.3 Environmental Consequences**

#### **No Build Alternative**

The No Build Alternative would involve no changes to existing conditions; therefore, no impact would occur.

#### **Build Alternative**

Because there is no designated critical habitat for any federally listed species present in the project area, and no federally listed (threatened or endangered) species have been observed within the project area during repeated biological and protocol-level surveys for federally listed species, no Section 7 consultation has occurred between Caltrans and the USFWS.

#### ***Least Bell's Vireo***

No least Bell's vireo nests or individuals have been observed within the BSA during two rounds of protocol-level surveys, and habitat in the BSA is marginal for least Bell's vireo; therefore, least Bell's vireo are not anticipated to be present in the BSA. With the incorporation of avoidance and minimization measures, the proposed project is not anticipated to adversely affect least Bell's vireo.

#### ***Southwestern Willow Flycatcher***

Southwestern willow flycatchers have not been observed within this portion of Los Angeles since 1906. No southwestern willow flycatcher nests or individuals were observed within the BSA during two rounds of protocol-level surveys, and habitat in the BSA is marginal for southwestern willow flycatchers; therefore, southwestern flycatchers are not anticipated to be present in the BSA. With the incorporation of avoidance and minimization measures, the proposed project is not anticipated to adversely affect southwestern willow flycatcher.

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

To avoid and minimize potential impacts to least Bell's vireo and southwestern willow flycatcher, the following measures would be implemented:

- ES-1 If vegetation clearing must occur during the nesting season, pre-construction surveys would be completed by a qualified biologist within 48 hours of clearing, grubbing or grading activities to determine the presence/absence of nesting vireo within 300 feet of the construction area. Surveys would be repeated if construction activities are suspended for five days or more.
- ES-2 Additional protocol-level surveys for the least Bell's vireo and southwestern willow flycatcher would be performed in the season prior to construction.
- ES-3 Protocol-level surveys would be performed 48 hours prior to vegetation clearing and grubbing if construction is scheduled to begin between March 1 and September 1.
- ES-4 If least Bell's vireo or southwestern flycatchers are found in the project area, appropriate buffer areas (300 feet) would be implemented, in coordination with the appropriate resource agencies, to ensure that the birds and/or their nests are not harmed.

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In addition, measures NAT-1 through NAT-5 and WLD-4 would be implemented to avoid and minimize impacts on threatened and endangered species. With implementation of avoidance, minimization, and mitigation measures, the Build Alternative would not result in any adverse effects on threatened or endangered species.

### **2.19.5 Cumulative Impacts**

The cumulative setting for threatened and endangered species is considered areas within the Los Angeles region where similar species may exist. Current and future developments within the area the Los Angeles region present a threat to special-status species, both through direct harm and through the destruction of habitat. The Build Alternative would require vegetation removal and activities within the river channel; however, with the implementation of avoidance, minimization, and mitigation measures, vegetation removal would be minimized and potential direct impacts on threatened and endangered species would be avoided or substantially minimized; therefore, project contributions would be less than cumulatively considerable.

## **2.20 Invasive Species**

This section discusses the potential for invasive species within the project area, and the potential for the project to result in the spread of these species.

### **2.20.1 Regulatory Setting**

On February 3, 1999, President Clinton signed E.O. 13112 requiring federal agencies to combat the introduction or spread of invasive species in the U.S. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." FHWA guidance issued August 10, 1999 directs the use of the State's invasive species list currently maintained by the California Invasive Species Council to define the invasive species that must be considered as part of NEPA analysis for a proposed project.

### **2.20.2 Affected Environment**

An NES was prepared by GPA Consulting in October 2012. Results of this analysis have been incorporated, as appropriate, in this section.

The Los Angeles River is channelized with concrete sidewalls, and has a vegetated island in the center with flowing channels on either side. Vegetation on the center island consists of both native and non-native riparian species. Native species include black willow, sandbar willow, California sycamore, alder, cattails, and bulrush. Non-native species include eucalyptus, castor bean, giant reed, blackberry, and an occasional fan palm. Invasive plant species in the river channel include giant reed, castor bean, and eucalyptus trees.

Of the non-native fish species in the BSA, none are invasive species. Of the non-native mammal species that may be found in the BSA, the invasive species that may be found include house mouse, Norway rat, and eastern fox squirrel.

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### **2.20.3 Environmental Consequences**

#### **No Build Alternative**

The No Build Alternative would involve no changes to existing conditions, and no direct impacts on invasive species would occur; however, this alternative would not include the invasive species removal proposed as part of the project mitigation for riparian and wetland impacts.

#### **Build Alternative**

The project would not be expected to have any permanent impacts on native wildlife species and would therefore not encourage the spread of invasive wildlife species. The Build Alternative would require vegetation removal, including riparian and wetland habitats within the Los Angeles River. The existing habitat is composed of both native species and exotic species such as giant reed, tree tobacco, castor bean, and cocklebur; therefore, the project would include removal of some invasive species, which would be a beneficial impact.

Removal of native vegetation could potentially encourage the spread of invasive species, which often thrive in disturbed conditions; however, following construction, vegetation regrowth in areas disturbed by the project would be expected to occur naturally. Where landscaping is conducted, it is standard practice that plant species used for landscaping and erosion control would not include invasive species, per the *Invasive Plants of California's Wildlands* (GPA Consulting, 2012). In addition, construction equipment would be inspected and cleaned, and eradication strategies would be implemented should an invasion occur. Therefore, the project would not result in adverse impacts related to the spread of invasive species.

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

The Build Alternative would not have adverse effects; therefore, avoidance, minimization, and/or mitigation measures are not required. In addition, NAT-5 would be implemented to remove existing invasive species from the project BSA, which would result in a beneficial impact related to the spread of invasive species.

### **2.20.5 Cumulative Impacts**

The cumulative setting for invasive species is considered areas within the Los Angeles region where special-status species are threatened by habitat destruction and colonization by invasive species. While much of the Los Angeles area is developed for urban use, some areas (such as the Los Angeles River) support native habitat and species, which are threatened by the introduction of invasive exotic species. The Build Alternative would not result in adverse impacts related to invasive species, and would not contribute to cumulative impacts.

## **2.21 Climate Change**

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gases (GHG), particularly those generated from the production and use of fossil fuels.

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While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization's in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs related to human activity that include carbon dioxide (CO<sub>2</sub>), methane(CH<sub>4</sub>), nitrous oxide(N<sub>2</sub>O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF<sub>6</sub>), HFC-23 (fluoroform), HFC-134a (tetrafluoroethane), and HFC-152a (difluoroethane).

There are typically two terms used when discussing the impacts of climate change. "GHG mitigation" is a term for reducing GHG emissions in order to reduce or mitigate the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts resulting from climate change, such as adjusting transportation design standards to withstand more intense storms and higher sea levels

Transportation sources in California, including passenger cars, light duty trucks, other trucks, buses and motorcycles, make up the largest source (second to electricity generation) of GHG-emitting sources. Conversely, the main source of GHG emissions in the U.S. is electricity generation followed by transportation. The dominant GHG emitted is CO<sub>2</sub>, mostly from fossil fuel combustion.

There are four primary strategies for reducing GHG emissions from transportation sources: improving system and operation efficiencies; reducing growth of vehicle miles traveled (VMT); transitioning to lower GHG fuels; and improving vehicle technologies. To be most effective, all four of these strategies should be pursued collectively.

### **2.21.1 Regulatory Setting**

#### **State Regulation**

With the passage of several pieces of legislation including State Senate Bills (SB), Assembly Bills (AB), and E.O.s, California launched an innovative and pro-active approach to dealing with GHG emissions and climate change.

AB 1493 Pavley, Vehicular Emissions: Greenhouse Gases (AB 1493), passed in 2002, requires CARB to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009 model year. In June 2009, the U.S. EPA Administrator granted a FCAA waiver of preemption to California. This waiver allowed California to implement its own GHG emission standards for motor vehicles beginning with model year 2009. California agencies will be working with federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger cars model years 2017-2025.

The goal of E.O. S-3-05, signed on June 1, 2005 by Governor Arnold Schwarzenegger, is to reduce California's GHG emissions to 2000 levels by 2010; 1990 levels by 2020; 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of AB32.

AB 32, the Global Warming Solutions Act of 2006, sets the same overall GHG emissions reduction goals as outlined in E.O. S-3-05, while further mandating that CARB create a plan,

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which includes market mechanisms, and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.”

E.O. S-20-06: (signed on October 18, 2006 by former Governor Arnold Schwarzenegger) further directs state agencies to begin implementing AB 32, including the recommendations made by the California’s Climate Action Team.

E.O. S-01-07: (signed on January 18, 2007 by former Governor Arnold Schwarzenegger) set forth the low carbon fuel standard for California. Under this E.O, the carbon intensity of California’s transportation fuels is to be reduced by at least ten percent by the year 2020.

SB 97 required the Governor’s Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. The Amendments became effective on March 18, 2010.

Caltrans Director’s Policy 30 (DP-30) Climate Change (approved June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. This policy contributes to Caltrans’ stewardship goal to preserve and enhance California’s resources and assets.

### **Federal Regulation**

Although climate change and GHG reduction is a concern at the federal level; currently, there are no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the U.S. EPA nor FHWA has developed specific guidance or methodology to conduct project-level greenhouse gas analysis. As stated on FHWA’s climate change website (<http://www.fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will facilitate decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies set forth by FHWA to reduce climate change impacts do correlate with efforts that California has undertaken and is undertaking to deal with transportation and climate change; the strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours travelled.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the “National Clean Car Program” and E.O. 13514- *Federal Leadership in Environmental, Energy, and Economic Performance*.

E.O. 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also directs federal agencies to participate in the interagency

## Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, or Mitigation Measures

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Climate Change Adaptation Task Force, which is engaged in developing a U.S. strategy for adaptation to climate change.

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497, the Supreme Court found that GHGs are air pollutants covered by the FCAA and that the U.S. EPA has the authority to regulate GHGs. The court held that the U.S. EPA Administrator must determine whether emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the FCCA:

- **Endangerment Finding:** The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases, CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons (HFC), perfluorocarbons (PFC), and SF<sub>6</sub>, in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution that threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's *Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles*, which was published on September 15, 2009. On May 7, 2010 the final *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon (MPG) if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards are expected to reduce GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On November 16, 2011, U.S. EPA and NHTSA issued their joint proposal to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles.

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### 2.21.2 Environmental Consequences

#### **Assessment Methodology**

An individual project does not generate enough GHG emissions to influence global climate change; rather, global climate change is a cumulative impact. This means that a project may contribute to a potential GHG impact through its incremental contribution combined with the contributions of all other sources of GHG.

In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of a project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

The AB 32 Scoping Plan contains the main strategies California proposes to use to reduce GHG. As part of its supporting documentation for the Draft Scoping Plan, CARB released the GHG inventory for California (last updated October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan are implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission 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, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.

#### **No Build Alternative**

The No Build Alternative would involve no changes to existing conditions; therefore, no impact would occur.

#### **Build Alternative**

Temporary GHG emissions from this alternative would be associated with construction activities. Construction GHG emissions include emissions produced by construction equipment and worker trips to and from the project area, and emissions arising from traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. Construction activities would be short-term and would be completed in approximately 18 months. Due to the temporary nature of these activities, the contribution of construction GHG emissions to climate change would be minimal.

Long-term GHG emissions from this alternative would be associated with operation of the proposed project. Operational emissions are defined as those that occur after project construction activities have been completed, and the project becomes operational. The proposed project is not expected to increase GHG emissions during operation because this

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alternative would maintain the same number of through lanes (two in each direction) and would not increase the capacity of the bridge; rather it would be expected to improve traffic circulation in the area. The project would also enhance bicycle and pedestrian travel, thereby creating long-term GHG benefits by providing opportunities for alternative modes of travel within and near the project area.

### 2.21.3 Avoidance, Minimization, and Mitigation Measures

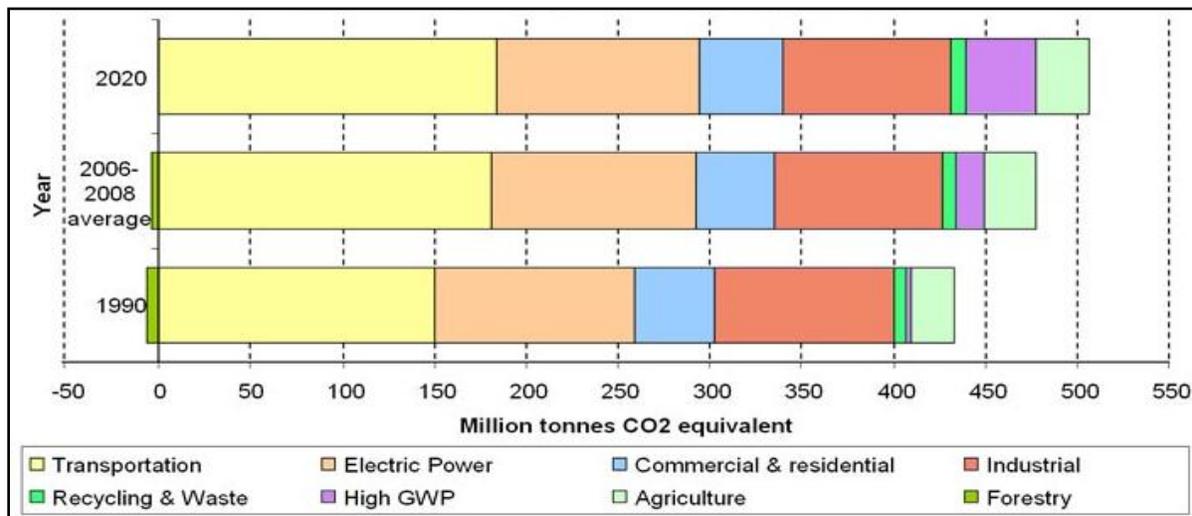
This section summarizes the Caltrans and statewide efforts that Caltrans is implementing in order to reduce GHG emissions, and includes strategies that pertain to the proposed project.

#### **AB 32 Compliance**

Caltrans continues to be actively involved on the Governor’s Climate Action Team as the CARB works to implement the E.Os S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Former Governor Arnold Schwarzenegger’s Strategic Growth Plan calls for a \$222 billion infrastructure improvement program to fortify the state’s transportation system, education, housing, and waterways, including \$100.7 billion in transportation funding during the next decade.

The Strategic Growth Plan targets a substantial decrease in traffic congestion below today’s level and a corresponding reduction in GHG emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together are expected to reduce congestion. The Strategic Growth Plan relies on a complete systems approach to attain CO<sub>2</sub> reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements (see **Table 21**).

**Table 21  
California Greenhouse Gas Emissions Forecast**



Source: Caltrans, 2012

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Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority.

Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. EPA and CARB. Finally, Caltrans is participating in funding for alternative fuel research at the University of California at Davis.

To the extent that it is applicable or feasible for the project and through coordination with the project development team, the following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

- Caltrans and the California Highway Patrol are working with regional agencies to implement Intelligent Transportation Systems (ITS) to help manage the efficiency of the existing highway system. ITS is commonly referred to as electronics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.
- In addition, Metro provides ridesharing services and park-and-ride facilities to help manage the growth in demand for highway capacity.
- According to Caltrans' Standard Specifications, the contractor must comply with all local Air Pollution Control District's rules, ordinances, and regulations in regards to air quality restrictions. The SCAQMD's In-Use Off-Road Diesel Vehicle Regulation limits vehicle idling to no more than five consecutive minutes, and requires equipment reporting and labeling.

### **Adaptation Strategies**

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications resulting from these types of impacts to the transportation infrastructure.

The Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency report on October 14, 2010 outlining recommendations to President Obama for how federal agency policies and programs can better prepare the U.S. to respond to the impacts of climate change. The *Progress Report of the Interagency Climate Change*

## Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, or Mitigation Measures

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*Adaptation Task Force* recommends that the federal Government implement actions to expand and strengthen the nation's capacity to better understand, prepare for, and respond to climate change.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects. On November 14, 2008, Governor Schwarzenegger signed E.O. S-13-08, which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This E.O set in motion several agencies and actions to address the concern of sea level rise.

The California Natural Resources Agency was directed to coordinate with local, regional, state and federal entities to develop *The California Climate Adaptation Strategy* (December, 2009), which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to E.O. S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the adaptation strategy document, including Environmental Protection; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

Resources Agency was also directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010 to advise how California should plan for future sea level rise. The report is to include:

- Relative sea level rise projections for California, Oregon, and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates;
- The range of uncertainty in selected sea level rise projections;
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems;
- A discussion of future research needs regarding sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all state agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to

## **Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, or Mitigation Measures**

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sea level rise. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data

Until the final report from the National Academy of Sciences is released, interim guidance has been released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise.

All projects that have filed a Notice of Preparation (NOP), and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects as of the date of E.O. S-13-08 may, but are not required to, consider these planning guidelines. The project does not fall under these criteria as a NOP will not be filed, and the project will not be programmed for construction within the 2008 to 2013 period.

E.O S-13-08 also directs the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level affecting safety, maintenance, and operational improvements of the system and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change impacts, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able to review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to E.O. S-13-08 and is mobilizing to be able to respond to the National Academy of Science report on Sea Level Rise Assessment which is due to be released in 2012.

### 3 COMMENTS AND COORDINATION

#### 3.1 Introduction

Early and continuing coordination with the public and appropriate public agencies is an essential part of the environmental documentation process to determine: 1) the scope of environmental documentation, 2) identification of potential impacts, 3) the appropriate level of impact analysis, 4) reasonableness of potential mitigation measures and 5) requirements for regulatory compliance. Agency consultation and public participation for this project have been accomplished through a combination of formal and informal methods, including public forums, project development meetings, interdepartmental coordination meetings, and interagency coordination meetings. This chapter summarizes the results of the project team's efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

#### 3.2 Consultation and Coordination

##### 3.2.1 Scoping

Early coordination with the public for this project included a formal public scoping meeting, and interviews and briefings with community leaders, agencies, and elected officials. The formal scoping meeting was held on June 26, 2007 at the Pacific Community Center at 501 S. Pacific Avenue in Glendale, California. This meeting was advertised in advance, and approximately 1,000 notices were mailed to local residents and businesses.

The scoping meeting format was held from 6:30 PM to 8:30 PM. The agenda was as follows:

- Sign in and Displays from 6:30 PM to 7:30 PM
- Project Presentation from 7:30 PM to 8:15 PM
- Question and Answers from 8:15 PM to 8:30 PM

Five private citizens attended the scoping meeting. Comments and concerns were received from attendees regarding construction traffic and noise, bike lane access during construction, timing issues with the Riverside Drive/Victory Boulevard Intersection.

An NOP for a Draft EIR circulated from June 14, 2007 to July 13, 2007. The NOP, which initiated the environmental review process for the proposed project, was distributed to responsible agencies, interested parties, and the public for review and comment.

##### 3.2.2 Coordination and Consultation with Public Agencies

###### Groups and Organizations

Invitations to the June 26, 2007 public scoping session were extended by letter sent to the City of Los Angeles Office of Historic Resources, the Los Angeles City Historical Society and Save Griffith Park on February 7, 2007 and to Friends of the Los Angeles River on February 14, 2007. No formal written comments were received at that time.

An invitation was also extended to the Los Angeles Conservancy and a representative (Mr. Jay Platt) of the Conservancy met with the proposed Project Development Team (PDT) for the

## Chapter 3 Comments and Coordination

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Riverside Drive Bridge on May 22, 2007. During this PDT, the project was presented in detail including layouts of the existing project and photo simulations of the proposed project.

When the project was revised in 2012, the following groups, identified as having an interest in the project, were consulted by letter on June 26, 2012:

- City of Los Angeles Office of Historic Resources
- Los Angeles City Historical Society
- Friends of Griffith Park
- Los Angeles Conservancy
- Friends of the Los Angeles River
- City of Glendale Planning Department

The letter requested comments on the Build Alternative and information regarding known historic properties within the project vicinity. Comments received were related to requesting more information on the project. The groups were provided with the appropriate project details and/or maps.

The project team also held meetings to inform organizations of the proposed strategy for rehabilitating the bridge, answer questions, address concerns, and receive constructive feedback. A meeting on June 19, 2012 with representatives from the Los Angeles Conservancy and the Los Angeles Office of Historic Resources resulted in positive feedback from both organizations.

### **Public Outreach and Meetings**

As part of the public outreach process, the PDT assembled a stakeholder mailing list for use in sending out updated project information. Project post cards were also sent out as a reminder for the scoping meeting that was held in June of 2007.

When the project was revised in 2012, a meeting was held on August 2, 2012 with the City of Los Angeles CHC and the public. The CHC responded favorably to the project as a whole and made minor design requests. They requested that the strategy for narrowing the pointed arch openings in the concrete railings be modified to express a shadow line, which the project design team has addressed in the proposed plans in response to this request. They also requested that the project team keep staff informed of the undertaking as it progresses and as designs are developed, so they could have the opportunity to comment on the design in the future, as necessary.

### **Native American Heritage Commission**

A record search of the Sacred Land File (SLF) and a list of Native American individuals/organizations with knowledge of cultural resources in the project area were requested by letter dated to the NAHC in February 2007. A written response was received from the NAHC on February 20, 2007. It stated that a record search failed to indicate the presence of

## Chapter 3 Comments and Coordination

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Native American cultural resources in the immediate project area. In addition, a list of Native American representatives associated with the project area was provided by the NAHC.

When the project was revised in 2012, a letter was sent to the NAHC requesting a new SLF records search and list Native American individuals/organizations that may have knowledge of cultural resources in the project area on June 22, 2012. The NAHC responded on June 28, 2012 and stated that Native American cultural resources were identified in the project area. The NAHC also provided a list of nine individuals/organizations for the project team to contact. Letters and emails were sent to each individual/organization on July 2, 2012.

### **Native American Tribes, Groups and Individuals**

Letters were sent on February 20, 2007, to Ron Andrade, Director of the Los Angeles City/County Native American Indian Commission; Cindi Alvitre of the Ti' At Society; John Tommy Rosas, Tribal Administrator of the Tongva Ancestral Territorial Tribal Nation; and Anthony Morales, Chairperson of the Gabrieleno/Tongva Tribal Council. These names were obtained from the Native American Heritage Commission. Mr. Morales of the Gabrieleno/Tongva Tribal Council telephoned the project archaeologist, Sherri Gust of Cogstone Resources Management Inc., on February 23, 2007. Mr. Morales stated that the Riverside Drive Bridge area is sensitive for Native American resources and requested that Native American monitoring be required. Cogstone Resources Management Inc. has attempted to contact the remaining representatives via telephone on three separate occasions since February 20, 2007; however, no response has been received to date.

When the project was revised in 2012, letters, maps, and photographs were sent on July 2, 2012 to: Ron Andrade, Director of L.A. City/County Native American Indian Commission; Sam Dunlap, Chairperson of GabrielinoTongva Nation; Cindi M. Alvitre, Chairwoman of Ti'At Society/Inter-Tribal Council of Pimu; Robert F. Dorame, Tribal Chair of GabrielinoTongva Indians of California Tribal Council; John Tommy Rosas Tribal Administrator of the Tongva Ancestral Territorial Tribal Nation; Bernie Acuna of Gabrielino-Tongva Tribe; Anthony Morales, Chairperson of Gabrielino/Tongva San Gabriel Band of Mission Indians; Linda Candelaria, Chairwoman of Gabrielino-Tongva Tribe; and Andrew Salas, Chairperson of Gabrielino Band of Mission Indians.

Mr. Rosas from the Tongva Ancestral Territorial Tribal Nation responded to consultation by Linda Moore of the City of Los Angeles on July 26, 2012. He thanked Ms. Moore for her correspondence but did not make any statements regarding the proposed project. Mr. Alvarez of the Gabrielino-Tongva Tribe responded via telephone on July 12, 2012. He stated that his organization would like to be onsite monitors for the project. Mr. Salas from the Gabrieleno Band of Mission Indians responded via email on July 10, 2012 stating that the proposed project is located within a highly culturally sensitive area and requests that a Native American monitor be on site during ground disturbance.

Follow-up calls to all parties that had not responded were conducted by Cogstone Resource Management, Inc. on September 7 and 10, 2012. No other responses have been received to date. Robert F. Dorame of the GabrielinoTongva Indians of California Tribal Council responded

## Chapter 3 Comments and Coordination

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and requested an email with project information. Cogstone emailed Mr. Dorame the information. No response has been received to date. No other parties responded to the follow-up calls.

### **State Office of Historic Preservation**

Caltrans, in coordination with the City, is consulting with SHPO regarding the methodology of the cultural resource studies that were prepared for this project. The HPSR/ASR and Finding of Effect (FOE) were originally submitted to SHPO in February of 2008. When the project was revised in 2012, an updated HPSR, an updated FOE, and a draft MOA were prepared for the project. These documents were submitted to SHPO and are currently under review. The City and Caltrans will coordinate with SHPO as needed to obtain concurrence on the findings of the HPSR and FOE and agreement on the MOA prior to making a final determination on the project.

## **4 LIST OF PREPARERS**

### **4.1 City of Los Angeles, Bridge Improvement Program**

Jing-Wen Jaw            Project Manager  
Linda Moore            Bridge Program Environmental Manager

### **4.2 California Department of Transportation**

David Wang            Local Assistance Engineer  
Carlos Montez        Environmental Branch Chief  
David Lewis            Environmental Planner

### **4.3 Tetrattech, Inc.**

Molly Mell            Project Manager  
Joe Dietz              Project Engineer

### **4.4 GPA Consulting**

Richard Galvin        Principal Planner  
Marieka Schrader    Senior Environmental Planner  
Erinn Peterson        Associate Environmental Planner  
Jeanne Levine        Associate Environmental Planner  
Jennifer Morrison    Environmental Planner/Biologist  
Mandy Jones          Environmental Planner  
Stan Glowacki        Senior Biologist  
Andrea Galvin        Principal Historian  
Laura O'Neill         Senior Architectural Historian

### **4.5 Environmental Sub-Consultants**

Sherri Gust            Cogstone Resource Management, Archaeology  
Bryan Yates            Acacia Consulting Engineers, Hazardous Materials  
Patrick Lam            ENGEO Incorporated, Geotechnical  
Patti Sexton            Tetrattech Inc., Hydrology  
Vicki Yang             V&A, Inc., Traffic Studies

## 5 DISTRIBUTION LIST

### 5.1 Elected Officials

The Honorable Tom LaBonge  
City Councilmember, 4<sup>th</sup> District  
Los Angeles City Hall  
200 N. Spring Street, Room 480  
Los Angeles, CA 90012

The Honorable Mike Gatto  
The State Assembly  
300 East. Magnolia Boulevard, Suite 504  
Burbank, CA 91502

The Honorable Adam Schiff  
Representative in Congress  
245 East Olive Avenue, #200  
Burbank, CA 91502

The Honorable Diane Feinstein  
United States Senate  
11111 Santa Monica Boulevard, Suite 915  
Los Angeles, CA 90025

The Honorable Zev Yaroslavsky  
Los Angeles County Supervisor, Third District  
Van Nuys District Office  
14340 Sylvan Street, Suite A  
Van Nuys, CA 91401

The Honorable Carol Liu  
The State Senate  
501 N. Central Avenue  
Glendale, CA 91203

The Honorable Barbara Boxer  
United States Senate  
312 N. Spring St.  
Los Angeles, CA 90012

### 5.2 Local Agencies and Organizations

Burbank City Hall  
Planning Department  
275 East Olive Avenue  
Burbank, CA 91510

City of Los Angeles  
Department of Recreation and Parks  
General Manager  
221 N. Figueroa St., Suite 1550  
Los Angeles, CA 90012

City of Los Angeles  
Police Department  
Deputy Chief Jose Perez  
251 East 6th Street  
Los Angeles, CA 90014

Griffith Park Autry National Center  
4700 Western Heritage Way  
Los Angeles, CA 90027

City Council District 4 Field Office  
Valley Field Office  
10116 Riverside Drive, Room 200  
Toluca Lake, CA 91602

City of Los Angeles Fire Department  
Chief Brian Cummings  
200 N. Main Street, 16th Floor  
Los Angeles, CA 90012

Glendale City Hall  
Planning Department  
613 E. Broadway, Room 110  
Glendale, CA 91206

Griffith Park Ranger Station  
4730 Crystal Springs Drive  
Los Angeles, CA 90027

## Chapter 5 Distribution List

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Los Angeles Board of Recreation and Parks  
Commissioners  
Office of Board of Commissioners  
221 N. Figueroa Street  
Suite 1510  
Los Angeles, CA 90012

Los Angeles Conservancy  
Preservation Advocate  
523 West 6<sup>th</sup> Street, #826  
Los Angeles, CA 90014

Los Angeles Zoo  
5333 Zoo Drive  
Los Angeles, CA 90027

Anthony Crump  
Silver Lake Neighborhood Council  
2658 Griffith Park Blvd. #308  
Los Angeles, CA 90039

Don Seligman, President  
Los Feliz Improvement Association  
P.O. Box 29395  
Los Angeles, CA 90029

County of Los Angeles  
Community Development Commission  
Executive Director  
2 Coral Circle  
Monterey Park, CA 91755

County of Los Angeles  
Public Works  
Gail Garber, Director  
900 S. Fremont Ave.  
Alhambra, CA 91803-1331

County Sanitation Districts of Los Angeles County  
Attn: Calvin Jin, Engineering Department  
1955 Workman Mill Road  
Whittier, CA 90601

Atwater Village Branch Library  
3379 Glendale Boulevard  
Los Angeles, CA 90039

Buena Vista Branch Library  
300 North Buena Vista Street  
Burbank, CA 91505

Los Angeles City Historical Society  
P.O. Box 862311  
Los Angeles, CA 90086-2311

Los Angeles Unified School District  
John Sterritt, Office of Environmental Health and  
Safety  
333 South Beaudry Avenue, 28th Floor  
Los Angeles, CA 90017

Nancy Cole  
Equestrian News  
13547 Ventura Boulevard, #623  
Sherman Oaks, CA 91423

Bruce Fleenor, Co-Chair  
Atwater Village Neighborhood Council  
3371 Glendale Blvd. Unit 105  
Los Angeles, CA 90039

Linda Demmers, President  
Greater Griffith Park Neighborhood Council  
P.O. Box 27003  
Los Angeles, CA 90027

County of Los Angeles  
Department of Regional Planning  
Sorin Alexanian, Planning Director  
320 West Temple Street  
Los Angeles, CA 90012

County of Los Angeles  
Sheriff's Department  
Sheriff Lee Baca  
4700 Ramona Blvd.  
Monterey Park, CA 91754-2169

Los Angeles County Bicycle Coalition  
Executive Director  
634 South Spring Street, Suite 820  
Los Angeles, CA 90014

Los Angeles Central Library  
630 W. 5<sup>th</sup> Street  
Los Angeles, CA 90071

Glendale Public Library  
222 E. Harvard Street  
Glendale, CA 91205

Grandview Branch Library  
1535 Fifth Street  
Glendale, CA 91201

### 5.3 State Agencies

April Nitsos  
California Department of Transportation  
Bicycle Facilities Unit, Division of Local Assistance  
P.O. Box 942874  
Sacramento, CA 94274

California Air Resources Board  
Environmental Review Section  
1001 I Street, P.O. Box 2815  
Sacramento, CA 95812

California Department of Fish and Wildlife  
Habitat Conservation Planning  
3883 Ruffin Road  
San Diego, CA 92123

California Department of Forestry and Fire  
Protection  
P.O. Box 94426  
Sacramento, CA 94244-2460

California Department of Parks and Recreation  
Attn: Environmental Review  
1416 9th Street, 9th Floor  
Sacramento, CA 95814

California Highway Patrol  
Commissioner, J. A. Farrow  
601 North 7th Street, P.O. Box 942898  
Sacramento, CA 95811

California Integrated Waste Management  
Executive Director  
P.O. Box 4025  
Sacramento, CA 95812-4025

California Native American Heritage Commission  
Executive Secretary Larry Myers  
915 Capitol Mall, Room 364  
Sacramento, CA 95814

California Native Plant Society  
Executive Director  
2707 K Street, Suite 1  
Sacramento, CA 95816-5133

California State Historic Preservation Officer  
Attn: Carol Roland-Nawi, Ph.D  
P.O. Box 942896  
Sacramento, CA 94296

Dale Benson  
Caltrans Bike Coordinator  
100 S. Main Street  
Los Angeles, CA 90012

Dwight Dutschke  
Department of Parks and Recreation  
Office of Historic Preservation,  
Project Review Section  
1725 23rd Street, Suite 100  
Sacramento, CA 95816

Los Angeles Regional Water Quality Control  
Board  
Environmental Review Unit  
320 W. 4th Street, Suite 200  
Los Angeles, CA 90013

Natural Resources Conservation Service  
Area 4  
4500 Glenwood Drive, Building D  
Riverside, CA 92501-3042

Southern California Association of Governments  
Environmental Document Review Section  
818 West Seventh Street, 12th Floor  
Los Angeles, CA 90017

South Coast Air Quality Management District  
Program Supervisor, CEQA Section  
21865 Copley Drive  
Diamond Bar, CA 91756

State Clearinghouse  
Office of Planning and Research  
Environmental Review Section  
P.O. Box 3044  
Sacramento, CA 95812-3044

State Resources Agency  
Environmental Review Section  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

### 5.4 Federal Agencies

U.S. Army Corps of Engineers  
Los Angeles District  
Attention: CESPL-CO-R  
915 Wilshire Blvd, Suite 1101  
Los Angeles, CA 90017

Carlsbad Fish and Wildlife Office  
6010 Hidden Valley Road, Suite 101  
Carlsbad, California 92011



APPENDIX A  
CEQA CHECKLIST



**CEQA Checklist**

Supporting documentation of all California Environmental Quality Act (CEQA) checklist determinations is provided in Chapter 2 of this Initial Study/Environmental Assessment (IS/EA). Discussion of all impacts and applicable avoidance, minimization, and/or compensation measures are located under the appropriate section headings in Chapter 2.

**PROJECT DESCRIPTION AND BACKGROUND**

Project Title:	Riverside Drive Bridge Widening and Retrofit Project
Lead agency name and address:	City of Los Angeles, Bureau of Engineering 1149 S. Broadway, Suite 750 Los Angeles, CA 90015-2213
Contact person and phone number:	Linda Moore, Bridge Program Environmental Manager (213/485-5751)
Project Location:	In the City and County of Los Angeles, near the intersection of Riverside Drive and Zoo Drive
Project sponsor's name and address:	City of Los Angeles, Bureau of Engineering 1149 S. Broadway, Suite 750 Los Angeles, CA 90015-2213
General plan description:	Public Facilities (PF) and Open Space (OS)
Zoning:	PF and OS
Description of project:	The build alternative consists of five project elements: seismic retrofit, bridge improvements, utility extensions, bike path improvements, and intersection improvements at the State Route 134 (SR-134) on-ramp.
Surrounding land uses and setting; briefly describe the project's surroundings:	The Riverside Drive Bridge crosses the Los Angeles River in the Hollywood Community Planning Area of Los Angeles. The bridge is situated in a fully urbanized setting that is dominated by recreational, residential, floodway (Los Angeles River), and transportation facilities. Immediately south of the bridge is SR-134 and immediately north is the Bette Davis Picnic Area (an extension of Griffith Park) and residences. The Los Angeles River bike path terminates in the southeast quadrant of the bridge.
Other public agencies whose approval is required (e.g. permits, financial approval, or participation agreements):	<ul style="list-style-type: none"> <li>• City of Los Angeles (City)</li> <li>• California Department of Transportation (Caltrans)</li> <li>• Los Angeles Regional Water Quality Control Board (LARWQCB)</li> <li>• U.S. Army Corps of Engineers (USACE)</li> <li>• California Department of Fish and Wildlife</li> <li>• U.S. Fish and Wildlife Service</li> <li>• State Historic Preservation Officer</li> </ul>

## Appendix A - CEQA Checklist

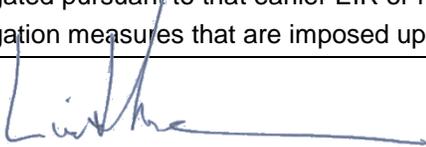
### ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, including at least one impact that is a "Potentially Significant Impact." Please see the checklist beginning on Page 3 for additional information.

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

### DETERMINATION:

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" 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 type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.
<input type="checkbox"/>	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<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
<b>Signature:</b> 	
<b>Date:</b> 5/23/12	
<b>Printed Name:</b> Linda Moore	
<b>For:</b> City of Los Angeles	

## Appendix A - CEQA Checklist

### CEQA Environmental Checklist

**District 7 – LA – 0 – City of Los Angeles**

**N/A**

**BHLS-5006 (205)**

Dist.-Co.-Rte.

P.M/P.M.

E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A "No Impact" answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not National Environmental Policy Act (NEPA), impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>I. AESTHETICS:</b> Would the project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>II. AGRICULTURE AND FOREST RESOURCES:</b> 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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<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"/>

## Appendix A - CEQA Checklist

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

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

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

**III. AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

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

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

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

d) Expose sensitive receptors to substantial pollutant concentrations?

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

**IV. BIOLOGICAL RESOURCES:** Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

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 Wildlife or US Fish and Wildlife Service?

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?

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

## Appendix A - CEQA Checklist

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

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

**V. CULTURAL RESOURCES:** Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

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

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

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

**VI. GEOLOGY AND SOILS:** Would the project:

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

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

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

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

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

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?

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?

## Appendix A - CEQA Checklist

**VII. GREENHOUSE GAS EMISSIONS:** Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

While the City has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is the City's determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. The City does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

**VIII. HAZARDS AND HAZARDOUS MATERIALS:** Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 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?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- 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?
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- 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?

## Appendix A - CEQA Checklist

**IX. HYDROLOGY AND WATER QUALITY:** Would the project:

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Violate any water quality standards or waste discharge requirements?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 type="checkbox"/>            | <input checked="" 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 which would result in flooding on- or off-site?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Otherwise substantially degrade water quality?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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 which would impede or redirect flood flows?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**X. LAND USE AND PLANNING:** Would the project:

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Physically divide an established community?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**XI. MINERAL RESOURCES:** Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

## Appendix A - CEQA Checklist

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?

**XII. NOISE:** Would the project result in:

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

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

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

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

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

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?

**XIII. POPULATION AND HOUSING:** Would the project:

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

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

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

**XIV. PUBLIC SERVICES:**

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

Fire protection?

Police protection?

Schools?

Parks?

## Appendix A - CEQA Checklist

Other public facilities?

**XV. RECREATION:**

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

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

**XVI. TRANSPORTATION/TRAFFIC:** Would the project:

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

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

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?

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

e) Result in inadequate emergency access?

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

**XVII. UTILITIES AND SERVICE SYSTEMS:** Would the project:

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

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?

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?

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

## Appendix A - CEQA Checklist

- |   |                          |                          |                                     |                                     |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| g) Comply with federal, state, and local statutes and regulations related to solid waste?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE**

- |  |                          |                                     |                                     |                          |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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 which will cause substantial adverse effects on human beings, either directly or indirectly?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

APPENDIX B  
PROGRAMMATIC SECTION 4(f) EVALUATION



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**PROGRAMMATIC SECTION 4(F) EVALUATION**  
**FOR THE**  
**RIVERSIDE DRIVE BRIDGE WIDENING PROJECT**

*BHLS-5006(205)*

**Bridge No. 53C-1298**

**April 2013**

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**Prepared for:**

**City of Los Angeles Bureau of Engineering**

**and**

**California Department of Transportation  
District 7**

**Submitted by:**

**GPA Consulting  
231 California Street  
El Segundo, CA 90245**

**April 2013**



Bridge No. 53C-1298  
EA: 932103  
BHLS-5006(205)

The City of Los Angeles, in cooperation with the California Department of Transportation, proposes to rehabilitate and widen the Riverside Drive Bridge (Bridge #53C-1298) near Zoo Drive in Los Angeles, California.

**RIVERSIDE DRIVE BRIDGE WIDENING PROJECT**  
**PROGRAMMATIC SECTION 4(F) EVALUATION**

Submitted pursuant to:

49 U.S.C. 303

THE STATE OF CALIFORNIA

Department of Transportation as assigned

\_\_\_\_\_  
Date of Approval

\_\_\_\_\_  
Carlos Montez, Branch Chief

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 Caltrans under its assumption of responsibility pursuant to 23 USC 327.

April 2013



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## 1.0 INTRODUCTION

The City of Los Angeles (City), in cooperation with the California Department of Transportation (Caltrans), proposes to widen and rehabilitate the Riverside Drive Bridge (Bridge #53C-1298) near Zoo Drive in Los Angeles, California. The project would widen and rehabilitate the existing four-lane bridge to correct existing geometrical design deficiencies, address seismic vulnerabilities, and improve pedestrian and bicycle travel. Analysis in this document is based on information from the following technical reports prepared for the proposed project:

- Visual Impact Assessment (GPA, 2012);
- Historic Property Survey Report (GPA, 2012);
- Finding of Adverse Effect (GPA, 2012); and
- Memorandum of Agreement (GPA, 2012).

### 1.1 Section 4(f) Requirements

Section 4(f) applies to a project whenever a federal (U. S. Department of Transportation (U.S. DOT)) action involves the use of a publicly owned park, recreation area, wildlife or waterfowl refuge, or land from a historic site. Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

As detailed in this report, proposed bridge improvements meet the applicability criteria for the *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges* (FHWA, 1983).

## 2.0 DESCRIPTION OF PROPOSED PROJECT AND ALTERNATIVES

### 2.1 Project Background

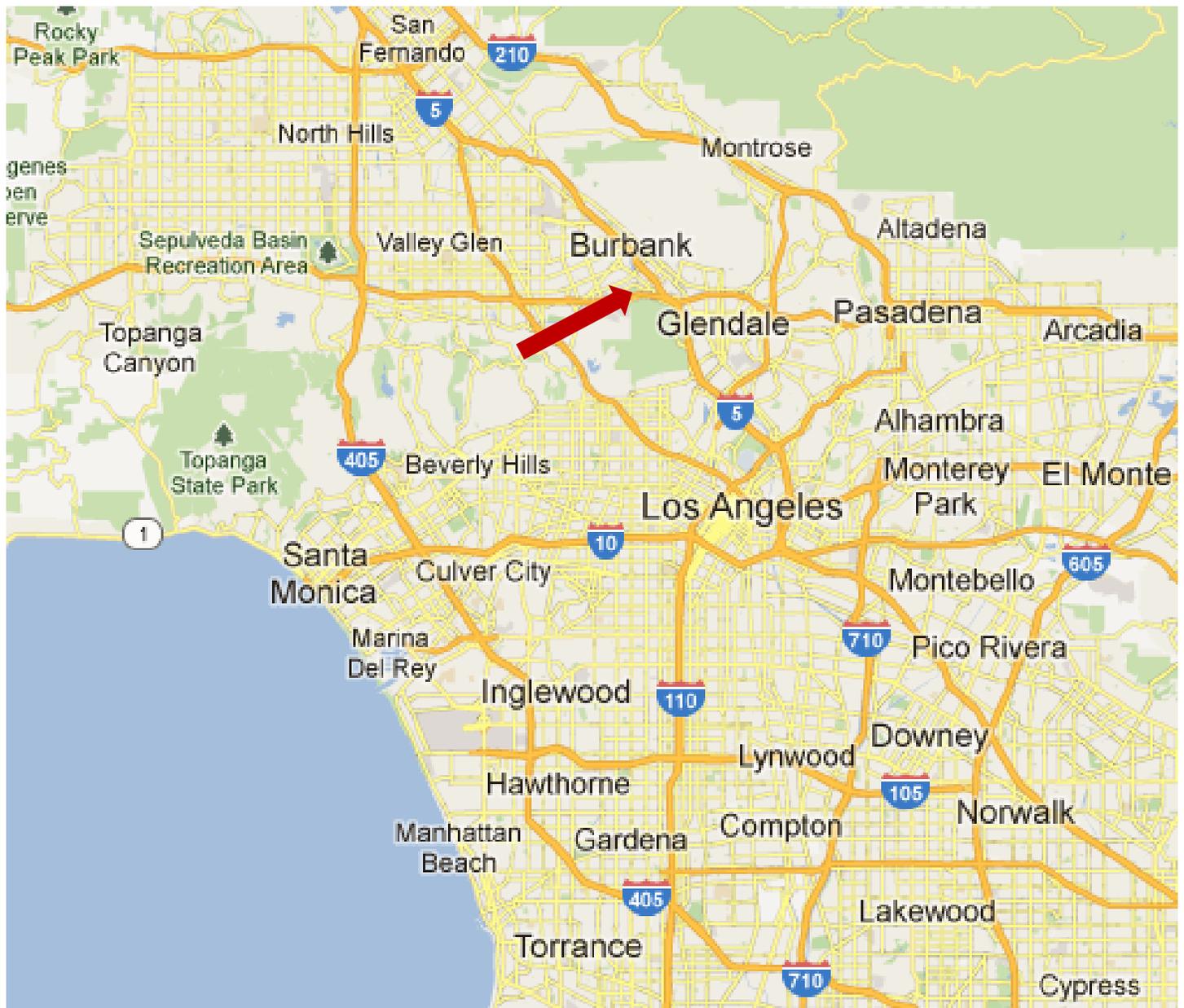
The City of Los Angeles (City) and the State of California Department of Transportation (Caltrans) propose to rehabilitate and widen the Riverside Drive Bridge (Bridge #53C-1298) over the Los Angeles River in Los Angeles, California (see **Figures 1** and **2**). Caltrans is the lead agency under the National Environmental Policy Act (NEPA) and the City is the lead agency under the California Environmental Quality Act (CEQA).

The bridge, built in 1938, is a five-span cast-in-place concrete T-beam structure that is 382 feet long, 56 feet wide, and accommodates four lanes of traffic and five-foot sidewalks. There are no shoulders or bike lanes on the bridge. The bridge was determined to be eligible for the National Register of Historic Places (NRHP) under the 2005 Caltrans Historic Bridge Inventory and was designated in 2008 as Historic-Cultural Monument (HCM) No. 910 under the City's Cultural Heritage Ordinance.

The bridge traverses south to north and crosses over the Los Angeles River in the Hollywood Community Planning Area of the city. The proposed project is in an urban setting dominated by residential neighborhoods, parkland, equestrian trails, and transportation facilities. To the south of the bridge, Riverside Drive terminates at a T-intersection with Zoo Drive. State Route (SR) 134 and Griffith Park lie to the south of the project area. The Bette Davis Picnic Area and residential neighborhoods lie to the north. The western portion of Bette Davis Picnic Area is designated as Easter Fields, a horse exercise field, which connects to the adjacent equestrian trails.

The project would include widening and rehabilitating the existing four-lane bridge to correct existing geometrical design deficiencies, address seismic vulnerabilities, and improve pedestrian and bicycle travel (see **Figure 3**). The proposed project includes a single-sided widening alternative that would reduce impacts on the historical features of the bridge.

The proposed project is identified in the Southern California Association of Governments' 2011 Federal Transportation Improvement Program under a group of projects funded through the Highway Bridge Program (HBP). The HBP provides funding to enable States to improve the condition of their highway bridges through replacement, rehabilitation, and systematic preventative maintenance.



No Scale

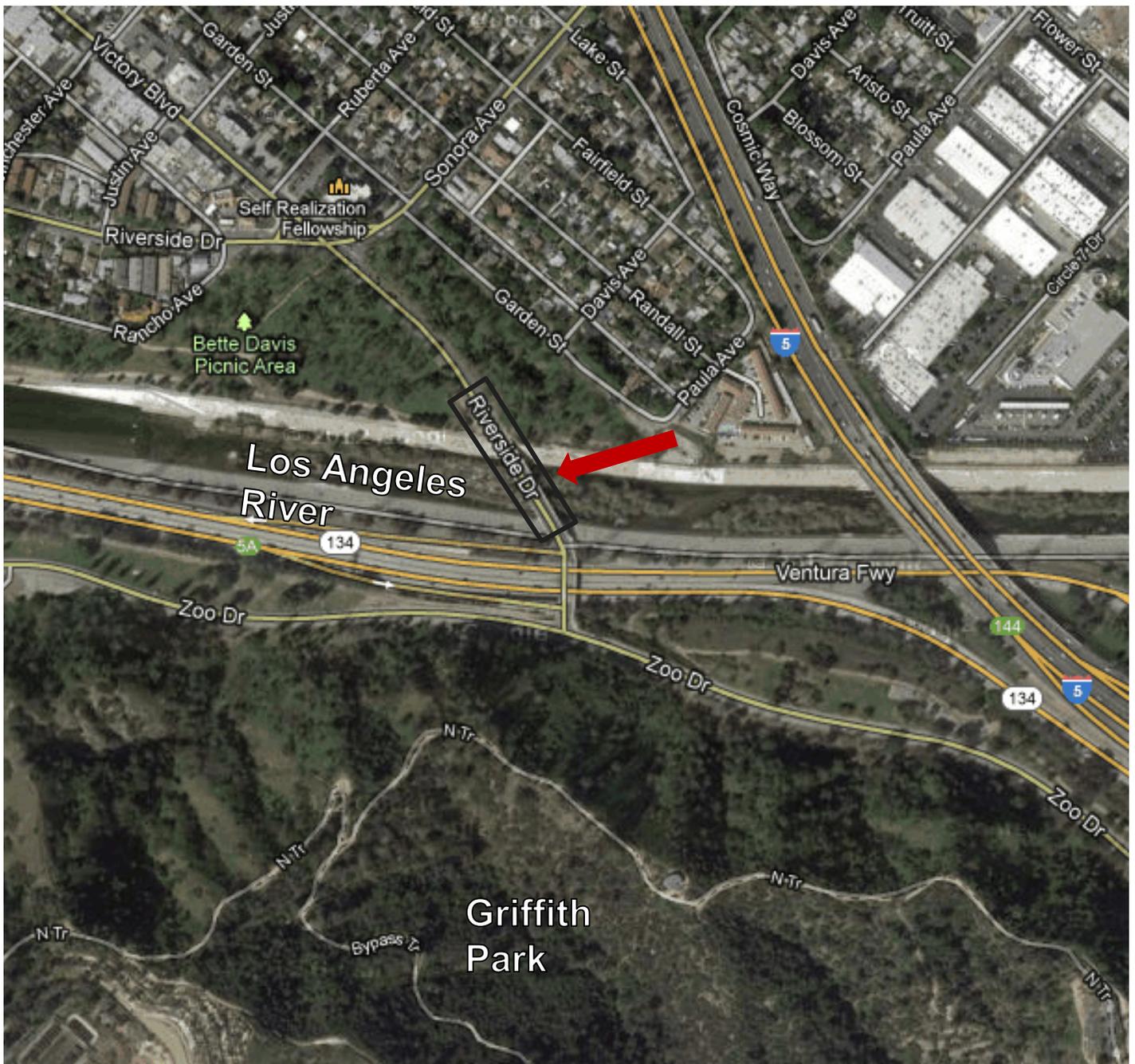
Source: Google Maps, 2012



Project Location







No Scale

Source: Google Maps, 2012



Project Location



Riverside Drive Bridge







No Scale

### Legend

= Project Area

= Riverside Drive Bridge



## **2.2 Purpose and Need**

The purpose of the project is to meet the following objectives:

- Improve geometric design deficiencies from inadequate structure width;
- Improve safety of bridge to meet current design standards; and
- Help achieve local planned development of the Los Angeles River Bike Path.

The project is proposed to improve safety and operation of the Riverside Drive Bridge. The following subsections discuss the existing conditions of the Riverside Drive Bridge that constitute the need for the proposed project.

### **2.2.1 Design and Geometrical Deficiencies**

An April 2011 Caltrans bridge inspection report, prepared by the Structure Maintenance and Investigations Division, scored the bridge's Sufficiency Rating at 75.2 and confirmed that the structure is Functionally Obsolete due to inadequate traffic lane widths and the absence of shoulders.

The bridge is also on the Highway Bridge Program Eligible Bridge List (EBL) due to inadequate structure width. The proposed project would improve pedestrian and bicycle travel, and improve existing geometric design deficiencies that contribute to the bridge's placement on the EBL.

Additionally, the existing bridge railings do not meet current design standards. Based on structural calculations performed by a previous project design team, the "crashworthiness" of the existing railings is estimated to be approximately one tenth of the current standards. The new bridge railings would meet current design standards.

### **2.2.2 Seismic Vulnerabilities**

The structure has also been determined to be vulnerable to a seismic-induced failure in the event of the newly defined Maximum Credible Event earthquake activity. The Riverside Drive Bridge was seismically retrofitted in 1992; however, since that time, the engineering estimates for the Maximum Credible Event have increased substantially and the previous retrofit has been determined to be inadequate. Therefore, the bridge is subject to seismic vulnerabilities and additional retrofitting is required.

### **2.2.3 Bicycle Traffic**

The Los Angeles River bike path currently extends along the riverbank from the Riverside Drive Bridge, generally in a southeast direction, to Barclay Street in Elysian Valley. The Class I bikeway currently terminates at Riverside Drive at the southeast corner of the Riverside Drive Bridge. Bicyclists continuing from this point must leave the bike path and share the constrained roadway with vehicular traffic. There are currently no bike lanes or shoulders on the bridge, which presents nonstandard conditions for bicyclists travelling through the project area. The

proposed project would add shoulders to the bridge for the bicyclists and would provide an undercrossing that links the eastern and western segments of the Los Angeles River bike path.

### **2.3 Project Location**

The Riverside Drive Bridge crosses the Los Angeles River in the Hollywood Community Planning Area of Los Angeles (see **Figures 1** and **2**). The bridge is situated in a fully urbanized setting that is dominated by recreational, residential, floodway (Los Angeles River), and transportation facilities. Immediately south of the bridge is SR-134 and immediately north is the Bette Davis Picnic Area (an extension of Griffith Park) and residences. The Los Angeles River bike path terminates in the southeast quadrant of the bridge.

### **2.4 Proposed Project**

#### **2.4.1 No Build Alternative**

The No Build Alternative would involve no changes to existing conditions; the current bridge, roadway, bike path facilities would remain the same, and no seismic improvements would be completed.

#### **2.4.2 Build Alternative**

The build alternative consists of five project elements: seismic retrofit, bridge improvements, utility alterations, bike path improvements, and intersection improvements at the SR-134 on-ramp (see **Figure 3**).

##### Seismic Retrofit

Seismic retrofit improvements would be limited to abutment seat extensions and concrete fill along the abutment walls below grade.

##### Bridge Improvements

The existing bridge would be widened approximately 19 feet on the downstream side. The widened structure would be approximately 75 feet wide and would accommodate four 11-foot through lanes, a 2-foot median, two 5-foot shoulders, two 8-foot sidewalks, and two 1-foot barrier railings. The new portion of the deck would be supported by cast-in-place concrete box girders, rather than matching the existing concrete T-beams. The box girders would be supported by new, separate, concrete piers, measuring approximately 21 feet in length and 3 feet in width. The new piers would be separated from the existing pier walls by approximately four feet.

The railings on the upstream side would be reconstructed to match the existing railings, while satisfying current crash barrier requirements. The only change in design would occur at the pointed arch openings, the interior dimensions of which would be narrowed to meet current code requirements. The opening would be narrowed in such a way that a distinct shadow line is created, distinguishing the original width from the new width. The decorative elements on the

upstream side, including the ornamented pylons and the horizontal bands of indentations beneath the railings would remain intact and be repaired as necessary.

The concrete light standards atop the pylons would be replaced with replicas. The lanterns would also be replaced with replicas of the original 1938 lanterns, which would also be modified on the interior to house LED lights.

The new railing would match the reconstructed railing on the upstream side. The horizontal banding would be recreated beneath the new railing. The pylons would be differentiated from the original features on the upstream side through simplified ornamentation. The new ornamentation would reference the historic ornamentation and be compatible with it, without mimicking it exactly.

### Utility Alteration

To alter an existing storm drain, excavation would be required south of the bridge, along the abutment, at a depth of 15 feet. To connect bridge electrical lines to the series circuit that currently ends at Victory Boulevard, existing utility lines would be extended north along Riverside Drive until just south of the intersection of Riverside Drive, Victory Boulevard, and Sonora Avenue. These improvements would likely be accomplished through micro tunneling or jacking of pipe at a maximum depth of 36 inches.

### Bike Path Improvements

The project would provide a bike path, 14 feet wide, which would cross under the bridge. This undercrossing would connect the existing Los Angeles River bike path east of the bridge to the area west of the bridge, where there are plans to extend the bike path. The bike path would be paved and striped according to current standards. The project would also provide a new connection from the future bike path to Riverside Drive. The connection would require the removal of the existing concrete railing atop the bridge's southwest abutment.

### Intersection Improvements

To improve visibility for bicyclists, motorists, and pedestrians, the intersection of the SR-134 on-ramp and Riverside Drive would be modified by softening the curve at the bridge's southwest abutment. The southwest abutment's concrete railing would be removed to accommodate the new curve, improve visibility, and allow for a new entry point to the bike path, as discussed above. The abutment itself would remain in place.

### Construction Activities

The project area includes areas to the west (upstream) where water diversion would take place. A construction staging area is proposed northwest of the bridge within the adjacent Bette Davis Picnic Area. The staging area would be in a 25,000-square-foot (approximately 0.57-acre) portion of the 14.7-acre park west of Riverside Drive near the bridge. No grading or digging

## **2.0 DESCRIPTION OF PROPOSED PROJECT**

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would be needed to accommodate the contractor's activities within the staging area and no trees would be removed. Following construction, the area would be restored to existing conditions.

### 3.0 DESCRIPTION OF SECTION 4(F) PROPERTIES

As noted above, Section 4(f) applies to projects that include any publicly owned park and recreation areas; public wildlife and waterfowl refuges of national, state, or local significance; or historic sites of national, state, or local significance, whether publicly or privately owned.

#### 3.1 Description of Affected Property

Riverside Drive Bridge traverses south to north and crosses over the Los Angeles River (see **Figure 4**). To the south of the bridge, Riverside Drive terminates at a T-intersection with Zoo Drive. State Route (SR) 134 and Griffith Park lie to the south of the project area. The Bette Davis Picnic Area and residential neighborhoods lie to the north. The western portion of Bette Davis Picnic Area is designated as Easter Fields, a horse exercise field, which connects to the adjacent equestrian trails.

The existing structure has four 11-foot traffic lanes, two travelling north, and two travelling south. Currently, two 4.5-foot sidewalks on either side of the bridge provide pedestrian access. There is no designated bike lane or shoulder for bicyclists; bicyclists share the roadway with vehicles.

##### 3.1.1 Access to the Bridge

The bridge provides access across the Los Angeles River for pedestrians, bicyclists, and motorists. The nearest connecting streets are Zoo Drive and SR-134 to the south, and Victory Boulevard and Sonora Avenue to the north. The bridge can also be accessed by the Los Angeles River bike path, which traverses perpendicular to the bridge.

##### 3.1.2 Unusual Characteristics of the Bridge

The Riverside Drive Bridge was formally determined eligible for the NRHP by the SHPO on December 7, 2005. This historic bridge was determined eligible for its association with urban planning policies in Los Angeles during the first half of the twentieth century; for providing a significant example of a master designer, the City of Los Angeles Bureau of Engineering; and for the bridge type, period, and method of construction.

The Riverside Drive Bridge was planned in 1936 and constructed in early 1938. It was designed in the Art Deco style, evidenced by incised striping at the tops of the pier ends, horizontal bands of indentations below the railings, and railings with pointed openings alternating with projecting chevron shapes. The bridge is one of approximately 45 monumental concrete bridges designed by the City's Bureau of Engineering between 1900 and 1950. In 1992, the bridge was seismically retrofitted.

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No Scale





## 4.0 IMPACTS ON SECTION 4(F) PROPERTY

This section discusses how each proposed alternative would affect the bridge and whether any permanent or temporary effects would result from the project that would substantially impair the features or attributes that qualify the resource for protection under Section 4(f).

### 4.1 No Build Alternative

Under the No Build Alternative, the proposed project would not be implemented. While there is no guarantee that the bridge would not be impacted by future projects, it is assumed for the purposes of this evaluation that the bridge would be maintained in its current condition. Accessibility for motorists, pedestrians, and cyclists traveling across the river would be maintained at existing levels.

The bridge would not be used for the project, and therefore there would be no change in its eligibility for the NRHP and associated protection under Section 4(f) (see **Table 1**). The visual quality of the historical bridge would be maintained; however, the bridge's geometric, seismic, and design limitations would not be resolved.

**Table 1 Potential Use of Riverside Drive Bridge**

Alternatives	Riverside Drive Bridge			
	Use			Remarks
	D	T	C	
No Build Alternative				No use
Build Alternative	X			Loss of historic material, adverse effects on the historic integrity of the bridge, results in direct use

*D = Direct Use, T = Temporary Use, C = Constructive Use*

Implementation of this alternative would not result in noise, vegetation, wildlife, air quality or water quality changes that would affect the features and attributes of the bridge that qualify the bridge for protection under Section 4(f). More information on overall impacts within these categories can be found in Chapter 2 of the IS/EA.

### 4.2 Build Alternative

The Build Alternative would result in a direct “use” of the Riverside Drive Bridge, per Section 4(f) definitions, and portions of the bridge would be permanently removed and/or altered. Construction-related traffic impacts would also affect access to and use of the bridge, but these effects would be temporary in nature, and minimization measures would be implemented to reduce the effects on drivers, pedestrians, and cyclists. A Transportation Management Plan would be required as part of the project that would maintain access to the surrounding areas while

minimizing delays and/or detours around the bridge. Following construction, existing circulation patterns across the bridge would be improved.

The Build Alternative would result in adverse effects on the historic integrity of the bridge, which is a 4(f) resource. The seismic retrofit, utility extensions, and storm drain alteration would not result in adverse effects on the bridge. The seismic retrofit would take place below grade, the utility extensions would not occur on the bridge itself, and the storm drain alteration would not damage the bridge abutment. These changes would not change the bridge's appearance; however, the bridge improvements, bike trail improvements, and intersection improvements would result in adverse effects on its historic integrity.

The bridge widening would require the removal of two bridge features (the horizontal bands of indentation and the pylons on the downstream side); this removal would not comply with the Secretary of the Interior's Standards for Rehabilitation (Rehabilitation Standards). Since the widening would physically destroy part of the historic property, this component of the Build Alternative would have an adverse effect on the historic integrity of the bridge.

Because the bridge has been determined eligible for the NHRP, and construction involves the use of federal funds, the project is required to comply with Section 106 of the National Historic Preservation Act (36 CFR § 800). To ensure compliance with this regulation, a Finding of Adverse Effect (FOE) and a Historic Property Survey Report (HPSR) have been prepared for the project. Additionally, a draft MOA has been prepared in accordance with the Section 106 Programmatic Agreement to resolve adverse effects. The City and Caltrans will coordinate with SHPO as needed to obtain concurrence on the findings of the HPSR and FOE and agreement on the MOA prior to making a final determination on the project.

The bike path improvements would require removal of the concrete railing atop the bridge's southwest abutment to allow future connection to the planned western segment of the bike path. Since this removal would physically destroy part of the bridge, this component of the Build Alternative would have an adverse effect on the historic integrity of the bridge. The intersection improvements would require the removal of the southwest abutment's concrete railing in order to reduce the curve at the Riverside Drive/SR-134 on-ramp intersection. This would result in a physical destruction of part of the bridge, which would have an adverse effect on the historic integrity of the bridge (see **Table 1**).

The Build Alternative would not result in noise, vegetation, wildlife, air quality or water quality changes that would affect the integrity of this section 4(f) resource. More information on overall impacts within these categories can be found in Chapter 2 of the IS/EA.

## 5.0 APPLICABILITY OF PROGRAMMATIC SECTION 4(F)

As documented below, the Build Alternative meets the applicability criteria and the required findings for the *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges* (1983). This programmatic Section 4(f) evaluation can be applied to projects that include improvements to a historic bridge that is part of either a federal-aid highway system or a state or local highway system that has continued to evolve over the years.

Even though these structures are on or eligible for inclusion on the NRHP, they must perform as an integral part of a modern transportation system. When they do not or cannot, they must be rehabilitated or replaced in order to assure public safety while maintaining system continuity and integrity. No individual Section 4(f) evaluations need be prepared for such projects. This programmatic Section 4(f) evaluation is applicable to the proposed Build Alternative because it meets the five criteria specific to historic bridges, as determined by the FHWA:

1. The Riverside Drive Bridge would be rehabilitated with federal funds.
2. The project would require the use of the Riverside Drive Bridge, which is a historic bridge structure that is eligible for listing on the NRHP.
3. The Riverside Drive Bridge is not a National Historic Landmark.
4. Caltrans (on behalf of the FHWA Division Administrator) has determined that the facts of the project match those set forth in the sections of this document.
5. Pursuant to Section 106 PA Stipulation XI, 36 CFR 800.6(a), and 800.6(b)(1), Caltrans proposes that the undertaking would have an Adverse Effect on the Riverside Drive Bridge, and is consulting with the SHPO to resolve adverse effects. A Draft MOA document has been prepared in accordance with the Section 106 PA and is pending approval.

## 6.0 AVOIDANCE ALTERNATIVES AND OTHER FINDINGS

The following evaluation demonstrates that there are no feasible and prudent avoidance alternatives to the use of the Riverside Drive Bridge. According to 23 CFR 774.17, an alternative is not feasible if it cannot be built as a matter of sound engineering judgment. An alternative is not prudent if:

1. It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
2. It results in unacceptable safety or operational problems;
3. After reasonable mitigation, it still causes severe social, economic, or environmental impacts; severe disruption to established communities; severe disproportionate impacts to minority or low income populations; or severe impacts to environmental resources protected under other federal statutes;
4. It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
5. It causes other unique problems or unusual factors; or
6. It involves multiple factors of the previously stated criteria that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

The following facts and circumstances support the finding that avoidance alternatives for the Riverside Drive Bridge project would not be prudent and/or feasible. Four alternatives would avoid use of the Riverside Drive Bridge. They are discussed below and summarized in **Table 2**.

**Table 2 Analysis of Avoidance Alternatives**

Avoidance Alternative	Feasible?	Prudent?
No Build Alternative	Y	N (Criteria 1 and 2)
New Upstream Vehicular or Pedestrian/Bicycle Bridge	Y	N (Criteria 3 and 4)
Seismic Retrofit Only	Y	N (Criteria 1 and 2)
TSM Alternative	Y	N (Criteria 1 and 2)
TDM Alternative	Y	N (Criteria 1 and 2)

*Y = Yes, N = No*

### 6.1 No Build Alternative

The No Build Alternative would avoid impacts on the Riverside Drive Bridge; however, this alternative would not be prudent based on criteria 1 (it would not address the needs of the project) and 2 (it would not improve the structurally deficient bridge).

## **6.2 New Upstream Vehicular or Pedestrian/Bicycle Bridge**

Two alternatives were analyzed that would avoid use of the existing bridge by constructing a new bridge adjacent to the existing bridge. One alternative would include constructing a vehicular bridge upstream and convert the existing bridge for pedestrian/bicycle use. The second alternative would include maintaining vehicular traffic on the existing bridge, but constructing a new bridge upstream for pedestrian/bicycle crossing.

Building a new vehicular bridge upstream of the existing bridge would have higher costs than rehabilitating the existing bridge. While this option is feasible from an engineering perspective, increased roadway and structure costs would result in project costs of an extraordinary magnitude (approximately \$20 million). Therefore, this alternative would not be prudent based on Criterion 4 above.

Either of these alternatives would also be expected to result in additional and/or greater environmental impacts. Constructing a new upstream bridge for either vehicular or pedestrian/bicycle use would require encroachment into portions of the Bette Davis Picnic Area, disruption of established travel patterns, and potential impacts on wetlands. Therefore, these alternatives would not be prudent based on Criterion 3 above.

## **6.3 Seismic Retrofit Only**

An alternative was proposed that would include rehabilitating the existing bridge without affecting its historical integrity. This alternative would implement the seismic retrofit elements of the project, including extending the abutment seats, in-filling the abutment wall voids, and thickening the top of the pier walls. While completing the seismic retrofit would accomplish the goal of improving the seismic deficiencies of the bridge, and could be completed without an adverse effect on the historic integrity of the bridge, it would not be prudent due based on criteria 1 (it would not address the need for the project) and 2 (it would not improve geometric deficiencies).

## **6.4 TSM Alternative**

The Transportation System Management (TSM) Alternative would include refining the existing transportation system to increase the efficiency of existing facilities without widening the bridge. Under this alternative, alternative modes of transportation would be improved to enhance mobility and reduce local and regional congestion on Riverside Drive. While improvements to the existing transportation system would be feasible and could likely be completed without an adverse effect on the historic integrity of the bridge, it would not be prudent due based on criteria 1 (it would not address the need for the project) and 2 (it would not improve the structural deficiencies of the bridge).

## **6.5 TDM Alternative**

The Transportation Demand Management (TDM) Alternative would include regional means of reducing the number of vehicle trips and vehicle miles traveled as well as increasing vehicle

## 6.0 AVOIDANCE ALTERNATIVES AND OTHER FINDINGS

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occupancy. While improvements to the existing regional transportation system would be feasible and could likely be completed without an adverse effect on the historic integrity of the bridge, it would not be prudent due based on criteria 1 (it would not address the need for the project) and 2 (it would not improve the structurally deficiencies of the bridge).

## **7.0 MEASURES TO MINIMIZE HARM TO SECTION 4(F) PROPERTY**

When use of a Section 4(f) resource is required, all planning to minimize harm, including development of mitigation measures, must be undertaken in coordination with the agency owning and/or administering the resource. Caltrans has taken into account effects on the Riverside Drive Bridge in accordance with 36 CFR 800; however, it is not possible to meet the project purpose and need while avoiding an adverse effect on the historic integrity of the bridge. A draft MOA has been prepared in accordance with the Section 106 PA to resolve adverse effects, and is pending approval.

Caltrans has taken into account the comments of interested parties and has designed the bridge extension in a manner that minimizes the overall effects to the character defining features of the bridge. The currently proposed project, which includes a single-sided widening, was designed specifically to be consistent with the Rehabilitation Standards and to minimize impacts on the historic bridge by allowing for the geometric improvement while maintaining most of the historic features on the upstream side.

The new portion of the deck would be supported by cast-in-place concrete box girders, rather than matching the existing concrete T-beams. The box girders would be supported by new, separate, concrete piers, rather than extending the existing piers. Utilizing a different girder type and separate piers would create differentiation between the historic portion of the bridge and the new portion. While not visible from the deck, this differentiation would be visible from the bike path and Los Angeles River.

The new piers would be similar in design to the original piers, but smaller in scale, indicating that they are part of an addition and not the original design. The new girders would incorporate the same arch profile as the original girders, but would be box-shaped instead of T-shaped. This strategy of differentiating historic fabric and features from new materials and features through the introduction of compatible but distinguishable elements is consistent with the Rehabilitation Standards.

The bridge was designed to be widened the least amount possible to achieve project objectives but without altering its sense of small scale to the degree that it would affect the bridge's eligibility for the NRHP.

The railings on the upstream side would be reconstructed to match the existing railings, while satisfying current crash barrier requirements. The only change in design would occur at the pointed arch openings, the interior dimensions of which would be narrowed to meet current code requirements. The opening would be narrowed in such a way that a distinct shadow line is created, distinguishing the original width from the new width. The only change in design would occur at the inside face, which would be narrowed to meet current code requirements. The outside face would retain the appearance of the historic width. The opening would be narrowed in such a way that a distinct shadow line is created, distinguishing the original width from the new width. The decorative elements on the upstream side, including the ornamented pylons and the

horizontal bands of indentations beneath the railings would remain intact and be repaired as necessary.

The concrete light standards atop the pylons would be replaced with replicas. The lanterns would also be replaced with replicas of the original 1938 lanterns, which would also be modified on the interior to house LED lights.

The new railing, horizontal bands, and pylons on the downstream side would be designed to be compatible with the historic elements of the bridge, yet subtly differentiated as such: the new railing and horizontal bands would match the reconstructed railing and existing bands on the upstream side to create a sense of continuity, but the pylons would be differentiated through simplified ornamentation. The three elements together would create a compatible yet not identical overall design. The new ornamentation would reference the historic ornamentation without mimicking it exactly by incorporating similar chevron patterns, but eliminating the horizontal bands located on each side of the vertically stacked chevrons.

In addition to design features, the following mitigation measures (MM) have been identified to further reduce the adverse effects on the bridge:

MM-1 Prior to the start of any work that could adversely affect any characteristics that qualify Riverside Drive Bridge (#53C-1298) as a historic property, the City would ensure that the following recordation measures are completed.

1. The City would take large-format (4-inch x 5-inch or larger negative size) photographs showing Riverside Drive Bridge in context, as well as details of its historic design and engineering features. Photographs would be processed for archival permanence in accordance with the Historic American Engineering Record (HAER) photographic specifications. Views of Bridge #53C-1298 would include:
  - a. Contextual views showing Bridge #53C-1298 in its setting;
  - b. Elevation views;
  - c. Views of the bridge's approaches and abutments; and
  - d. Detail views of significant engineering and design elements.
2. The City would make a reasonable and good faith effort to locate historic construction drawings for the Riverside Drive Bridge (Bridge #53C-1298). If these drawings are located, the City would photographically reproduce plans, elevations, and selected details from these drawings in accordance with HAER photographic specifications. If they are legible in this format, reduced size (8.5-inch x 11-inch) copies of construction drawings may be included as pages of the report cited in subsection 3 of this MM, rather than photographed and included as photographic documentation. The City would promptly notify Caltrans if historic construction drawings for Bridge #53C-1298 cannot be located. In that event, the requirements of this paragraph shall not apply.

3. The City would complete a written historical and descriptive data report for Bridge #53C-1298. This report would provide a physical description of Bridge #53C-1298, discuss its construction and its significance under applicable NRHP criteria, and address the historical context for its construction following the format and instructions in the September 1993 National Park Service (NPS) *HAER Guidelines for Preparing Written Historical and Descriptive Data*.
4. Upon completion, the City would submit copies of the documentation prescribed in subsection 3 of this MM to the Caltrans Transportation Library and History Center in Sacramento and the Office of Historic Preservation in Sacramento. The City would also offer copies of the documentation prescribed in subsection 3 of this MM to the Los Angeles Public Library and the Los Angeles Conservancy.

MM-2 Prior to the start of any work that could adversely affect characteristics that qualify Riverside Drive Bridge (#53C-1298) as a historic property, Caltrans Professionally Qualified Staff (PQS) would review proposed plans to ensure that they comply with the Rehabilitation Standards. The City would work with a qualified professional meeting the applicable PQS Standards to develop the design of the widened structure in a manner that is compatible with the historic bridge but distinguishable from the existing design or materials, in accordance with the Rehabilitation Standards.

1. The City would submit final proposed designs to Caltrans and the SHPO for comment prior to the start of any activities that could adversely affect characteristics that qualify the Riverside Drive Bridge as a historic property.
2. The City would prepare a mitigation monitoring plan to include periodic monitoring of the construction activities and mitigation monitoring reports with photographs indicating that the activities are compliant with the Rehabilitation Standards. The monitor would meet the Secretary of the Interior's Professional Qualifications Standards for Architectural Historian or Historic Architect pursuant to CFR 36 CFR Part 61, Appendix A (PQS Standards).

MM-3 The City would identify an appropriate location for an interpretive display or kiosk within the immediate vicinity. The interpretive display shall include information on Riverside Drive Bridge's history and significance, as well as information on the design process of widening the bridge, including the design and construction process and the public outreach efforts. All interpretive material would be made available for review and approval by Caltrans PQS and the SHPO prior to fabrication and installation.

MM-4 The City would retain, clean, and restore the two existing bronze dedication plaques that are located on the bridge. These plaques are located on the concrete railing atop the northwest abutment, which would not be demolished as part of the project. Therefore, the plaques would remain on the bridge in their existing location.

MM-5 The City would install new informative permanent metal plaques at both ends of the widened bridge at public locations that provide a brief history of the bridge, its

engineering features and characteristics, the reasons for its alteration, and a statement of the characteristics of the replacement features. Per current regulation, Caltrans PQS and the SHPO have 30 days to review proposed plaque information before they are produced and installed.

- MM-6 The City would prepare a website, or adapt its current website, to make the information from the HAER recordation available to the public for a minimum of five years. The information would also be offered to the Caltrans Transportation Library and History Center in Sacramento for inclusion on its website.

These mitigation measures are outlined in the draft MOA, prepared in accordance with the PA. After approval, it would be documented as a final signed MOA between SHPO, Caltrans, and FHWA.

## 8.0 COORDINATION

### 8.1 Section 4(f) Coordination

Before the Programmatic 4(f) Evaluation can be approved, coordination with the official having jurisdiction over the resource must be documented in advance. In the case of historic properties, the official with jurisdiction is the SHPO for the state wherein the property is located. SHPO will provide their concurrence as part of the Section 106 process, discussed below in more detail.

Caltrans is the lead agency and must make a formal determination that 1) there is no prudent and feasible alternative to the use of Section 4(f) resources, and 2) all possible planning has been taken to avoid the use of a 4(f) property or to minimize harm to any 4(f) property affected by the project. The Caltrans District/Region Senior Environmental Planner is authorized to approve programmatic Section 4(f) evaluations.

Programmatic 4(f) agreements do not require a public comment period or individual circulation because their basic approach and content have already been circulated and agreed upon by the US Department of the Interior. However, this Programmatic Section 4(f) Evaluation is being circulated to the public as part of the draft EA.

### 8.2 Section 106 Coordination

Because the bridge has been determined eligible for the NHRP, and construction involves the use of federal funds, the project is required to comply with Section 106 of the National Historic Preservation Act (36 CFR § 800). To ensure compliance with this regulation, a FOE and a HPSR have been prepared for the project. Additionally, a draft MOA has been prepared in accordance with the Section 106 Programmatic Agreement to resolve adverse effects.

Caltrans submitted the FOE Report and the Draft MOA to the SHPO recommending concurrence with the determination that the proposed widening would result in an adverse effect on the Riverside Drive Bridge and concurrence on the measures that outline appropriate treatment of the historic property. See Appendix B for correspondence relating to SHPO concurrence on project impacts and minimization measures.

Through the Section 106 process, several groups and organizations were identified as having an interest in the project and the bridge's historical status. The City of Los Angeles Office of Historic Resources, Los Angeles City Historical Society, Los Angeles Conservancy, Friends of Griffith Park, Friends of the Los Angeles River, and City of Glendale Planning Department were consulted by letter June 26, 2012. The letter requested comments on the proposed undertaking and information regarding known historic properties within the undertaking's vicinity. Comments received regarding the project were inquisitive in nature and solicited more information regarding the project. They were provided with the appropriate project details and/or maps.

The project team also held meetings to inform organizations of the proposed strategy for rehabilitating the bridge, answer questions, address concerns, and receive constructive feedback. A meeting on June 19, 2012 with representatives from the Los Angeles Conservancy and the Los

Angeles Office of Historic Resources resulted in positive feedback from both organizations. A meeting was held on August 2, 2012 with the City of Los Angeles Cultural Heritage Commission (CHC) and the public. The CHC responded favorably to the project as a whole and made minor design requests. They requested that the strategy for narrowing the pointed arch openings in the concrete railings be modified to clearly express a shadow line, which the project design team has addressed in the proposed plans in response to this request. They also requested that the project team keep staff informed of the undertaking as it progresses and as designs are developed, so they could have the opportunity to comment on the design in the future, as necessary.

## 9.0 REFERENCES

California Department of Transportation. *Programmatic Section 4(f) Evaluation Annotated Outline*.. Accessed July 9, 2012 from <http://www.dot.ca.gov/ser>.

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Code of Federal Regulations Title 23, Pt. 774, 2008 ed. *Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4(f))*.

U.S. Department of Transportation Federal Highway Administration. *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges*. Accessed July 9, 2012 from <http://www.environment.fhwa.dot.gov/4f>.

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**APPENDIX A**  
**RESOURCES EVALUATED RELATIVE TO THE REQUIREMENTS OF**  
**SECTION 4(F)**

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## RESOURCES EVALUATED RELATIVE TO THE REQUIREMENTS OF SECTION 4(F)

### Riverside Drive Bridge Widening

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 USC 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Based on the definition of resources protected under Section 4(f), the project area includes two resources: Griffith Park and the Riverside Drive Bridge. Approximately 25,000 square feet (0.57 acre) of Griffith Park, located within the Bette Davis Picnic Area, would be temporarily occupied by the project during construction for equipment staging. There are no picnic tables, equestrian trails, or pedestrian trails within this proposed staging area. Grading or ground disturbance would not be necessary in the staging area. Although the staging area would not be available for recreational use during the construction phase of the proposed project, other areas of the park would remain open. The Bette Davis Picnic Area would be restored to its pre-project condition or better and would regain its full use after completion of construction.

The proposed project would not result in a Section 4(f) “use” of the park; rather, the staging area would constitute a temporary occupancy, according to the following criteria set forth in the Federal Register Rules and Regulations 23 C.F.R. 771.135(p)(7):

- The duration of occupancy (approximately 21 months) would be temporary and less than the time needed for project construction (approximately 24 months);
  - There would be no change in ownership of the park;
  - The staging work would be minor, as materials and equipment would be placed in the area with no grading, digging, or tree removal required;
  - The area would only be used for the placement of construction materials and equipment, and therefore, no permanent adverse physical impacts are anticipated;
  - As there are no picnic tables, equestrian trails, or pedestrian trails within the proposed staging area and other areas of the park would remain open during construction, there would be no
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interference with the activities or purpose of the resource, on either a temporary or permanent basis; and

- The land would be fully restored to a condition that is at least as good as the one that existed prior to implementation of the project, and the area would regain its full use after completion of construction.

Therefore, the provisions of Section 4(f) are not triggered. Concurrence regarding the temporary occupancy of Griffith Park has been independently documented with the City of Los Angeles Department of Recreation and Parks. Other land within Griffith Park is located near the project area, south of SR-134, but is located outside of the project limits. Please refer to **Figure 4** for a depiction of the project as it relates to the Section 4(f) resources within or near the project area.

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**APPENDIX B**  
**LETTERS AND OTHER CORRESPONDENCE**

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**DEPARTMENT OF TRANSPORTATION**

DISTRICT 7

100 S. MAIN STREET, SUITE 100

LOS ANGELES, CA 90012-3606

PHONE (213) 897-0362

FAX (213) 897-0360

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April 15, 2013

Michael A. Shull, Superintendent  
Planning, Construction and Maintenance Division  
City of Los Angeles, Department of Recreation and Parks  
221 N. Figueroa St., 1st Floor  
Los Angeles, CA 90012

Dear Mr. Shull:

**Re: Riverside Drive Bridge (Bridge #53C-1298) Widening and Retrofit Project, Los Angeles, California Request for Concurrence on Section 4(f) Temporary Occupancy Determination for Griffith Park**

The City of Los Angeles (City) Bridge Improvement Program (BIP) and the State of California Department of Transportation (Caltrans) propose to rehabilitate and widen the Riverside Drive Bridge (Bridge #53C-1298) over the Los Angeles River near Zoo Drive in Los Angeles, California. The bridge, built in 1938, is a five-span, cast-in-place, concrete T-beam structure that is 382 feet long and 56 feet wide, and accommodates four lanes of traffic and 4.5-foot sidewalks. There are no shoulders or bike lanes on the bridge.

The proposed project would include widening and rehabilitating the existing four-lane bridge by approximately 19 feet on the east (downstream) side to correct existing geometrical design deficiencies and seismic vulnerabilities and improve pedestrian and bicycle travel. The proposed project would also include improvements to the existing bike path along the Los Angeles River and minor curve improvements at the westbound State Route 134 on-ramp.

***Griffith Park***

A portion of Griffith Park's Bette Davis Picnic Area is located within the proposed project area, north of the bridge. The Bette Davis Picnic Area includes open space, picnic tables, and equestrian trails. In order to complete the proposed project, a temporary staging area would be required within the Bette Davis Picnic Area. The proposed project would require use of approximately 25,000 square feet (0.57 acre) of the Bette Davis Picnic Area north of the Los Angeles River and west of Riverside Drive for equipment staging during the construction phase of the project.

There are no picnic tables, equestrian trails, or pedestrian trails within this proposed staging area. No grading or other ground disturbance would be necessary in the staging area. Although the staging area would not be available for recreational use during the construction phase of the

proposed project, other areas of the park would remain open. The Bette Davis Picnic Area would be restored to its pre-project condition or better and would regain its full use after completion of construction.

Section 4(f) of the Department of Transportation Act of 1966 applies to a project whenever a federal action involves the use of a publicly-owned park, recreation area, wildlife or waterfowl refuge, or land from a historic site.

Griffith Park is a publicly owned park and the proposed project involves federal funding; however, the proposed project would not result in a Section 4(f) "use" of the park. According to the Code of Federal Regulations Title 23, Section 771.135(p)(7):

A temporary occupancy of land is so minimal that it does not constitute a use within the meaning of Section 4(f) when the following conditions are satisfied:

- i. Duration (of the occupancy) must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
- ii. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the 4(f) resource are minimal;
- iii. There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purpose of the resource, on either a temporary or permanent basis;
- iv. The land being used must be fully restored, i.e., the resource must be returned to a condition which is at least as good as that which existed prior to the project; and
- v. There must be documented agreement of the appropriate federal, state, or local officials having jurisdiction over the resource regarding the above conditions.

The construction staging for the proposed project would constitute a temporary occupancy of Griffith Park because it would meet the above conditions. The duration of occupancy of Griffith Park would be temporary and less than the time needed for project construction, and there would be no change in ownership of the park. The staging work in Griffith Park would be minor, as materials and equipment would be placed in the construction staging area with no grading, digging, or tree removal required. The area would only be used for the placement of construction materials and equipment, and therefore, no permanent adverse physical impacts are anticipated. As there are no picnic tables, equestrian trails, or pedestrian trails within the proposed staging area and other areas of the park would remain open during construction, there would be no interference with the activities or purpose of the resource, on either a temporary or permanent basis. Finally, the land in the construction staging area would be fully restored to a condition that is at least as good as the one that existed prior to the project, and the Bette Davis Picnic area would regain its full use after completion of construction. Therefore, the provisions of Section 4(f) are not triggered.

Mr. Michael A. Shull  
April 15, 2013  
Page 3

To proceed with the design and construction of the project, the City and Caltrans need to document that the project would meet the definition of temporary occupancy, based on conditions i through iv above, and obtain concurrence as explained in condition v. Therefore, Caltrans would like to request concurrence from the City of Los Angeles Department of Recreation and Parks, as the department with jurisdiction.

Concurrence with this determination in no way signifies that the Department of Recreation and Parks is granting right of entry or right of use of Griffith Park for the project. Any right of entry related to the park would be negotiated separately between the BIP and Department of Recreation and Parks during the right-of-way process for the project. It is noted that any use of park property for the proposed project will require the approval of the Board of Recreation and Parks Commissioners. Concurrence with the determination signifies only that the proposed project would satisfy the conditions listed above, and would constitute a temporary occupancy of Griffith Park.

Please review the attached map, review the above determination, sign below, and forward the signed original back to me for our records. If you have any questions regarding the proposed project, the Griffith Park qualification as a Section 4(f) resource, or the determination of temporary occupancy, please do not hesitate to call me at (213) 897-9116.

Sincerely,

Carlos Montez, Branch Chief  
California Department of Transportation, District 7  
Environmental Planning Division

I concur that the proposed project meets conditions i through iv above and therefore would constitute a temporary occupancy of Griffith Park as defined by Section 4(f).

---

Michael A. Shull, Assistant General Manager  
Department of Recreation and Parks  
City of Los Angeles

---

Date



APPENDIX C  
TITLE VI STATEMENT



**DEPARTMENT OF TRANSPORTATION**

OFFICE OF THE DIRECTOR  
P.O. BOX 942873, MS-49  
SACRAMENTO, CA 94273-0001  
PHONE (916) 654-5266  
FAX (916) 654-6608  
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March 16, 2012

**NON-DISCRIMINATION  
POLICY STATEMENT**

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Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact Mario Solis, Manager, Title VI and Americans with Disabilities Act Program, California Department of Transportation, 1823 14<sup>th</sup> Street, MS-79, Sacramento, CA 95811. Phone: (916) 324-1353, TTY 711, fax (916) 324-1869, or via email: [mario\\_solis@dot.ca.gov](mailto:mario_solis@dot.ca.gov).

A handwritten signature in blue ink, appearing to read "Malcolm Dougherty".

MALCOLM DOUGHERTY  
Acting Director



APPENDIX D  
SUMMARY OF AVOIDANCE, MINIMIZATION,  
AND MITIGATION MEASURES



## Appendix D – Summary of Avoidance, Minimization, and Mitigation Measures

### Avoidance, Minimization, and Mitigation Measures

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURE	ACTION REQUIRED	TIMING / PHASE	RESPONSIBLE AGENCY OR PARTY
<b>VISUAL/AESTHETICS</b>			
<b><i>Avoidance and Minimization Measures</i></b>			
<b>VIS-1</b> Wherever feasible, construction materials and debris would be stored away from highly visible areas within the Riverside Drive corridor, Los Angeles River corridor, and the Bette Davis Picnic Area. Storage areas would be fenced and/or covered to minimize visibility of these areas to potential viewers.	Minimal visibility of storage areas	As feasible throughout construction	City of Los Angeles Bridge Improvement Program
<b>VIS-2</b> The project would be designed to incorporate tree protection during construction for trees included in the City tree protection ordinance. Where feasible, existing trees would be preserved in place, and measures would be incorporated to minimize disturbance around preserved trees. For example, soil and other construction materials would not be stockpiled within three feet of any live tree trunks. Care would be taken to avoid placing stockpiled materials on exposed tree roots when feasible.	Plan check to ensure tree protection	Once during final design	City of Los Angeles Bridge Improvement Program
	Preservation of trees and measures to minimize disturbance	As required throughout construction	City of Los Angeles Bridge Improvement Program
<b>VIS-3</b> Any oaks or other protected trees that are impacted would be relocated or replaced according to the City tree protection ordinances. Replacement trees would be planted within the project area where feasible to maintain visual quality. Re-planting of trees within Caltrans right of way, if required, would be conducted in coordination with Caltrans biologists and landscape architects.	Relocation or replacement of protected trees	As required throughout construction	City of Los Angeles Bridge Improvement Program
	Coordination with Caltrans biologists and landscape	As required throughout construction, if re-planting of trees in Caltrans right of way	City of Los Angeles Bridge Improvement Program

## Appendix D – Summary of Avoidance, Minimization, and Mitigation Measures

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURE	ACTION REQUIRED	TIMING / PHASE	RESPONSIBLE AGENCY OR PARTY
	architects		
<b>VIS-4</b> Where vegetation removal is unavoidable, this vegetation would be replaced in accordance with the City and Caltrans landscaping requirements. In addition, sensitive habitats, such as wetland and riparian habitat, would be replaced in accordance with applicable regulatory requirements.	Vegetation and habitat replacement	As required throughout construction	City of Los Angeles Bridge Improvement Program
<b>CULTURAL RESOURCES</b>			
<b><i>Mitigation Measures</i></b>			
Mitigation measures will be presented in a memorandum of agreement document that will be submitted to SHPO under separate cover, pursuant to Section 106 PA Stipulation XI, 36 CFR 800.6(a) and 800.6(b)(1). Potential mitigation measures could include the preparation of Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation of the bridge before any work begins, and then making the information available to the public for a minimum of five years. Because HABS/HAER documentation alone is not sufficient mitigation, additional measures may be considered. For example, Caltrans Professionally Qualified Staff (PQS) could review proposed plans to ensure that they comply with the Secretary of the Interior’s Standards for Rehabilitation, and the City could prepare and implement a mitigation monitoring plan for the period of construction. In addition, the City could install new informative permanent metal plaques at both ends of the bridge.	TBD	TBD	TBD
<b>HAZARDOUS MATERIALS</b>			
<b><i>Mitigation Measures</i></b>			
<b>HAZ-1</b> The City would coordinate with the DTSC to assess the potential	Coordination	As required during pre-	City of Los Angeles

## Appendix D – Summary of Avoidance, Minimization, and Mitigation Measures

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURE	ACTION REQUIRED	TIMING / PHASE	RESPONSIBLE AGENCY OR PARTY
for construction impacts on regional groundwater, including contamination plume migration and cross plume contamination associated with the Superfund site. This coordination would include an assessment of potential for worker health and safety impacts; specifically, the need for volatile organic compound monitoring during project area excavations would be explored and identified.	with DTSC	construction	Bridge Improvement Program
<b>HAZ-2</b> A pre-demolition lead and asbestos survey would be completed prior to the commencement of construction. Lead and asbestos containing materials found during this process would be disposed of in a manner approved by the Cal OSHA.	Lead and asbestos survey	Once during pre-construction	City of Los Angeles Bridge Improvement Program
	If found, lead and asbestos disposal	Once during pre-construction	City of Los Angeles Bridge Improvement Program
<b>HAZ-3</b> Prior to construction, a hazardous materials compliance plan would be prepared by a Certified Industrial Hygienist to address the metals content of the yellow and white roadway striping found in the project area. This plan would be prepared in accordance with Caltrans Guidance for SSP 15-301.	Preparation of hazardous materials compliance plan	Once during pre-construction	City of Los Angeles Bridge Improvement Program
<b>HAZ-4</b> If it is determined that groundwater would likely be encountered during construction, a groundwater quality assessment would be completed during the final design phase. If construction dewatering is required, groundwater management may be covered under the City's NPDES Permit.	Completion of groundwater quality assessment	Once during construction, as required	City of Los Angeles Bridge Improvement Program
<b>NOISE</b>			
<b>Mitigation Measure</b>			
<b>NOI-1</b> As practicable, noise-attenuating "jackets" or portable noise screens would be used to provide shielding for pavement breaking, jack hammering or other similar type activities when work is close to noise	Use of noise attenuation	As required during construction	City of Los Angeles Bridge Improvement

## Appendix D – Summary of Avoidance, Minimization, and Mitigation Measures

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURE	ACTION REQUIRED	TIMING / PHASE	RESPONSIBLE AGENCY OR PARTY
sensitive areas.	materials		Program
<b>NATURAL COMMUNITIES</b>			
<b><i>Avoidance and Minimization Measures</i></b>			
<b>NAT-1</b> Work areas would be minimized to the extent feasible to avoid the Los Angeles River.	Plan check to ensure minimal work areas	Once during final design	City of Los Angeles Bridge Improvement Program
<b>NAT-2</b> Staging areas would be restricted to areas outside of the river channel to avoid indirect impacts on the Los Angeles River and sensitive natural resources.	Plan check to ensure staging areas are outside river channel	Once during final design	City of Los Angeles Bridge Improvement Program
<b>NAT-3</b> Areas of vegetation where individual trees and shrubs have a diameter at breast height (dbh) of four inches or fewer and do not require complete removal, would be cut at ground level with hand tools to allow for regrowth. These areas would be included on the project plans.	Plan check to ensure designation of trees/shrubs to be cut at ground level	Once during final design	City of Los Angeles Bridge Improvement Program
<b>NAT- 4</b> Legally protected trees that have a dbh of five inches or greater would be protected in place if possible, and would be included on the project plans.	Plan check to ensure tree protection	Once during final design	City of Los Angeles Bridge Improvement Program
<b><i>Mitigation Measures</i></b>			
<b>NAT-5</b> A re-vegetation plan would be developed to replace affected willow riparian vegetation at a minimum 1:1 mitigation ratio. The re-vegetation plan would include a summary of impacted vegetation, a planting plan, mitigation ratios, and success criteria based on resource agency	Re-vegetation plan – prepared in coordination	Once during pre-construction	City of Los Angeles Bridge Improvement Program

## Appendix D – Summary of Avoidance, Minimization, and Mitigation Measures

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURE	ACTION REQUIRED	TIMING / PHASE	RESPONSIBLE AGENCY OR PARTY
requirements. The re-vegetation plan would be developed in coordination with and approved by resource agencies prior to implementation.	with and approved by resource agencies		
<b>NAT-6</b> All invasive plant species in the BSA, including, but not limited to giant reed, tree tobacco, castor bean, and cocklebur, would be removed and disposed of in a manner that minimizes the potential for their reestablishment. Invasive plants would be identified by a biologist and removal procedures would follow the recommendations of the California Invasive Plant Council (Cal-IPC). Application of herbicides would strictly adhere to all applicable state and federal laws.	Invasive plant identification	Once during pre-construction	City of Los Angeles Bridge Improvement Program
	Invasive plant removal	Once during construction	City of Los Angeles Bridge Improvement Program
<b>Wetlands and Other Waters</b>			
<b><i>Avoidance and Minimization Measure</i></b>			
<b>WET-1</b> Vegetation to be preserved would be identified and flagged to avoid accidental disturbance and removal.	Identification of vegetation to be preserved	Once during pre-construction	City of Los Angeles Bridge Improvement Program
<b><i>Mitigation Measure</i></b>			
<b>WET-2</b> The City would develop a mitigation plan detailing mitigation for the loss and disturbance of USACE jurisdictional wetlands within the BSA to ensure that there is “no net loss” of wetlands and/or other waters of the U.S. The City would compensate for permanent loss of wetlands and/or other waters of the U.S., either onsite or offsite, at a minimum 1:1 ratio (one acre restored for every acre affected). The plan would be developed	Mitigation plan – prepared in coordination with and approved by USACE	Once during final design	City of Los Angeles Bridge Improvement Program

## Appendix D – Summary of Avoidance, Minimization, and Mitigation Measures

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURE	ACTION REQUIRED	TIMING / PHASE	RESPONSIBLE AGENCY OR PARTY
in coordination with, and approved by, the USACE.	Restoration	Following project completion, as required by the restoration plan	City of Los Angeles Bridge Improvement Program
<b>Animal Species</b>			
<b><i>Avoidance and Minimization Measures</i></b>			
<b>WLD-1</b> Construction activities within the stream channel would be completed during the dry season, to the extent feasible, when aquatic species are more likely to be out of the river or easier to identify for relocation.	Construction within stream channel during dry season	As required throughout construction	City of Los Angeles Bridge Improvement Program
<b>WLD-2</b> A qualified biologist would conduct pre-construction surveys for western pond turtles within the construction area within 48 hours prior to construction, channel excavation, and riparian vegetation removal. If western pond turtles are discovered, they would be relocated upstream or downstream of the construction area to an area of suitable habitat.	Pre-construction surveys for western pond turtles	Within 48 hours prior to construction, channel excavation, and riparian vegetation removal	City of Los Angeles Bridge Improvement Program
	Relocation of western pond turtles, if found	Prior to construction	City of Los Angeles Bridge Improvement Program
<b>WLD-3</b> Vegetation removal would be performed outside of the nesting season (March 1-September 1) to the extent feasible.	Vegetation removal outside nesting season	As required throughout construction	City of Los Angeles Bridge Improvement Program
<b>WLD-4</b> If vegetation clearing must occur during the nesting season, pre-construction surveys would be completed by a qualified biologist within 48	Pre-construction	Within 48 hours of clearing, grubbing or	City of Los Angeles Bridge Improvement

## Appendix D – Summary of Avoidance, Minimization, and Mitigation Measures

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURE	ACTION REQUIRED	TIMING / PHASE	RESPONSIBLE AGENCY OR PARTY
hours of clearing, grubbing or grading activities to determine the presence/absence of nesting birds within 300 feet of the construction area. Surveys would be repeated if construction activities were suspended for five days or more.	surveys for nesting birds	grading activities; repeat if construction activities suspended for five days or more	Program
<b>WLD-5</b> If nesting birds are found in the project area, appropriate buffer areas (300 feet) would be implemented, in coordination with the appropriate resource agencies, to ensure that the birds and/or their nests are not harmed.	Buffer areas for nesting birds	As required throughout construction	City of Los Angeles Bridge Improvement Program
<b>WLD-6</b> Between March 1 and July 31, bat surveys would be conducted by a qualified wildlife biologist and prior to the removal of any trees or work on the bridge structure. If no bat roosts are detected, then no further action would be required provided the vegetation removal and ride demolition activities are conducted prior to the next bat-breeding season. If removal is delayed, then an additional pre-demolition survey would be conducted no more than seven days prior to removal to ensure that a new colony has not been established.	Pre-demolition surveys for bat roosts	Once prior to tree removal or demolition activities between March 1 and July 31; if construction activities are delayed, to be repeated no more than seven days prior to demolition/tree removal	City of Los Angeles Bridge Improvement Program
<p><b>WLD-7</b> If a colony of bats is found roosting within the BSA, then the following measures would be implemented to reduce the potential disturbance:</p> <ul style="list-style-type: none"> <li>• If a maternity colony of bats is found in the construction area and the project can be constructed without the disturbance of the colony, appropriate buffer zones, either physical or timed, would be identified by a qualified biologist and implemented to ensure the continued success of the colony.</li> <li>• If an active nursery roost is known to occur within the construction area and the project cannot be conducted outside of the maternity roosting season, bats would be excluded from the site after July 31 and before March 1 to prevent the occupation of the site by maternity colonies. Non-</li> </ul>	Buffer zones, exclusion of breeding bats, and eviction of non-breeding bats	As required during construction	City of Los Angeles Bridge Improvement Program

## Appendix D – Summary of Avoidance, Minimization, and Mitigation Measures

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURE	ACTION REQUIRED	TIMING / PHASE	RESPONSIBLE AGENCY OR PARTY
breeding bats shall be safely evicted under the direction of a bat specialist.			
<b>Mitigation Measures</b>			
<b>WLD-8</b> No work would be conducted in flowing or ponded water except as necessary to construct a water diversion. All river flows within the construction area would be diverted by placing flows in a culvert or diversion channel to ensure no work in flowing water occurs.	Installation of culvert or diversion channel	Prior to construction	City of Los Angeles Bridge Improvement Program
<b>WLD-9</b> Prior to water diversion, block netting would be placed approximately 200 feet upstream of the bridge to prevent the arroyo chub from entering the project area during the water diversion process. Prior to and during the installation of the water diversion, the wetted areas of the BSA would be surveyed by a qualified fisheries biologist and all arroyo chub within the diversion area would be captured and relocated downstream of the project area.	Installation of block netting	Prior to water diversion	City of Los Angeles Bridge Improvement Program
	Arroyo Chub surveys and relocation	Prior to and during installation of water diversion	City of Los Angeles Bridge Improvement Program
<b>WLD-10</b> After the water diversion is in place, the diversion area would be surveyed for several hours to ensure that no arroyo chub are stranded in drying areas of the river. Block netting would be cleaned and maintained regularly to ensure proper function during water diversion to avoid impacts to arroyo chub. After the water diversion process is complete, the upstream block nets would be removed to allow arroyo chub to pass through the water diversion to downstream habitat.	Arroyo Chub surveys and maintenance of block netting	During water diversion process	City of Los Angeles Bridge Improvement Program
	Removal of block netting	Upon completion of water diversion process	City of Los Angeles Bridge Improvement Program

## Appendix D – Summary of Avoidance, Minimization, and Mitigation Measures

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURE	ACTION REQUIRED	TIMING / PHASE	RESPONSIBLE AGENCY OR PARTY
<b>WLD-11</b> If a water diversion is not necessary but the river is still flowing through the work area, block nets would be placed upstream and downstream of the work area following surveys for chub and other fish species, and all fish are removed from the project area. Block netting would be removed when project work is completed.	Installation of block netting	During construction if the river is flowing through work area	City of Los Angeles Bridge Improvement Program
	Removal of block netting	After construction is complete	City of Los Angeles Bridge Improvement Program
<b>Threatened and Endangered Species</b>			
<b><i>Avoidance and Minimization Measures</i></b>			
<b>ES-1</b> If vegetation clearing must occur during the nesting season, pre-construction surveys would be completed by a qualified biologist within 48 hours of clearing, grubbing or grading activities to determine the presence/absence of nesting vireo within 300 feet of the construction area. Surveys would be repeated if construction activities are suspended for five days or more.	Pre-construction surveys for nesting vireo	During construction, within 48 hours of clearing, grubbing or grading activities; to be repeated if construction activities are suspended for five days or more	City of Los Angeles Bridge Improvement Program
<b>ES-2</b> Additional protocol-level surveys for the least Bell's vireo and southwestern willow flycatcher would be performed in the season prior to construction.	Protocol-level surveys for vireo and southwester flycatcher	The season prior to construction	City of Los Angeles Bridge Improvement Program
<b>ES-3</b> Protocol-level surveys would be performed 48 hours prior to vegetation clearing and grubbing if construction is scheduled to begin between March 1 and September 1.	Protocol-level surveys for vireo and southwester flycatchers	During construction 48 hours prior to vegetation clearing and grubbing between March 1 and September 1	City of Los Angeles Bridge Improvement Program
<b>ES-4</b> If least Bell's vireo or southwestern flycatchers are found in the	Buffers for	Throughout construction	City of Los Angeles

## Appendix D – Summary of Avoidance, Minimization, and Mitigation Measures

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURE	ACTION REQUIRED	TIMING / PHASE	RESPONSIBLE AGENCY OR PARTY
project area, appropriate buffer areas (300 feet) would be implemented, in coordination with the appropriate resource agencies, to ensure that the birds and/or their nests are not harmed.	vireo and southwester flycatchers	as required	Bridge Improvement Program

APPENDIX E  
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APPENDIX F  
ACRONYMS AND ABBREVIATIONS



## Appendix F - List of Acronyms and Abbreviations

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### List of Acronyms and Abbreviations

AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AEA	Atomic Energy Act
AEC	Atomic Energy Commission
AGR	Agricultural Supply
AM	Morning
APE	Area of Potential Effects
APN	Assessor's Parcel Number
ASR	Archaeological Study Report
AQMD	Air Quality Management Plan
BMP	Best Management Practices
BOE	City of Los Angeles Bureau of Engineering
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
Cal-ARP	California Accidental Release Prevention Program
Cal EPA	California Environmental Protection Agency
Cal-IPC	California Invasive Plant Council
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act

## Appendix F - List of Acronyms and Abbreviations

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CESA	California Endangered Species Act
CFR	Code of Federal Regulations
Cfs	Cubic Feet Per Second
CGS	California Geological Survey
CH <sub>4</sub>	Methane
CHC	Cultural Heritage Commission
City	City of Los Angeles
CMP	Congestion Management Program
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
CO-CAT	Coastal Ocean Climate Action Team
CRHP	California Register of Historical Resources
CSG	California State Geologist
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	Decibels
dBA	Decibels (A-weighted Scale) ‘
DPM	Diesel Particulate Matter
DTSC	California Department of Toxic Substances Control
DSA	Disturbed Soil Area
DWP	Los Angeles Department of Water and Power
EA	Environmental Assessment
EBL	Eligible Bridge List
EIR	Environmental Impact Report
E.O.	Executive Order
EPCRA	Emergency Planning and Community Right-to-Know Act
°F	Degrees Fahrenheit

## Appendix F - List of Acronyms and Abbreviations

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FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide
FIRM	Flood Insurance Rate Maps
FOE	Finding of Effect
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Programs
GHG	Greenhouse Gas
HABS	Historic American Building Survey
HAER	Historic American Engineering Report
HAP	Hazardous Air Pollutants
HBP	Highway Bridge Program
HCM	Historic-Cultural Monument
HFC	Hydrofluorocarbons
HFC-23	Fluoroform
HFC-134a	Tetrafluoroethane
HFC-152a	Difluoroethane
HHS	Department of Health and Human Services
HPDF	Historic Property Data File
HPSR	Historic Property Survey Report
HRER	Historic Resources Evaluation Report
HSC	State Health and Safety Code
HWCL	State Hazardous Waste Control Law
Hz	Hertz
I-5	Interstate Highway 5
IND	Industrial Service Supply

## Appendix F - List of Acronyms and Abbreviations

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IPCC	Intergovernmental Panel on Climate Change
ISA	Initial Site Assessment
IS/EA	Initial Study/Environmental Assessment
ITS	Intelligent Transportation Systems
LAMC	Los Angeles Municipal Code
LARRMP	Los Angeles River Revitalization Master Plan
LARWQCB	Los Angeles Regional Water Quality Control Board
LED	Light-Emitting Diode
LEDPA	Least Environmentally Damaging Practicable Alternative
Leq	Equivalent Sound Level
Leq(h)	1-hour-A-weighted equivalent sound
LHS	Location Hydraulic Study
LOS	Level of Service
MACT	Maximum Achievable Control Technology
MBTA	Migratory Bird Species Act
MCE	Maximum Credible Event
Metro	Los Angeles Metropolitan Transportation Authority
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MOU	Memorandum of Understanding
MPG	Miles Per Gallon
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer Systems
MSAT	Mobile Source Air Toxics
MSDS	Material Safety Data Sheets
MUN	Municipal and Domestic Supply
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act

## Appendix F - List of Acronyms and Abbreviations

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NES	Natural Environmental Study
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
N <sub>2</sub> O	Nitrous Oxide
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NO <sub>x</sub>	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
O <sub>3</sub>	Ozone
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
OPR	Office of Planning and Research
OS	Open Space
OSHA	Occupational Safety and Health Administration
OSH Act	Occupational Safety and Health Act
PA	Programmatic Agreement
PCB	Polychlorinated Biphenyls
PDT	Project Development Team
PF	Public Facilities
PFC	Perfluorocarbons
PM	Afternoon
PM <sub>2.5</sub>	Fine Particulate Matter
PM <sub>10</sub>	Particulate Matter
PQS	Caltrans Professionally Qualified Staff
PRC	California Public Resources Code

## Appendix F - List of Acronyms and Abbreviations

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RAP	Relocation Assistance Program
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
REC 1	Water Contact Recreation
REC 2	Non-Contact Water Recreation
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SARA	Superfund Amendments and Reauthorization Act
SB	State Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments'
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SDWA	Safe Drinking Water Act
SF <sub>6</sub>	Sulfur Hexafluoride
SFVGB	San Fernando Valley Groundwater Basin
SHPO	State Historic Preservation Officer
SHS	State Highway System
SIP	State Implementation Plan
SLF	Sacred Land File
SO <sub>2</sub>	Sulfur Dioxide
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWQCB	State Water Quality Control Board
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TSCA	Toxic Substances Control Act

## Appendix F - List of Acronyms and Abbreviations

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U.S.	United States
USACE	United States Army Corps of Engineers
USC	United States Code
U.S. DOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
v/c	Volume/Capacity
VIA	Visual Impact Assessment
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
VP	Viewpoint
WARM	Warm Freshwater Habitat
WD	Wetland Delineation
WDR	Waste Discharge Requirements
WET	Wetland Habitat
WILD	Wildlife Habitat
WSA	Wetland Study Area

