Seismic Retrofit and Bridge Rail Upgrade

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – LA-39 (PM 17.81, San Gabriel River Bridge, Bridge No. 53-0113)
DISTRICT 7 – LA-71 (PM R0.92, Ridgeway Street UC, Bridge No. 53-2052)

EA: 32620/EFIS: 0716000113

Initial Study with Proposed Mitigated Negative Declaration

Prepared by the
State of California, Department of Transportation

April 2020

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LA-39 PM 17.81
LA-71 PM R0.92
32620
0716000113

Seismic Retrofit and Bridge Rail Upgrade

INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation
CEQA Lead Agency

Responsible Agencies:
California Transportation Commission
California Department of Fish and Wildlife
Regional Water Quality Control Board

April 30, 2020
Date of Approval

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PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) is proposing a seismic retrofit and barrier replacement project on two bridge structures on State Routes 39 and 71, the San Gabriel River Bridge and the Ridgeway Street Undercrossing (UC). Painting work and structural approach slab replacement are also proposed for the San Gabriel River Bridge.

Determination

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

Caltrans 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 Aesthetics, Agriculture and Forestry Resources, Air Quality, Cultural Resources, Energy, Geology and Soils, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Tribal Cultural Resources, and Utilities and Service Systems.

In addition, the proposed project would have less than significant effects to Green House Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Transportation, and Wildfire.

With the following mitigation measures incorporated, the proposed project would have less than significant effects to Biological Resources: BIO-5, BIO-6, BIO-7, BIO-8, BIO-9, BIO-10, BIO-18, and BIO-19.

_____ _____

Ron Kosinski Date

Deputy District Director District 7

California Department of Transportation

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Chapter 1 - Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) is proposing a seismic retrofit and barrier replacement project on two bridge structures on separate routes within Los Angeles County; the San Gabriel River Bridge (Bridge Number 53-0113, Post Mile 17.81) on State Route (SR)-39 and the Ridgeway Street Undercrossing (UC) (Bridge Number 53- 2052, Post Mile R0.92) on SR-71. Painting work and modification of the structure approach slabs are also proposed for the San Gabriel Bridge.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA). After the public circulation period, all comments will be considered and Caltrans will select a preferred alternative and make the final determination of the project's effect on the environment. Typically, Caltrans would hold a public hearing during the draft environmental document circulation period. However, due to the prohibition on public gatherings in Los Angeles County during the current COVID-19 emergency, a public hearing will not be held. Your comments, however, are still welcome and can be provided as stated on the Notice of Intent.

EXISTING FACILITIES

The San Gabriel River Bridge lies on SR-39, also referred to as San Gabriel Canyon Road, located north of the City of Azusa. The bridge crosses over the soft-bottom San Gabriel River within the lower portion of the Angeles National Forest; it was built in 1933. The bridge is a three-span steel truss bridge and is about 356 feet long.

To the north of the City of Azusa, SR-39 begins as San Gabriel Canyon Road. SR-39 winds through the San Gabriel Mountains in the Angeles National Forest for 21.9 miles until it reaches a gate blocking the road 1.8 miles north of Crystal Lake Road in the Crystal Lake Recreation Area. Beyond the gate, the last 4.5 miles of the route, including the connection to SR-2, have been closed to public traffic since 1978 due to recurring rockslides that have damaged roadbed. Continuing south from the City of Azusa, SR-39 is a north-south continuous travel way until just south of SR-60 where it is blocked by Peter F. Schabarum Regional County Park. The road resumes in the City of La Habra, at Whittier Blvd, and continues until its southern terminus at SR-1 in the City of Huntington Beach. SR-39 is eligible for the State Scenic Highway System; however, it is not designated as a scenic highway by Caltrans.

The Ridgeway Street UC lies on the Police Officer Daniel T. Fraembs Memorial Highway, SR-71, just southeast of Interstate (I) 10. The bridge was built in 1972 and crosses Ridgeway Street in the City of Pomona. The bridge is a three-span reinforced concrete box girder structure and is about 235 feet long.

The southern terminus of SR-71 is at SR-91 in the City of Corona. SR-71 transitions between an expressway and freeway until it terminates at SR-57 and I-10 in the City of San Dimas. SR-71 serves as an important diagonally aligned commuter traffic corridor between the cities within the Pomona and San Gabriel Valleys and the cities of western Riverside County. It is a heavily used

alternative to SR-57, located to the west, and I-15, located to the east. SR-71 is part of the California Freeway and Expressway System and the National Highway System, a network of highways considered essential to the country's economy, defense, and mobility by the Federal Highway Administration. SR-71 is eligible for the State Scenic Highway System; however, it is not designated as a scenic highway by Caltrans.

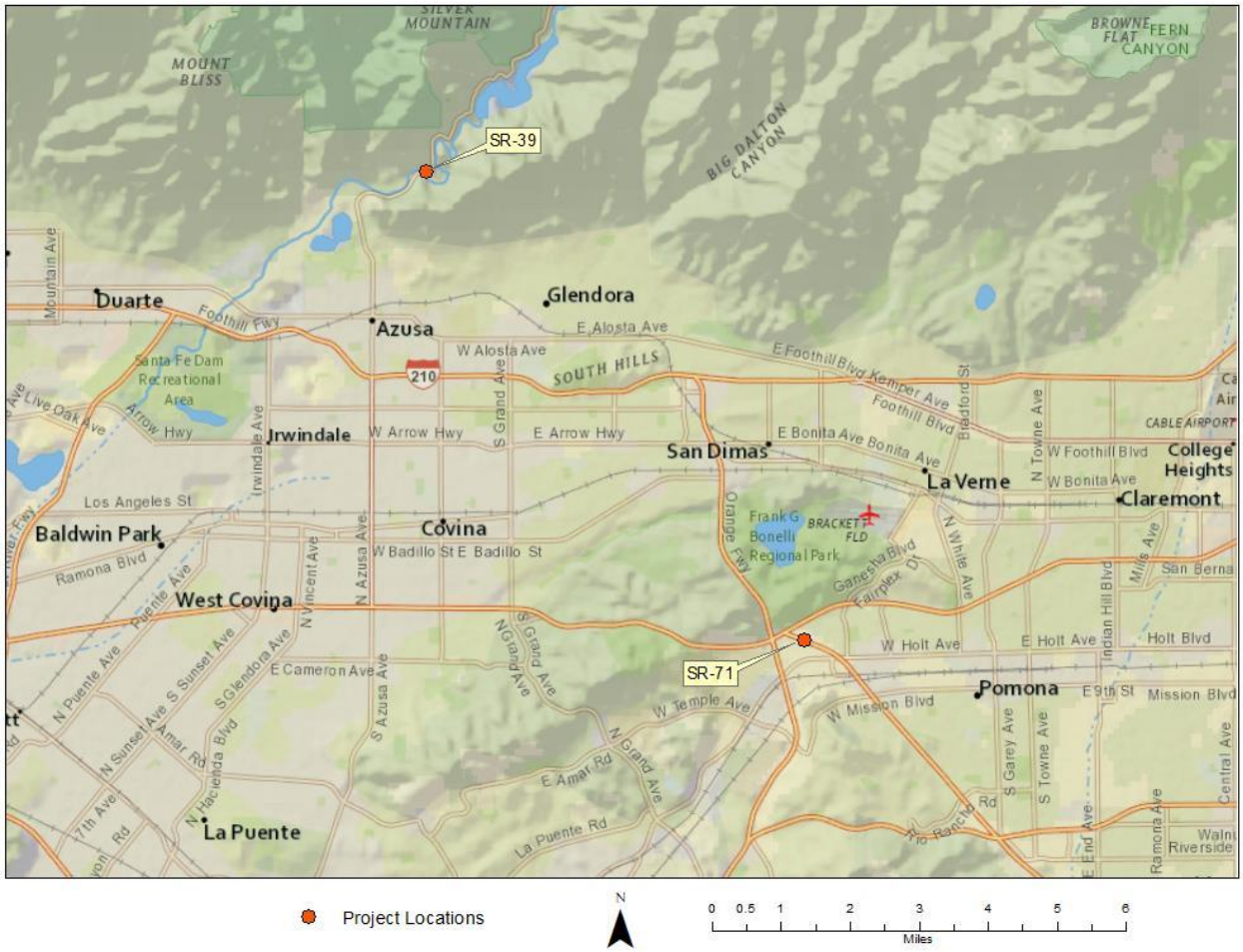

Figure 1.1 Regional Map of Project Locations

1.2 Purpose and Need

1.2.1 Purpose

This project proposes to preserve the structural integrity of two structures in a safe and economic manner to reduce seismic vulnerabilities and improve safety.

1.2.2 Need

Structural conditions have been identified for these structures that if not addressed would affect the structural integrity of the structures and would not meet current standards.

Pavement and bridge conditions are rated either “Good”, “Fair”, or “Poor”. “Poor” suggests the need for major reconstruction investment, while “Good” suggest no such need. Ratings are

provided for overall bridge health, scour, seismic condition, rail condition, and goods movement.

The San Gabriel River Bridge is currently rated in "Good" overall health, but "Poor" in seismic, rail, and bridge goods movement condition by the Caltrans Office of Structure Maintenance and Investigation. The Ridgeway Street Undercrossing is rated "Fair" in overall bridge health, but "Poor" in bridge seismic condition and "Fair" in rail condition. In all other categories it is rated "Good".

1.3 Project Description

This section describes the proposed action developed to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. There are two alternatives proposed for this project, the Build Alternative and the No-Build Alternative.

1.3.1 No-Build Alternative

There would be no changes made to the existing two bridge facilities under the No-Build Alternative. Under the No-Build Alternative, these bridges would continue to have insufficient structural integrity that does not meet current standards. In the event of seismic activity, the bridges would remain vulnerable to potential damage or failure.

1.3.2 Build Alternative

The Build Alternative proposes to strengthen the structural integrity on the San Gabriel River Bridge and Ridgeway Street UC to reduce their seismic vulnerabilities. Both bridges would undergo a seismic retrofit, but the specific activities that are required differ because of the materials the bridges were constructed with and their current design. Both bridges, however, would undergo minor widening (1 to 2 feet) to allow for new barrier railings that are compliant with current safety standards; the bridge decks would also be strengthened with composite fiber reinforced polymer (CFRP) strips. On the San Gabriel River Bridge the upper lateral and transverse sway bracings, along with the rivets, would be replaced. Additionally, Pier 2 of the bridge would be retrofitted. The abutment and pier walls on the Ridgeway Street UC would be retrofitted. See below for further details on the proposed work. The estimated cost of the Build Alternative is $14,707,763.

San Gabriel River Bridge

The major activity proposed on the San Gabriel River Bridge is the installation of 2 piles (long columns driven underground to form part of the bridge foundation) adjacent to Pier 2 which provides support for the bridge in the middle of the San Gabriel River. To enable a crane to access the area around the pier, a trestle bridge would have to be constructed on both sides of the bridge, starting at the eastern shore of the river and extending out to Pier 2. Bridge work activities would be performed from the trestle bridge, bridge deck, or partially disturbed areas next to the bridge. Figure 1.2 shows an image of a generic bridge structure that identifies the major parts.

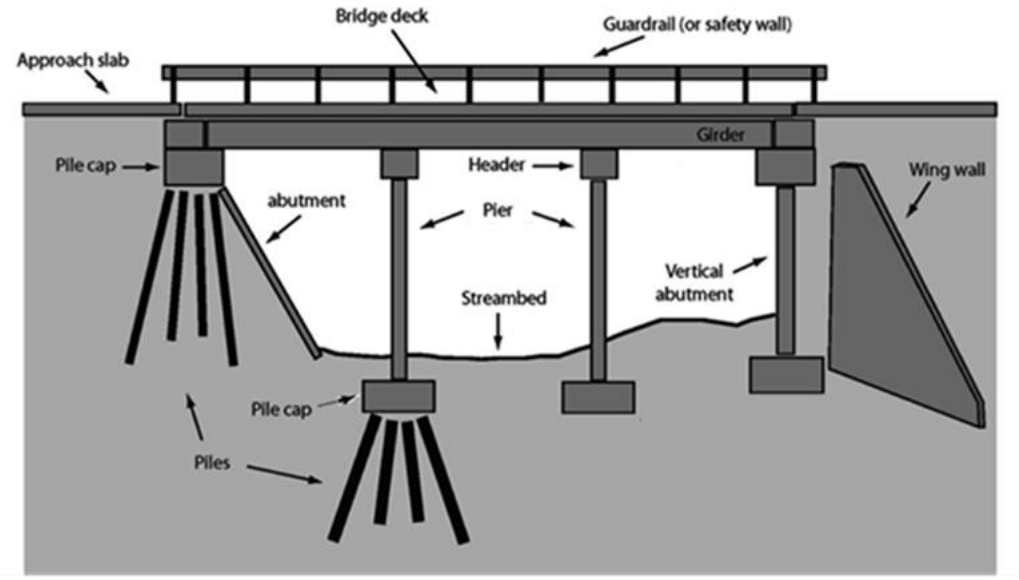

Figure 1.2 Parts of a Typical Bridge Structure.

Modified from: https://engviral.com/common-bridge-terminologies-bridge-structure-terms-used-general/ (accessed on 4/23/2020).

The bridge will undergo retrofits at its abutments and piers. At Abutment 1, the Build Alternative would replace the structural approach to strengthen the portion of the bridge that joins the deck to the ground. At Pier 1 and Abutment 2, the steel shoes will be replaced with isolation bearings. At Pier 2, the rocker expansion bearings will also be replaced with isolation bearings. These are the elements that the bridge deck and superstructure rest upon and which connect the superstructure to the piers and abutments. Joint seal assemblies will be installed at Pier 1 and Abutment 2. Two cast-in-shell piles will be added to Pier 2, within the river. The piles will be bonded to Pier 2 with a pier cap. Lateral bracing will be replaced at Pier 1, Pier 2, and Abutment 2. A seismic catcher will be installed at Pier 2, which is a device the superstructure can fall onto when an earthquake occurs and is typically a steel shelf drilled and bolted onto the pier. The gusset plates will be replaced and the rivets in the bridge trusses will be replaced with bolts. The bridge deck will be widened to accommodate new concrete barriers that will be compliant with current safety standards. Lastly, the support structure will be cleaned and painted.

The activities proposed over the river and at Pier 2 require the use of trestle bridges on either side of the bridge. The trestle bridges will be constructed from the east bank of the river, towards Pier 2. Cranes will drive H-beam piles and then mount decks onto the piles to make the trestle bridges. Existing trees will need to be removed for construction of the trestle bridges.

The removal and replacement of the barrier railings and the cleaning and painting of the San Gabriel River Bridge has the potential for debris to fall into the river. A containment system will be used to prevent materials from falling into the river. The bridge superstructure will be wrapped with plastic tarps during painting and concrete forms will be used to cast the new bridge railings.

Figure 1.3 shows the San Gabriel River Bridge Project location.

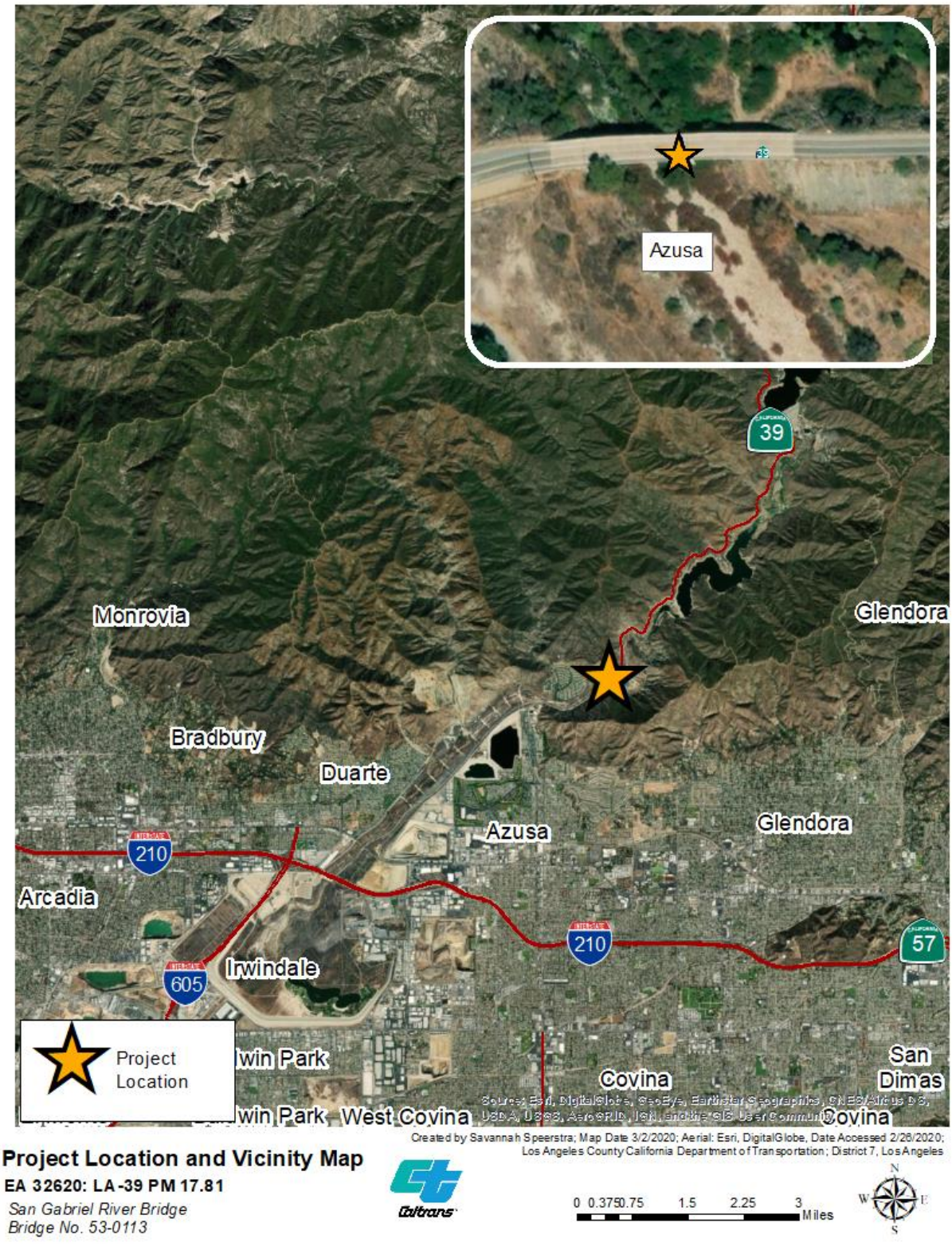

Figure 1.3 San Gabriel River Bridge Project Location and Vicinity Map

Ridgeway Street Undercrossing

The major activity proposed on the Ridgeway Street Undercrossing is the replacement of the support wing walls. The bridge would also be widened by 1 foot to accommodate a new concrete barrier railing. In addition, access to the soffit will be installed at 8 locations under the bridge deck. Pipe seat extenders for each hinge and a diaphragm bolster will be installed. And, the pier walls will be retrofitted with a buttress. These activities will occur mostly below the grade of the highway in areas that already have been disturbed or maintained recently.

Figure 1.4 shows the location of the Ridgeway Street Undercrossing.

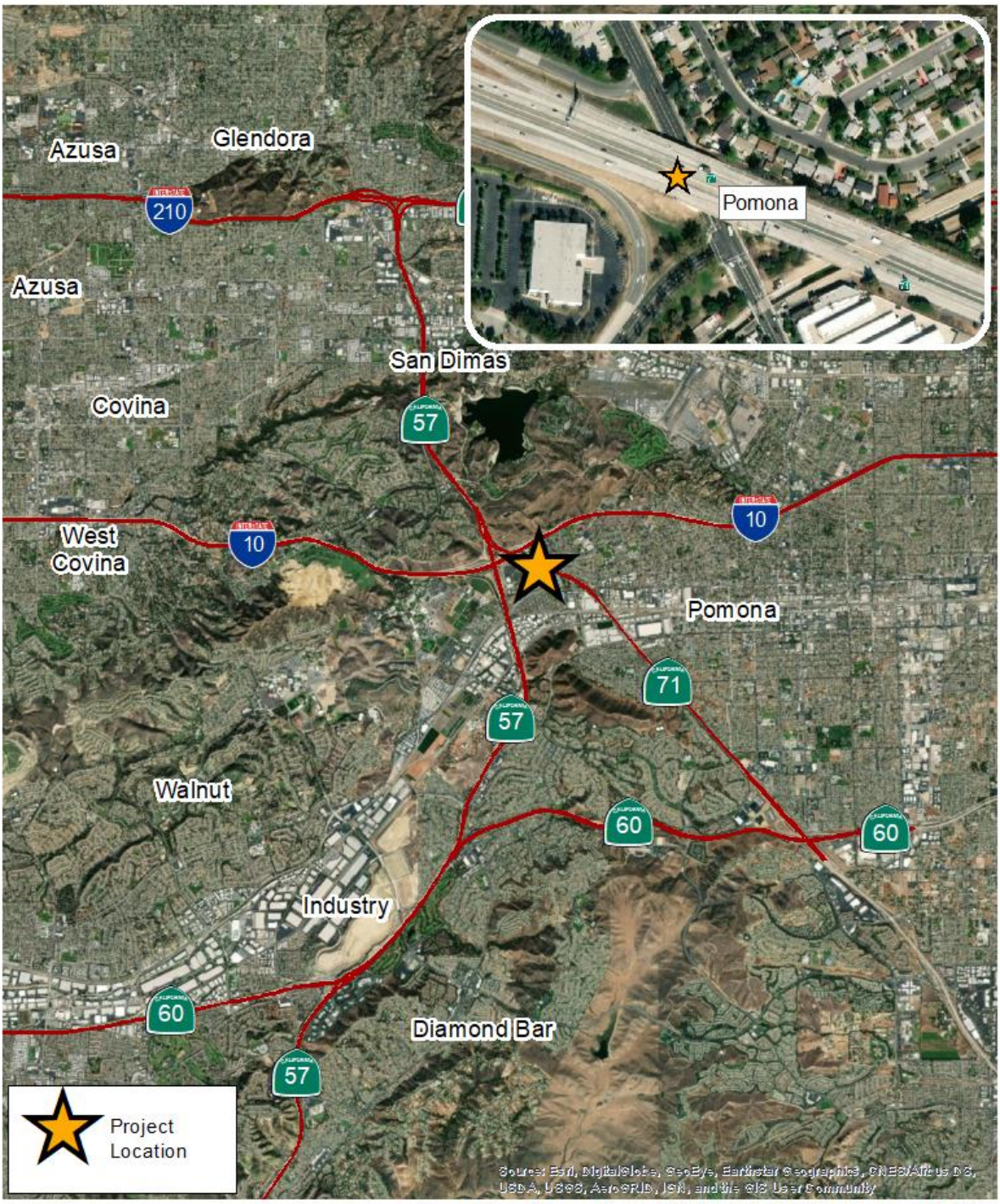

Figure 1.4 Ridgeway Street Undercrossing Project Location and Vicinity Map

Table 1.1 provides a summary of the work being proposed at each bridge.

Table 1.1: Construction Work Proposed in the Build Alternative

San Gabriel River Bridge	Ridgeway Street Undercrossing
Steel Truss	Concrete Girder
1. Install shear keys at Piers 1 and 2 and Abutment 2. 2. Remove existing steel rocker-expansion bearings with isolation bearings at Pier 2. 3. Replace existing steel shoes with isolation bearings at Pier 1 and Abutment 2. 4. Install joint seal assemblies at Pier 1 and Abutment 2. 5. Install two 8’ diameter cast-in-steel shell piles at Pier 2. 6. Install 8’ by 6’ pier caps at Piers 1 and 2. 7. Replace existing lateral bracing. 8. Install a seismic catcher at Pier 2. 9. Replace/strengthen existing gusset plates and replace rivets with bolts. 10. Widen bridge decks to accommodate new barrier railing. 11. Remove and replace the concrete barrier railings. 12. Construct new structure approaches at both abutments. 13. Clean and paint bridge. 14. Strengthen the deck with composite fiber reinforced polymer strips.	1. Provide access openings to the soffit. 2. Provide eight pipe seat extenders for each hinge (two hinges), 16 pipe seat extenders total. 3. Provide diaphragm bolster. 4. Remove and replace closure wall. 5. Retrofit pier wall with buttress. 6. Widen bridge by 1’ to accommodate new barrier railing. 7. Remove and replace the concrete barrier railings. 8. Strengthen the deck with composite fiber reinforced polymer strips.

1.4 Permits and Approvals Needed

The following permits and approvals are anticipated for the proposed project.

Table 1.2 Permits and Approvals

Agency	Permit/Approval	Status
California Department of Fish and Wildlife	1602 Lake or Streambed Alteration Agreement	Application will be submitted after Final Environmental Document (FED) approval.
Regional Water Quality Control Board (RWQCB)	Section 401 Water Quality Certification	Application will be submitted after FED approval.
Regional Water Quality Control Board	Waste Discharge Requirements	Will be bundled with the Section 401 Water Quality Certification. Application will be submitted after FED approval.
United States Army Corps of Engineers	Nationwide Permit (NWP) under Section 404 of the Clean Water Act (#14 Linear Transportation Projects)	Application will be submitted after FED approval.
California Transportation Commission	CTC vote to approve funds	Following the approval of the FED, the California Transportation Commission will be required to vote to approve funding for the project.

Caltrans has made the determination that in the context of NEPA, the totality of the impacts do not rise to the level where the project would have a significant impact on the quality of the human environment. Therefore, a Categorical Exclusion has been prepared pursuant to NEPA.

Chapter 2 – Environmental Factors

2.1 Introduction

The environmental factors checked below would be potentially affected by this project. Please see the checklist below for additional information regarding affected factors.

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

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 project 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 following the applicable section of the checklist. The words "significant" and "significance" used throughout the following checklist are related to CEQA. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below.

2.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

CEQA Significance Determinations

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

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

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

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

No Impact - The Caltrans District 7 Office of Landscape Architecture has determined that no noticeable visual changes to the environment will occur as a result of the proposed project; this determination was documented in the Visual Impact Assessment Questionnaire, completed January 10, 2020.

2.2 Agriculture and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California 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:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Regulatory Setting

The California Environmental Quality Act (CEQA) requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

Impacts to timberland are analyzed as required by the California Timberland Productivity Act of 1982 (CA Government Code Sections 51100 et seq.), which was enacted to preserve forest resources. Similar to the Williamson Act, this program gives landowners tax incentives to keep their land in timber production. Contracts involving Timber Production Zones (TPZs) are on 10-year cycles. Although state highways are exempt from provisions of the Act, the California Secretary of Resources and the local governing body are notified in writing if new or additional right-of-way from a TPZ will be required for a transportation project.

CEQA Significance Determinations

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

No Impact - According to the Farmland Mapping Monitoring Program of the California Resources Agency, there is no designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within any of the project sites.

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

No Impact – The project area does not include land zoned for agricultural use nor any land subject to a Williamson Act contract.

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?

c), d), and e) No Impact – *No farmland, forest land, timberland, or timberland zoned Timberland Production would be converted to transportation use with the proposed project. Therefore, there is no potential for impacts.*

2.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

Environmental Setting

An Air Quality Memorandum by the Caltrans Air Quality Branch to assess potential impacts of this project. It has been determined that the proposed project is listed in Table 2 of 40 CFR 93.126 under the subtitle "safety" and classification "Widening narrow pavements or reconstructing bridges (no additional travel lanes)." Therefore, pursuant to 40 CFR 93.126, this project is exempt from the requirements to determine conformity.

The *Transportation Project-Level Carbon Monoxide Protocol* indicates that a project-level air quality analysis is not required for projects exempt pursuant to 40 CFR 93.126, and it is unlikely that the proposed project will result in an adverse impact to ambient CO. This type of project is

not anticipated to involve a significant number or result in an increase in the number of diesel vehicles or increase vehicle idling; therefore, it is unlikely to result in adverse impacts to ambient PM 10 and PM 2.5. It is also not anticipated to cause an increase in Mobile Source Air Toxics (MSAT), because there are no anticipated meaningful changes to traffic volumes, vehicle mix, location of the existing facility, or any other factors that would cause an increase in MSAT emissions impacts relative to the No-Build Alternative.

The proposed project is located in the lower desert portion of Los Angeles County, within the boundary of the South Coast Air Basin (SCAB) and within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Therefore, this project must comply with the SCAQMD Fugitive Dust Implementation Rule 403 to minimize temporary emissions during construction of the project as applicable and appropriate.

CEQA Significance Determinations

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

No Impact – The proposed project would not conflict with or obstruct any implementation of air quality plans by the SCAQMD, State of California, County of Los Angeles, or City of Pomona.

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

No Impact – The proposed project would not result in any cumulatively considerable net increase of any criteria pollutant. The Caltrans District 7 Air Quality Branch has determined the project is not anticipated to result in any meaningful changes to traffic volumes, vehicle mix, location of the existing facility, or any other factors causing an increase in mobile source air toxic emissions impacts. The project will not result in an increase in the number of diesel vehicles, an increase in vehicle idling, or a significant increase in greenhouse gas (GHG) emissions.

c) Expose sensitive receptors to substantial pollutant concentrations?

No Impact – The proposed project would not expose sensitive receptors to substantial pollutant concentrations. As stated in (b), the project is not anticipated to result in any meaningful changes to traffic volumes, vehicle mix, location of the existing facility, or any other factors causing an increase in mobile source air toxic emissions impacts.

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

No Impact – While construction equipment on site will generate some objectionable odors primarily arising from diesel exhaust, these emissions will generally be limited to the project site and will be temporary in nature. Objectionable odors will be minimized by conducting certain construction activities in areas at least 500 feet from any sensitive receptors as feasible. Therefore, emissions such as those leading to odors would not adversely affect a substantial number of people.

Avoidance and Minimization Measures

AQ-1 Objectionable odors should also be minimized by conducting certain construction activities in areas at least 500 feet from the sensitive receptors as feasible.

AQ-2 This project must comply with all applicable AQMD rules. SCAQMD Fugitive Dust Implementation Rule 403 requires minimization of temporary emissions during construction of the project as applicable and appropriate.

AQ-3 This project must comply with all applicable AQMD rules. SCAQMD Rule 113 (Architectural Coating) limits the amount of VOC emissions from paving, asphalt, concrete curing, and cement coatings operations.

2.4 Biological Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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, U.S. Fish and Wildlife Service, or NOAA Fisheries?	☐	☒	☐	☐
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Regulatory Setting

Many state and federal laws regulate impacts to wildlife and wildlife habitat. The United States Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. Additionally, the United States Army Corps of Engineers (USACE) and Los Angeles Regional Water Quality Control Board regulate federally protected waters as part of the Clean Water Act.

Federal laws and regulations relevant to wildlife include the following:

National Environmental Policy Act (NEPA)

Federal Endangered Species Act (FESA)

Migratory Bird Treaty Act (MBTA)

Fish and Wildlife Coordination Act

Clean Water Act

Executive Order 13112 – Invasive Species

The USFWS and NMFS maintain lists of protected, threatened, and endangered species under the Federal Endangered Species Act (FESA). If a project has the potential to affect one or more listed species, a biological assessment must be written. Additionally, the project team must conduct consultation with the USFWS or NMFS to determine the magnitude of the effect and develop conservation measures that would enable the project to avoid, minimize, or mitigate effects to the listed species. The Migratory Bird Treaty Act (MBTA) requires prevention of project impacts that would result in the "take" of migratory birds.

The Clean Water Act defines federally protected waters, including wetlands, which are collectively referred to as "Waters of the United States". Federally protected waters are the streams, lakes, and other waterbodies that have hydrological connectivity with a "traditionally navigable waterway", which is a waterway that drains to interstate or foreign waters, and which is navigable. The limits of this jurisdiction are up to the "ordinary high watermark" for streams. Section 404 of the CWA requires entities that either dredge or fill a portion of Waters of the US to obtain a permit from the USACE. Section 401 of the CWA requires that activities that will result in a discharge of pollutants to Waters of the US receive a water quality certification from the appropriate state agency. For this project, the Los Angeles Regional Water Quality Control Board has jurisdiction.

Executive Order 13112 requires federal agencies not to contribute to the spread of invasive species. Caltrans has been designated Federal Highway Administration responsibilities in administering NEPA determinations and thus acts as a federal agency.

State laws and regulations relevant to wildlife include the following:

California Environmental Quality Act (CEQA)

California Endangered Species Act (CESA)

California Migratory Bird Protection Act

Sections 1600 – 1603 of the California Fish and Game Code: Lake and Streambed Jurisdiction

Sections 4150 and 4152 of the California Fish and Game Code: Non-game Mammals

Porter-Cologne Water Quality Control Act

The California Endangered Species Act (CESA), administered by CDFW, 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. Similar to the MBTA, sections 3500 et seq. of the California Fish and Game Code prohibit take of non-game migratory birds, and the California Migratory Bird Protection Act extends the protections that non-game migratory birds were granted prior to January 1, 2017.

CEQA also considers three groups of biological resources not covered by the endangered species acts. These groups are rare vegetation communities and habitats, plant species ranked as rare by

the California Native Plant Society, and bats. If a project will affect a very rare resource, contribute toward a trend of listing a species, or cause the degradation of high quality rare habitat, then impacts are considered severe.

California Fish and Game Code section 1600 et seq. requires proponents of actions that will affect or have the likelihood of affecting streams, lakes, or other natural water courses (jurisdiction extends to the bed and bank of a stream and its adjacent riparian vegetation) to notify CDFW before beginning construction and obtain a Lake and Streambed Alteration Agreement if CDFW determines that the project may substantially and adversely affect fish or wildlife resources. However, if a project shall completely avoid affecting the water body, then an agreement is not necessary.

The Porter-Cologne Act defines all surface and subsurface water bodies as "Waters of the State". Projects that will disturb or otherwise introduce pollutants into a Water of the State are required to obtain a waste discharge requirements permit from the RWQCB. Section 2.10 Hydrology and Water Quality contains more information on these requirements.

Environmental Setting

A Natural Environment Study (NES) was completed for this project in April of 2020. The NES summarizes the study conducted of the environmental variables and conditions in the biological study area (BSA) from information gathered through field surveys and literature searches. Within the BSA is the project impact area (PIA), which is the area where project activities will directly disturb and affect the existing environment and biological resources. The rest of the BSA is the area generally within 500 feet of the PIA in all directions, and it is studied to evaluate the effects of the project on biological resources that may be indirectly affected by the project while or after it is implemented. In the NES and this Initial Study, a species described as occurring "in the BSA" typically occurs within the area of potential indirect impacts, but outside the direct PIA. However, a vegetation community or class of species' habitat, such as breeding or foraging habitat, said to be "in the BSA" means it occurs both within and outside of the PIA unless otherwise specified.

The PIA and BSA for the San Gabriel River Bridge and the Ridgeway Street Undercrossing are shown in Figures 2.1 and 2.2 below, respectively.

San Gabriel River Bridge

Figure 2.1 Project Impact and Biological Study Areas – San Gabriel River Bridge

Caltrans biologists performed a general biological survey, two sets of protocol surveys, a fish survey, and a tree survey in the BSA. All surveys were performed on foot or submerged in the water, covering the entire PIA and the majority of the BSA. Parts of the BSA were not accessible and traversable on foot (private lands, rugged slopes, steep canyon walls, and the river flowing with high water), but they were observable from other points of the BSA. USFWS trust resources in the project vicinity were obtained using the Information Planning and Conservation (IPaC) system, and a record of species reported to have occurred within a five-mile distance from the project site was obtained from the California Natural Diversity Database (CNDDB). A list of habitats and endangered species that might occur in the project area was obtained from NMFS for the "Azusa" and "San Dimas" geographic quadrangles.

The surveys were conducted primarily during spring and summer 2019, and it is possible that species blooming during other parts of the year were less identifiable during those surveys. Another limitation of the surveys is that the fish survey was conducted when the river water was fast-flowing and turbulent, resulting in low visibility. This may have prevented the identification of fish in the river.

The San Gabriel River Bridge is located above and within the San Gabriel River in San Gabriel Canyon, which is a natural river that has been dammed by the Morris Dam less than one mile upstream. The dam causes the river to have an unnatural and inconsistent hydrology. The outlet of the Old Azusa Tunnel, another major man-made feature, is located northeast of the bridge and conveys groundwater to the river year-round. The tunnel opens into a pond mostly vegetated with non-native palms and figs. After passing through a small riparian patch, tunnel water flows through a culvert that empties into the river just downstream of the bridge. The river does not flow perennially in the BSA, as it is manipulated (most immediately by the Morris Dam) based on recent weather and drought conditions or requests from water agencies downstream of the project site.

Despite the unnatural hydrology, there is native riparian vegetation in the river and along its banks. Since the river upstream of the bridge is manipulated and downstream is supplied water through the Old Azusa Tunnel, riparian vegetation forms a wider river border downstream than upstream. Farther away and parallel to the river, scale broom scrub grows in strips. Uphill of these scale broom borders, coastal sage scrub, ruderal species, and more wide patches of scale broom scrub grows. The central portion of the river has a cobbly and rocky bottom with a few scattered patches of vegetation.

Fountain grass is the most prolific invasive species in the project area. It likely escaped from the suburban neighborhoods downstream of the bridge. Many other invasive plants in the area indicate other disturbances. Historically, people have used the area around the bridge extensively. The Canyon Inn was located on the terrace to the west-southwest of the project site, though it has since been demolished. Several other buildings including a nursery are located to the east-southeast, and beyond them is a horse stable (Rainbow Canyon Ranch).

Ridgeway Street Undercrossing

Figure 2.2 Project Impact and Biological Study Areas – Ridgeway St Undercrossing

Caltrans biologists surveyed this location on foot in October 2018. It is located in a suburban area of Pomona, and there are few biological resources near it, since the area is heavily developed and disturbed by people. The topography is generally flat at the local street level, and SR-71 is raised above the grade of the local streets. The Thompson Creek/Santa Fe Channel runs through the southeastern portion of the BSA in a concrete box channel. Most species observed near the bridge and SR-71 were non-native, and some were invasive.

Note: In the responses that follow, all Avoidance, Minimization, and Mitigation measures apply to the San Gabriel River Br. location. Those measures that also apply to the Ridgeway St. UC location (Bio – 25, 28, 30, and 33) are noted below.

CEQA Significance Determinations

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, U.S. Fish and Wildlife Service, or NOAA Fisheries?

Less Than Significant with Mitigation Incorporated – At the San Gabriel River Bridge, Caltrans has determined that, with the inclusion of the avoidance, minimization, and mitigation measures cited below, the project may affect, but is not likely to adversely affect southwestern willow flycatcher or any other listed species. The project is also not likely to result in adverse modification of southwestern willow flycatcher critical habitat. The project will not result in the "take" of State-listed species.

For the Ridgeway St. Undercrossing, no special status species or habitat was observed in the BSA, with the exception of potential nesting habitat for migratory birds. The Ridgeway street area has very low potential for special status species to occur.

Plants

A database search identified nineteen (19) special status plant species that are potentially present or have suitable habitat within the San Dimas and neighboring quadrangles. Of these, four (4) were determined to have the potential to occur within the BSA. They are described below. During focused surveys, one (1) of these were detected.

Slender Mariposa-Lily (*Calochortus clavatus* var. *gracilis*)
Status: California Native Plant Society – ranked Rare Plant

The slender mariposa-lily is a bulbiferous herb that grows in chaparral on cool north-facing slopes. This species is presumed extant in the BSA, though it was not surveyed for. Its general habitat is steep, shaded canyons in chaparral. The closest occurrence is in a chaparral area at the southern fringe of the BSA on the north-facing slope of the nearby foothills. Suitable habitat is not present for this species in the PIA, because it relies on stable, uncompacted soil to persist; most of the soil in the BSA has been disturbed.

The project will not directly affect this species because it does not occur in the PIA. The project will not indirectly affect this species because its habitat is not present in the PIA and the species' current location in the BSA is far enough from the PIA that there is no potential for indirect impacts in the form of invasive species introduction or dust. No avoidance, minimization, or mitigation measures are required.

Parry's Spineflower (*Chorizanthe parryi* var. *parryi*)
Status: California Native Plant Society – ranked Rare Plant

The general habitat for this species is sandy, open areas in coastal sage scrub and chaparral. There is some nominally suitable habitat for this species along the northern fringe of the BSA, but none in the PIA. In the PIA, soils are more rocky, gravelly, and cobbly, and they are more wet than this species requires. None were observed within the BSA.

San Gabriel Mountains Dudleya (*Dudleya densiflora*)
Status: California Native Plant Society – ranked Rare Plant

This species is known to occur in San Gabriel Canyon. It was observed during a survey beyond the BSA on the eastern slope of the canyon. Its general habitat is steep cliff walls in coastal sage

scrub, chaparral, and other habitats; there is suitable habitat for this species along the northern fringe, but none in the PIA. None were observed in the BSA.

Robinson's Pepper-Grass (*Lepidium virginicum* var. *robinsonii*)
Status: California Native Plant Society – ranked Rare Plant

This species has suitable habitat in the BSA, generally outside of the PIA. Its general habitat is dry, disturbed areas, riverbanks, and fields in coastal sage scrub and chaparral. Suitable habitat is present, but it was not observed in the BSA. Therefore, it is not expected despite the presence of suitable habitat; but, its potential presence cannot be discounted.

Based on the presence of suitable habitat in the BSA and recent records of the species in the project vicinity, the above three coastal sage scrub special status plants (Parry's spineflower, San Gabriel Mountains dudleya, and Robinson's pepper-grass) may occur in the project area. However, these species were not observed in the BSA during surveys. Focused surveys for these species were not conducted, but Caltrans did perform multiple surveys in suitable habitat which allowed for incidental detection of these species. Their potential presence cannot be ruled out, but the likelihood of occurrence in the PIA is low.

The following avoidance and minimization measures will be implemented at the San Gabriel River Bridge to prevent impacts to these species. No mitigation measures are required because permanent impacts are not expected at this time.

Avoidance and Minimization Measures

BIO-1: Pre-Construction Surveys – Listed Plant Species
A qualified biologist will survey the project impact area for these species during the blooming periods prior to construction. If plants are found in the project impact area, Caltrans will conduct consultation with CDFW to determine the appropriate course of action and will not continue construction where the plant occurs until consultation is complete.

BIO-2: Equipment Hygiene
The contractor will clean project equipment of invasive plant materials and vectors prior to their entry to the project impact area to prevent the introduction or proliferation of invasive plants that would affect coastal sage scrub species.

Animals
Animals include insects, reptiles, amphibians, birds, mammals, and fish. Based on a database search, a total of twenty-four (24) special status animal species were identified to be potentially present or have suitable habitat within the San Dimas and neighboring quadrangles. Of those species, eighteen (18) had nominally suitable habitat in the BSA. After performing habitat assessments in the BSA, performing pedestrian surveys, and reviewing the occurrence information for these species, only eight (8) were found to have the potential to occur in the BSA. They are described below. Discussion of the least Bell's vireo is also included, as it is a federally threatened and state endangered species. During the focused surveys, only two (2) of

these were detected. Additionally, one (1) species, the southwestern willow flycatcher, has critical habitat within the BSA as designated by USFWS.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)
Status: Federally Endangered, State Endangered

Critical habitat designated by USFWS for the southwestern willow flycatcher is present in the PIA, though the flycatcher was not observed in protocol surveys. One sighting of this species occurred in 2008 two miles west of the project site. The physical and biological features in southwestern willow flycatcher critical habitat include: a supply of surface water or inundated soil, dense riparian vegetation for nest sites and shelter, fine sediments, dense foliage in the lower vegetative strata, and at least 50% canopy coverage. The designated critical habitat includes the river and adjacent riparian vegetation up to the 100-year floodplain.

In the PIA, there are 17,227 square feet of critical habitat bearing physical and biological features, according to the USFWS' critical habitat mapping layer and the Federal Emergency Management Agency's (FEMA) maps. Not all this area will be affected to the same degree. The floodplain overlaps with most of the PIA where trestle bridges would be built and where vegetation trimming would occur for construction access. There are some areas of the floodplain that have physical and biological features of critical habitat; these features include willow thickets, mature California sycamore woodland, small areas of open water scattered throughout dense riparian vegetation, and cottonwood woodland. Other areas of the floodplain do not have such features; these are the areas with an open canopy, broad areas of open water, thoroughwort stands, upland areas vegetated with invasive species, and unvegetated upland areas. Surveys did not find much evidence of fine sediment deposition in the BSA, likely due to impediment by the Morris Dam.

The most suitable habitat for southwestern willow flycatcher was found to be outside of the PIA in the pond to the northeast of the bridge, as it had multiple vegetative strata, perennial inundation, relatively calm water, and dense vegetation close to the water level, which makes the pond more suitable for breeding than the remainder of the BSA. The PIA has suitable foraging and migration habitat in the form of sycamore and willow riparian woodland and mulefat scrub.

The project's two new piles will cause 100.5 square feet of permanent impact to designated critical habitat with physical and biological features. The project will temporarily affect 7,219 square feet of critical habitat with those features and 18,367 square feet of critical habitat lacking them. The impacts to critical habitat are shown in Figure 2.3, below. This project will implement the avoidance and minimization measures below for jurisdictional waters and riparian natural communities of concern. It will also implement the mitigation measures for southwestern willow flycatcher habitat.

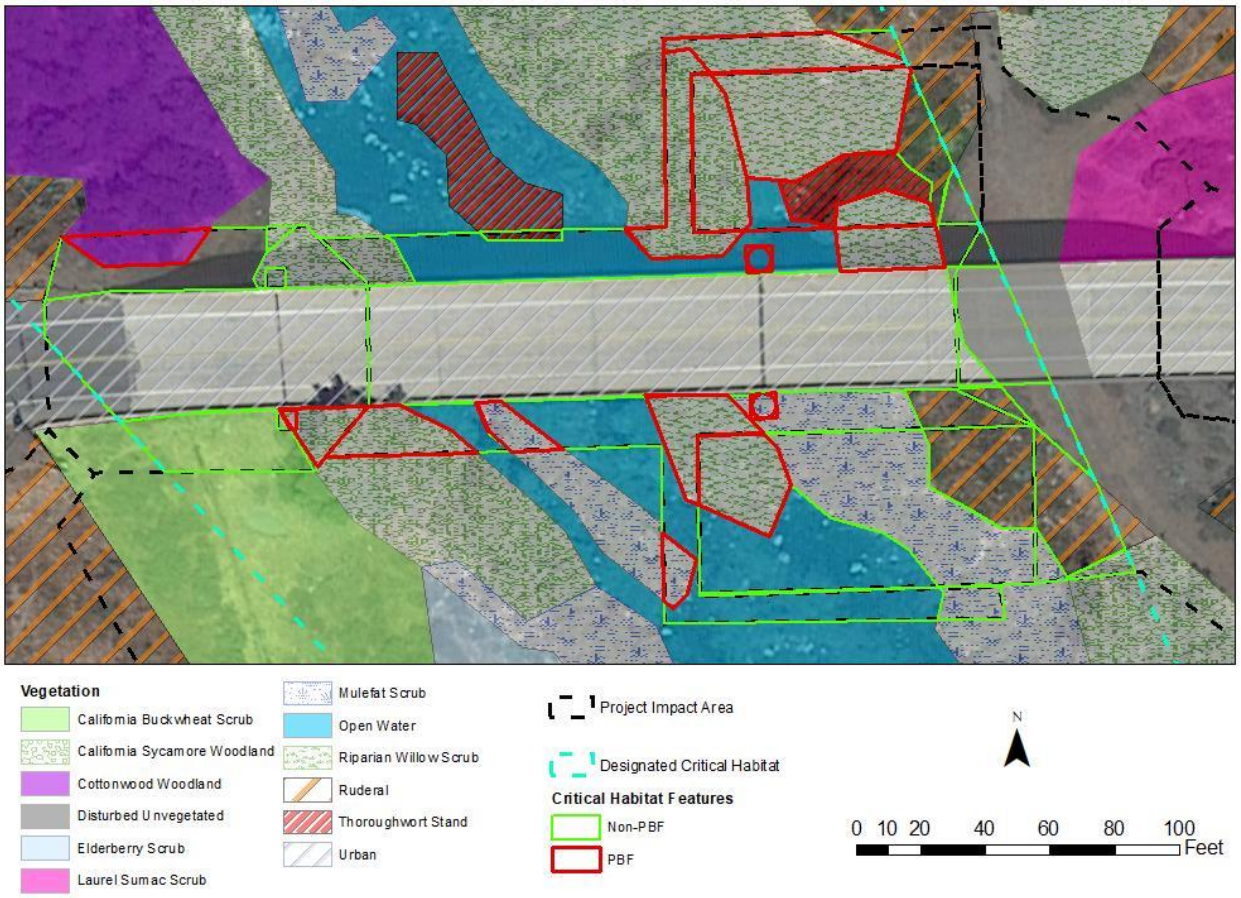

Figure 2.3 Southwestern Willow Flycatcher Critical Habitat Impact

The project is not anticipated to directly affect southwestern willow flycatcher because there is no suitable breeding habitat in the project impact area. However, the project may indirectly affect this species if it is nesting in the BSA outside of the PIA. The project may also cause indirect effects by temporarily removing suitable foraging and migration habitat. These impacts will be minimized and mitigated for according the following measures.

Avoidance and Minimization Measures

BIO-3: Pre-Construction Surveys – Listed Bird Species

A qualified biologist will perform surveys in suitable habitat for special status avian species one year prior to the removal of vegetation in the BSA and prior to the beginning of noise-generating activities, such as pile driving, during the bird nesting and migration season. A lapse in vegetation removal or construction lasting longer than three days will warrant a repeat survey. If southwestern willow flycatchers are found in the BSA, then the project will implement a 500-foot no-work buffer around the nest or occurrence and conduct consultation with the resource agencies.

BIO-4: Habitat Impact Minimization

The project biologist will coordinate with the resident engineer and construction contractor to ensure that impacts to southwestern willow flycatcher habitat are minimized to the extent feasible.

Mitigation Measures

BIO-5: Riparian Woodland
Riparian woodland square footage will be replaced at a 1:1 ratio, but lost riparian trees will be replaced generally at a ratio of 3:1. The project will replant 27 sycamores, 3 ashes, 6 black willows, and 6 red willows, all from cuttings.

BIO-6: Riparian Thickets
The project will replace mulefat scrub by taking cuttings from undisturbed mulefat plants and installing one cutting per three square feet of scrub disturbed.

BIO-7: Invasive Plants
The project will enhance the riparian vegetation in the BSA by removing the stands of invasive plants outside of the PIA, such as thoroughwort, giant cane, and tamarisk, and allow native species to reclaim those areas in the BSA to mitigate impacts to native riparian vegetation. Invasive vegetation will be removed in a way that causes the least disturbance to the surrounding native vegetation.

BIO-8: Streambed
The project will restore all temporary impacts by re-contouring the river's streambed and replacing removed plants after the completion of construction in the river.

BIO-9: Habitat Mitigation and Monitoring Plan
The habitat restoration for these impacts and others will be implemented under a habitat mitigation and monitoring plan, to be approved by the resource agencies prior to the beginning of construction. The implementation of this plan will be overseen by a qualified biologist.

BIO-10: Non-Native Vegetation
The project will replace part of the non-native vegetation surrounding the pond to the northeast of the bridge. This area currently is vegetated with Mexican fan palms and figs, which are used by migratory birds (such as orioles). The trees will be replaced gradually, so as to ensure that at least 50% of the current nesting capacity is maintained in the pond area.

Least Bell's Vireo (*Vireo bellii pusillus*)
Status: Federally Threatened, State Endangered

This species has habitat requirements similar to the southwestern willow flycatcher. None were observed during the protocol surveys, and the nearest recorded occurrence is an extirpated one

two miles away from the project site. There is no suitable breeding habitat in the BSA for this species, though the PIA has suitable foraging and migration habitat in the form of sycamore and willow riparian woodland and mulefat scrub.

The project is not anticipated to directly affect least Bell's vireo because there is no suitable breeding habitat in the PIA. However, the project may indirectly affect this species if it is nesting in the BSA outside of the PIA. The project would also indirectly affect it by temporarily removing suitable foraging and migration habitat. To avoid, minimize, and mitigate for these effects, measures **BIO-3** through **BIO-10** will be implemented.

Pallid Bat (*Antrozous pallidus*), Hoary Bat (*Lasiurus cinereus*), Western Yellow Bat (*Lasiurus xanthinus*), and Big Free-Tailed Bat (*Nyctinomops macrotis*)
Statuses: State Species of Special Concern, Western Bat Working Group-rated Priority Species

Caltrans did not perform bat surveys because there was a lack of evidence of day roosting in the bridge itself. The bridge is mostly constructed of steel and lacks deep crevices, so it does not serve as suitable day roosting habitat. However, there is potentially suitable day roosting habitat in the trees in the BSA and in the crevices along the canyon walls. There was ample guano under the bridge and urine staining on the soffit, which indicated that the bridge is used for night roosting. The river, riparian areas, and pond provide foraging habitat for bats.

The pallid bat roosts in caves, trees, buildings, and bridges. The hoary bat roosts in the foliage of medium to large trees. The western yellow bat individually roosts in palm trees and broadleaf trees. The big free-tailed bat roosts primarily in crevices and rocks. It roosts less frequently in buildings and tree cavities and may also roost in bridges. All of these species have potential habitats in the BSA.

Direct impacts to bat species are not anticipated, due to the lack of suitable day roosting habitat on the bridge and also the reduced habitat quality in the BSA. However, the project may still affect tree roosting bats, like the yellow bat. It may also affect bats that forage in the canyon by using artificial lighting for night work. The following avoidance and minimization measures will be implemented to reduce these potential impacts. The mitigation measures **BIO-5** through **BIO-10** will be implemented to mitigate effects to bats by restoring riparian trees and habitat used for day roosting.

Avoidance and Minimization Measures

BIO-11: Bat Focused Surveys
Caltrans will perform more focused bat surveys during the permitting phase as part of obtaining the lake or streambed alteration agreement with CDFW.

BIO-12: Night Lighting Minimization
The project will use the minimum lighting feasible to perform night work. A bat biologist will monitor the positioning and use of lighting to ensure that light is not unnecessarily shone upon the potential bat habitat surrounding the project impact area.

BIO-13: Pre-Construction Surveys - Bats
Pre-construction surveys for tree roosting bats in riparian trees will be conducted prior to their removal. If the trees are found to have tree roosting bats, then those trees will be removed during the night when bats are foraging.

BIO-14: Staged Tree Removal
The project will remove and trim riparian trees in a staged fashion. First, the limbs of the trees will be removed, and the tree will be left in place over night. Leaving the tree overnight allows tree roosting bats time to leave tree cavities. After the bats have left the trunk of the tree, the trunk will be removed and tree removal will be complete.

Yellow Warbler (*Setophaga petechia*)
Status: State Species of Special Concern

This species was detected multiple times in the BSA outside of the PIA during protocol surveys. It was observed singing in an area downstream of the PIA and within 100 feet of the PIA, indicating that it had a breeding territory in the BSA. It likely forages throughout the BSA along the river, and its natural habitats are riparian areas with alders and sycamores.

The project is not anticipated to directly affect yellow warbler because there is no suitable breeding habitat in the PIA. However, the project may indirectly affect this species if it is nesting in the BSA outside of the PIA. The project would also indirectly affect it by temporarily removing suitable foraging and migration habitat. To avoid, minimize, and mitigate for these effects, measures **BIO-3** through **BIO-10** will be implemented.

Southern California Rufous-Crowned Sparrow (*Aimophila ruficeps canescens*)
Status: CDFW Watch List, NatureServ State Rank Vulnerable

This species was detected multiple times in the BSA outside of the PIA during protocol surveys. It likely forages throughout the BSA but does not nest in the PIA.

The project is not anticipated to directly affect Southern California rufous-crowned sparrow because there is no suitable breeding habitat in the PIA. However, the project may indirectly affect this species if it is nesting in the BSA outside of the PIA. The project would also indirectly affect it by temporarily removing suitable foraging and migration habitat. To avoid, minimize, and mitigate for these effects, measures **BIO-3** through **BIO-10** will be implemented.

Measures **BIO-25** and **BIO-33** through **BIO-35** will also be implemented for yellow warbler and Southern California rufous-crowned sparrow. Further discussion on yellow warbler, Southern California rufous-crowned sparrow, and other migratory birds may be found under question d). Impacts, and avoidance, minimization, and mitigation measures on other bird nesting in the BSA will be discussed there as well.

Crotch Bumble Bee (*Bombus crotchii*)

Status: NatureServ State Rank Critically Imperiled to Imperiled, voted candidate for listing under the California Endangered Species Act

The Crotch bumble bee inhabits grasslands and scrublands with plants that flower throughout the year and disturbed soil or rodent nests for colony nesting, primarily on the coastal side of California Mountains, the coastal lowlands of southern California, and the San Joaquin Valley.

The bee was not incidentally observed during any field surveys conducted during the species' flight periods, though foraging habitat (buckwheat scrub) for this species was observed in a small area to the south of the bridge. Suitable colony nesting habitat (undisturbed land with existing burrows and cavities) was also found in the staging area to the southwest of the bridge. Additional undisturbed soil suitable for colony burrowing and overwinter sites was also found in the ruderal field to the north of the PIA. The project will directly affect a small part of the total available foraging habitat in the BSA and PIA by disturbing soil, and the project will indirectly affect this species through the temporary removal of suitable colony nesting and foraging habitat.

The project will implement avoidance and minimization measures to avoid direct effects to this species and minimize the project's indirect effects. It will also implement mitigation measures for indirect effects. They are described below.

Avoidance and Minimization Measures

BIO-15: Pre-Construction Surveys - Insects

A qualified entomologist will perform surveys in suitable habitat for special status insect species one year prior to the removal of vegetation and the disturbance of soil in the BSA. If Crotch bumble bee colonies or overwintering queens are found in the BSA, then the project will implement a 500-ft no-work buffer around the colony or occurrence and conduct consultation with CDFW.

BIO-16: Habitat Impact Minimization

The project biologist will coordinate with the resident engineer and construction contractor to ensure that impacts to Crotch bumble bee habitat are minimized to the extent feasible.

BIO-17: Dust Suppression

The project will implement standard dust control measures to minimize the spread of dust beyond the project impact area and staging area onto adjacent foraging and burrowing habitat.

Mitigation Measures

BIO-18: Decompacting Soil

The project will mitigate for temporary effects to potentially suitable Crotch bumble bee habitat by decompacting soil after project construction and staging are complete. The disturbed area will be reseeded with native plants.

BIO-19: Non-Native Weed Suppression

The project will suppress non-native weeds in the project staging area to allow native pollen species to revegetate the area.

Santa Ana Speckled Dace (*Rhinichthys osculus*)
Status: State Species of Special Concern, American Fisheries Society – Threatened

The general habitat of this species is the Santa Ana river and other mountain rivers and streams. Caltrans biologists did not observe any native fish in the BSA, likely due to the San Gabriel River's hydrology; it is severely anthropogenically manipulated and modified. As a result of manipulation from the Morris Dam, the river experiences extreme flows at irregular intervals, not in any direct response to precipitation events or snow melt. These conditions likely contribute to the lack of fish, which would be stranded when the dam is shut off. However, because the Santa Ana Speckled Dace's described habitat is present in the BSA (despite the inhabitability of that habitat), it is included in this list.

Direct impacts to the Santa Ana speckled dace are not anticipated, due to the lack of suitable habitat and also reduced habitat quality in the BSA. Measure **BIO-8** will be implemented to ensure the river habitat is preserved.

General Measures for All Species and Habitats

Additional general avoidance and minimization measures not yet described that are relevant to all special status species, critical habitat, jurisdictional waters, and natural communities are below.

Avoidance and Minimization Measures

BIO-20: Construction Monitoring
Biologists will be on site during construction to monitor and quantify impacts to special status resources, observe and document the implementation of project conservation measures, and report project impacts. The monitors will pause construction if an unexpected biological resource is present in the impact area during construction.

BIO-21: Impact Minimization
Direct impacts to jurisdictional waters, riparian resources, and natural communities of concern will be limited to the extent feasible.

BIO-22: Worker Education Program
The project biologist will present a worker education program. The project will instruct construction staff about the biological resources present in the project impact area, the relevant laws and regulations and permit conditions protecting them, and the conservation measures that are required to limit impacts to those resources. All construction staff that are scheduled to work on site for longer than 30 minutes will be required to receive the program before performing work.

BIO-23: Environmentally Sensitive Area (ESA) Designation and Fencing
The river and special status natural communities will be designated as environmentally sensitive areas. Prior to the beginning of construction, fencing and signage will be installed at the project disturbance boundaries. The project biologist will monitor the construction activities and verify that ground disturbance occurs outside of the environmentally sensitive areas. If it is found that the project requires further disturbance of jurisdictional waters or special status natural communities during construction, that disturbance will not occur until after Caltrans has conferred with the resource agencies.

BIO-24: Pre-Construction Surveys
Caltrans will conduct pre-construction surveys for special status species in suitable habitat. No work shall begin until the species have left the BSA or Caltrans has completed consultation with the appropriate agencies to determine and agree upon the following steps in construction while the species is present.

BIO-25: Pre-Construction Nest Removal (San Gabriel River Br. and Ridgeway St. UC)
Caltrans will remove bird nests from the bridges prior to construction, but outside of the bird nesting season, when the nests are inactive.

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?

Less Than Significant with Mitigation Incorporated – The project will mitigate for the temporary removal of riparian vegetation by replacing it on site and performing habitat enhancement in the construction area and in the pond to the northeast of the bridge. With avoidance and minimization measures and incorporated mitigation, the project would have a less than significant impact on any riparian habitat or other sensitive natural community.

Riparian Woodland
Portions of the riparian vegetation, the sycamore woodland, and the black and red willow thickets are stands of special status natural communities by the San Gabriel River bridge. The riparian woodlands (California sycamore woodlands [CaCode 61.310.00]) and riparian scrub (black willow thicket [CaCode 61.211.00]) are classified as special status natural communities by CDFW. Scale broom scrub is also a special status community, though none occurs in the PIA.

The project will remove fourteen (14) trees: nine (9) California sycamore and one (1) ash, totaling approximately 1,200 square feet of impacts to California sycamore woodland, plus two (2) black willows and two (2) red willows. One of these black willows is a tree isolated from the other riparian vegetation by a thoroughwort stand and disturbed areas, while the other black willow is part of the riparian woodlands on the left bank of the river downstream from the bridge. The total impact to black willow thicket is approximately 1,200 square feet. One red willow will be removed upstream of the bridge. The total impact to red willow thicket will be 1,210 square feet. All tree impacts will be temporary and mitigated for.

Scale Broom Scrub
Scale broom scrub is a community that is associated with intermittent washes in semi-arid and arid climates, alluvial fans, and remnant floodplain terraces. The dominant species in the community is the eponymous scale broom. Scale broom scrub was found in the BSA, but none of it occurred in the PIA. As with the rest of the BSA, it was extensively disturbed by fountain grass.

There will be no direct impact to scale broom scrub, as it does not occur in the PIA. The project will not indirectly affect this community with the implementation of avoidance and minimization efforts. No mitigation is required for this community, because it will not be removed.

Avoidance and Minimization Measures

The avoidance and minimization measures **BIO-1** through **BIO-5** described in the response to question a) also apply to the San Gabriel River's woodlands and thickets overall. The project will implement those avoidance and minimization efforts for riparian habitats and other sensitive natural communities.

For scale broom scrub, the following avoidance and minimization measures will be implemented at the San Gabriel River Br.:

BIO-26: Construction Monitoring
The project biologist will monitor the implementation of permit conditions and environmental commitments. The project biologist will monitor and watch project construction. The biologist will have the authority to pause construction and advise construction staff on the risks associated with disturbing areas that have not been authorized for disturbance.

BIO-27: Worker Education Program
The worker education program will also discuss scale broom scrub and how to avoid impacts to it.

BIO-28: Equipment Hygiene
The project will clean project equipment of invasive plant materials and vectors prior to their entry to the project impact area to prevent the introduction or proliferation of invasive plants that would affect scale broom scrub.

The following avoidance and minimization measures will be implemented to minimize impacts to critical habitat, jurisdictional waters and riparian habitats, and other sensitive natural communities.

BIO-29: Construction Monitoring-Permit Conditions
The project biologist will monitor the implementation of permit conditions. The biologist will monitor and quantify impacts to WOUS/WOTS, the CDFW

jurisdiction, and riparian trees; and record and report them. The biologist will monitor and document the implementation of the project's conservation measures.

BIO-30: Best Management Practices (BMPs) (San Gabriel River Br. and Ridgeway St. UC)
The project will implement Caltrans standard stormwater BMPs.

BIO-31: Impact Minimization
The project will limit the direct impacts to jurisdictional waters, riparian resources, and natural communities of concern to the extent feasible.

BIO-32: Environmentally Sensitive Area (ESA) Designation and Fencing
The project will designate the river and special status natural communities as environmentally sensitive areas. Prior to the beginning of construction, fencing and signage will be installed at the project disturbance boundaries. The project biologist will monitor construction activities and verify that ground disturbance occurs outside of the environmentally sensitive areas. If it is found that the project requires further disturbance of jurisdictional waters or special status natural communities during construction, that disturbance will not occur until after Caltrans has conferred with the resource agencies.

Mitigation Measures

The mitigation measures **BIO-6** through **BIO-10**, also described in response a), also address the San Gabriel River's woodlands and thickets overall. These mitigation measures will be implemented for habitat restoration.

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

No Impact- The project is not located on any federally protected wetland. It will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through any means.

Waters of the US occur in the PIA and adjacent to the PIA. Three pieces of evidence were observed to determine the location of the ordinary high water mark: the river stage at the river's highest flows; water staining on rocks; and the deposition of wrack along the shoreline and boulders. However, hydrophytic vegetation was not observed in the PIA; therefore, there are no jurisdictional wetlands in the PIA.

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?

Less Than Significant Impact – Migratory birds, special status species and otherwise, nest throughout the San Gabriel River BSA, including the PIA. Yellow warbler was observed in multiple surveys during the nesting season, producing territorial songs in the BSA. Southern California rufous-crowned sparrow, another special status species, was observed in the BSA but not in the PIA.

Non-special status species were also observed in the BSA, and likely more nesting occurred in the BSA than was observed. The steel trusses of the bridge are used by common raven (*Corvus corax*). House finch (*Haemorhous mexicanus*) and hooded oriole (*Icterus cucullatus*) were observed nesting in the palm trees lining the pond to the northeast of the project impact area. Hummingbirds were observed gathering nesting materials in the BSA, and white-throated swifts (*Aeronautes saxatalis*) were observed flying into a crevice that they likely nested in. The large sycamore in the ruderal field to the north of the project impact area has cavities that are used by acorn woodpeckers (Melanerpes formicivorus).

With the incorporation of avoidance and minimization measures the project would not interfere with the movement of any native resident or migratory fish or wildlife species or their corridors. The use of native wildlife nursery sites would not be impeded with the implementation of these measures.

Migratory Birds and Nesting

The project has the potential to directly affect nesting birds, particularly common raven. The project includes cleaning and painting the steel support structure of the bridge and doing so would require the removal of an existing raven nest. The project will remove a small portion of the total vegetation in the San Gabriel River and indirectly cause nesting disturbance to a small area of the San Gabriel Canyon. The construction activities on and around the bridge also have the potential to indirectly affect nesting ravens and other birds.

There are other places for resident coastal sage scrub and riparian nesting birds to nest while the project is being implemented and the project will replace riparian vegetation that will be removed. The following avoidance and minimization measures will be implemented to prevent direct and indirect effects to nesting birds.

<u>Avoidance and Minimization</u>

BIO-33: Pre-Construction Surveys – Nesting Birds (San Gabriel River Br. and Ridgeway St. UC)

To avoid "taking" migratory birds and yellow warbler, a biologist will perform nesting bird surveys no later than three days before initiation of vegetation removal is scheduled during the nesting bird season. If nesting birds are observed within vegetation to be removed or habitat to be disturbed, then the project will avoid removing that vegetation until the nestlings have fledged.

BIO-34: Construction Monitoring – Vegetation Removal and Noise Generating Activities

A qualified biologist will monitor the project during vegetation removal and other noise generating activities. The monitor will survey for nesting birds in the BSA,

if any have been previously identified during surveys or monitoring, and detect whether they are being disturbed by project activities. If the monitor observes migratory bird nest disturbance caused by the project, then construction will be paused within 150 feet (300 to 500 feet for species of special concern) of the project activities until the nestlings have fledged.

BIO-35: Worker Education Program
A qualified biologist will make a presentation to construction staff who are on site for longer than 30 minutes. The staff will be advised on the bird species that have been known to occur in the project area, their nest appearance and siting factors, the project's conservation measures, and the procedures for reporting and avoiding nesting migratory birds and yellow warbler.

BIO-25 will also be implemented to minimize impacts to nesting birds.

Habitat Connectivity and Wildlife Corridors
There is no habitat connectivity to affect at the Ridgeway St. Undercrossing, as it is surrounded by development within the suburban Greater Los Angeles area.

The San Gabriel River is a riparian corridor linking the lowlands to the mountains, providing shelter and rest stops for migratory birds and terrestrial species, such as coyotes and skunks, that travel between these areas. There is little fish passage opportunity due to substantial barriers both upstream and downstream of the BSA and the inconsistent/unseasonal hydrology of the river between the project location and Morris Dam.

The San Gabriel River does link habitats, but the project would not affect its capabilities to do so in any significant manner. Some disturbance is to be expected during construction, but with avoidance and minimization measures, the project would not permanently interfere with the movement of any native resident or migratory fish or wildlife species, with established native resident or migratory wildlife corridors, nor impede the use of native wildlife nursery sites.

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

No Impact – There are no local policies or ordinances protecting the trees or other biological resources that will be affected by this project.

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

No Impact – The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

2.5 Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Regulatory Setting

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as "unique" archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term "tribal cultural resources" to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

Environmental Setting

The information in this section is based on an Historic Property Survey Report (HPSR) prepared for this project and completed in February 2020. Methods used to complete the technical report included defining the Area of Potential Effects (APE) and conducting a records search of the

Caltrans Cultural Resources Database (CCRD) which contains 2018 and 2019 records from the California Historical Resources Information System (CHRIS) at the South Central Coastal Information Center (SCCIC). Additional efforts included reviewing pertinent cultural resource literature and maps, reviewing national, state, and local historical registers/lists, reviewing As-Built plans, contacting the Native American Heritage Commission (NAHC) and consulting with interested Native Americans, and analyzing the results in the technical documentation.

The records search, literature review, and Native American consultation have determined there are no known archaeological resources within or adjacent to the project areas. Review of the bridge As-Built plans documents extensive ground disturbance within the APE as a result of the construction of the bridges, approach slopes, and roads. Analysis of historic aerials and historic USGS maps also documents the San Gabriel River Bridge within the original route of the San Gabriel River and the Ridgeway Street Undercrossing within the former San Jose Wash (now channelized Thompson Wash to the south). Also, the proposed excavation at the Ridgeway Street Undercrossing bridge would be entirely within the original excavation and construction fill. Excavation at the San Gabriel River Bridge is proposed deeper than the original excavation, but no buried soils relating to human occupation would be anticipated at such depths in a river course. Given prior disturbance from the hydraulic processes, construction activities, and construction fill, it is not anticipated that there is any intact buried cultural soil. Thus, there is extremely low potential that any buried archaeological resources would be impacted by the development of the current project.

The two bridges, the San Gabriel River Bridge and the Ridgeway Street Undercrossing, were previously evaluated for inclusion in the National Register of Historic Places. Caltrans, in accordance with Section 106 PA Stipulation VIII.C.5 and as applicable PRC 5024 Memorandum of Understanding Stipulation VIII.C.5, had determined these properties (bridges) were not eligible for inclusion in the NRHP and those determinations remain valid. For the purposes of CEQA Guidelines 15064.5(a), there are No Historical Resources present in the APE.

CEQA Significance Determinations

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No Impact – The proposed project would not cause a substantial adverse change in 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?

No Impact – The proposed project would not cause a substantial adverse change in significance of an archaeological resources pursuant to §15064.5.

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

No Impact – No human remains are known to exist within the project APE. Therefore, construction of the Build Alternative would not impact known human remains. If human remains are exposed during construction, standard measures require compliance with State Health and Safety Code Section 7050.5 which states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains and that the Los Angeles County Coroner shall be contacted.

Avoidance and Minimization Measures

CUL-1: If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

CUL-2: If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Claudia Harbert, Senior District 7 Cultural Resource Specialist, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

2.6 Energy

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☒
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

CEQA Significance Determinations

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

No Impact – The proposed project would not negatively impact the area with an unnecessary consumption of energy resources during project construction or operation.

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

No Impact – The proposed project does not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

2.7 Geology and Soils

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Environmental Setting

The information below was presented in the *Structure Preliminary Geotechnical Report for the San Gabriel River Bridge* and *Structure Preliminary Geotechnical Report for the Ridgeway Street Bridge* completed in 2013. The San Gabriel River Bridge is located within the south facing slopes of the San Gabriel Mountains. The San Gabriel Mountains are part of the east-west trending Transverse Ranges Geomorphic Province. The north-south width of the province is bordered by the San Gabriel Mountains, the San Bernardino Mountains, and the San Rafael Mountains while the length of the province extends from Point Arguello in the west to the Eagle Mountains in Joshua Tree National Monument in the east. No known faults cross either project site.

The San Gabriel River Bridge crosses the San Gabriel River at a sharp bend where Quaternary surficial sediments overlie the bottom of the San Gabriel Canyon. The steep sides are formed by gray, medium-grained quartz diorite. The rock type is massive to gneissoid and may be considered moderately soft to moderately hard where the rock is exposed at the surface or forms a horizon with surficial soils. Massive rock is a homogenous rock type with strength that does not vary much throughout it. Gneiss rock is a high grade metamorphic rock with distinct layers. The quartz diorite may be considered hard to extremely hard when encountered below the soil horizon. The San Gabriel River continues south from the canyon and enters the San Gabriel Valley at Azusa wash. At this point the San Gabriel River crosses the Sierra Madre Fault, which defines the southern edge of the San Gabriel Mountains.

The Ridgeway Street UC is located within the Pomona Valley, in an alluviated valley south of the eastern part of the San Jose Hills. The San Jose Creek crosses under SR-71 at this point, and the Puddingstone Reservoir is located approximately 1 mile north of the bridge site. The site is underlain by Quaternary alluvium, which consists of 30 feet of loosely consolidated gravel and medium dense sand. Below this top layer is a layer of very dense sand to the maximum depth

explored. According to the as-built Log of Test Borings, groundwater was encountered at 726.8 feet elevation during a September 1966 subsurface exploration, and the Los Angeles County Department of Public Works Ground Water Wells website currently shows four monitoring wells located within 0.5 mile of the job site. These wells indicate that the maximum groundwater table elevations are approximately in the range of 664 to 672 ft. elevation. However, the groundwater table may fluctuate with the change of season or local irrigation activities.

Regulatory Setting

Topographic and geologic features are protected under the California Environmental Quality Act (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. Structures are designed using the Department's Seismic Design Criteria (SDC). The SDC provide 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.

CEQA Significance Determination

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

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

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

Less Than Significant Impact – The Caltrans District 7 Office of Geotechnical Design determined that the San Gabriel River Bridge is located about 10 miles away from the nearest known earthquake fault. The peak ground acceleration at this location is very high, so it is unlikely that liquefaction or other seismic related ground failure, including landslides, will occur. A geotechnical study will be prepared in the final design phase to analyze the soil conditions of the proposed site.

The scope of the project involves improving the seismic safety of two bridges that are currently experiencing deficiencies. There will be no new structures built. Therefore, there will be no impact.

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

No Impact – The proposed project would not 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?

No Impact – The proposed project is not located on any unstable geologic unit or soil. The proposed project would not cause the soil to become unstable, and it would not result in any 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?

No Impact – The proposed project is not located on expansive soil as defined in Table 18-1-B of the Uniform Building Code (1994). It will not create any substantial risk 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?

No Impact – The proposed project does not involve the use of septic tanks or alternate waste water disposal systems. There will be no change in the way highway water runoff is managed.

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

No Impact – The proposed project will not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. From a geological standpoint, paleontological resources are not expected to be present.

2.8 Green House Gas Emissions

Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. The analysis included in the climate change section of this document provides the public and decision-makers as much information about the project as possible. It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. These measures are outlined in the climate change section that follows the CEQA checklist and related discussions.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

CEQA Significance Determination

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

Less Than Significant Impact – The proposed project is not anticipated to result in increase in operational GHG emissions, as no additional roadway capacity will be added. However, per Governor's Executive Order B-30-15, Caltrans requires that construction GHG emissions be quantified. These quantities, estimated using the Caltrans Emissions Tool 2018 (CAL-CET) v1.2, are available in the Air Quality Memorandum and summarized in Table 2.1 below. They are anticipated to have a less than significant impact on the environment.

Table 2.1 Greenhouse Gas Emissions

	ROG	CO	NOx	PM10	PM2.5	CO2
Daily Average (lbs/day)	1.413	5.96	8.80	0.848	0.596	1988
Annual Average (tons/year)	0.099	0.42	0.61	0.059	0.042	139

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

No Impact – The proposed project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The following measures will be implemented to reduce the amount of greenhouse gas emissions that would result from construction of this project:

Avoidance and Minimization Measures

CC-1 Ensure that all construction equipment is properly tuned and maintained.

CC-2 Minimize idling time to 5 minutes to save fuel and reduce emissions.

CC-3 To the extent possible, minimize unnecessary vehicular and machinery activities, and minimize the number of construction equipment operating simultaneously through efficient management practices.

CC-4 Promote and encourage use of solar-powered equipment when feasible.

CC-5 Incorporate native plants and vegetation to the project design to increase carbon sequestration.

CC-6 Through a combination of preservation and new planting, avoid an ultimate net loss of tree canopy within the project limits (minimum 1:1 replacement of trees lost) or compensate for trees lost to the extent possible by planting trees on- or off-site.

TRAF-1: Traffic Management Plan Data Sheet

A Traffic Management Plan (TMP) Data Sheet shall be developed to implement practical measures to minimize any traffic delays that may result from lane restrictions or closures in the construction work zone. The TMP Data Sheet shall

plan and design strategies to improve mobility, as well as increase safety for the traveling public and highway workers. These strategies include, but are not limited to, dissemination of information to motorists and the greater public, construction incident management strategies, deployment of flaggers, and alternate route planning/detouring. The TMP Data Sheet would be in accordance with the lane closure charts provided in the Maintaining Traffic Specifications.

2.9 Hazards and Hazardous Materials

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Regulatory Setting

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also 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 cleanup 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 cleanup of 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 found, disturbed, or generated during project construction.

Environmental Setting

Information regarding hazardous wastes and materials was obtained from a Technical Memorandum titled "*Updated Preliminary Hazardous Waste Assessment for Seismic Bridge Retrofit and Barrier Replacement*" prepared on March 9, 2020. The assessment consisted of an evaluation of the proposed project on the San Gabriel Bridge and the Ridgeway Street Undercrossing, a departmental record review, and regulatory agency records review. Key elements of the project scope of work will involve environmental issues common to highway construction projects. Of concern are the potential occurrence of Asbestos Containing Construction material (ACCM), Aerially Deposited Lead (ADL), Lead Based Paint, contaminated groundwater, and electrical waste.

CEQA Significance Determination

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

Less Than Significant Impact - The Hazardous Waste Assessment has identified the potential for the presence of: ACCM, ADL, Lead Based Paint, Groundwater and Electronic Waste at both bridges. All standard measures and Best Management Practices will be followed for the removal and transport of materials to an appropriate disposal facility. Incorporation of standard and non-standard special Caltrans provisions, found in the next question, would result in a less than significant impact.

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

Less Than Significant Impact - The Hazardous Waste Assessment has identified the potential for hazardous materials to be disturbed by the proposed construction activities. The following describes hazardous waste concerns per bridge, with incorporation of minimization measures, for a finding of a less than significant impact.

Ridgeway Street Undercrossing

Asbestos Containing Construction Material (ACCM)
The project scope will include work that may pose a hazard to human health and the environment if asbestos is contained in the bridge structure, deck, and railings. Bridges are considered regulated structures by the USEPA and require National Emission Standards for Hazardous Air Pollutants (NESHAP) notification to the delegated air district. The delegated air district for Los Angeles County is the South Coast Air Quality Management District (SCAQMD). SCAQMD requires an asbestos survey to accompany the required notification of proposed work on structures. During the Final Design Phase, Caltrans will conduct an asbestos survey to determine whether asbestos containing construction materials are present at the Ridgeway Street Undercrossing.

If Asbestos is identified, all standard measures and Best Management Practices will be followed for the removal and transport of materials to an appropriate disposal facility.

Aerially Deposited Lead (ADL)
Excavation in unpaved areas will disturb soils potentially contaminated with ADL. During the Final Design Phase Caltrans will conduct a Site Investigation for ADL to characterized soils and determine the appropriate methods for handling and managing project soils.

A Lead Compliance Plan (LCP) will be required to protect workers from exposure to lead while handling soils.

Groundwater

Boring logs for this bridge from 1969 were reviewed and indicated groundwater may be encountered during construction activities. Groundwater, as measured on September 1966, was encountered approximately 39 feet below the ground surface (ft-bgs). Groundwater has the potential to be contaminated from offsite releases unrelated to project activities.

A review of the State Water Resources Control Board (SWRCB) Geotracker and Department of Toxic Control Substances (DTSC) Envirostor databases identified one hazardous waste site within 0.5 miles of the project. The hazardous waste site "HOUSEHOLD FINANCE CORP (T0603729146) had a release of diesel fuel from a leaking underground storage tank and was granted regulatory closure as a category 1 low threat closure on 1/11/2007. No further information related to the site was available on Geotracker.

During the Final Design Phase Caltrans will determine if construction dewatering is required. If required, Caltrans will then conduct a Site Investigation to categorize groundwater and determine the appropriate method for handling and disposal.

Electronic Waste
Ridgeway Street UC has streetlights anchored to the railings which will be removed. Lighting components and electrical equipment may contain hazardous substances such as polychlorinated biphenyls (PCB) ballasts, fluorescent or mercury lamps, mercury switches and timers, electronic components with heavy metals, and/or other electrical components regulated under Title-22. Electrical equipment will either be reused or disposed of as hazardous waste at an appropriate facility.

San Gabriel River Bridge

Asbestos Containing Construction Material (ACCM)
The project scope will include work which may pose a hazard to human health and the environment if asbestos is contained in the bridge structure, deck, and railings. Bridges are considered regulated structures by the USEPA and require National Emission Standards for Hazardous Air Pollutants (NESHAP) notification to the delegated air district. The delegated air district for Los Angeles County is the SCAQMD. SCAQMD requires an asbestos survey to accompany the required notification of proposed work on structure.

During the Final Design Phase Caltrans will conduct an asbestos survey to determine whether asbestos containing construction materials are present at the San Gabriel River Bridge.

Lead Based Paint
The bridge was built in 1933 and repainted in 1949, likely with Lead Based Paint (LBP). In 1986 the bridge was 100% sandblasted, and water-based primers and a water-based aluminum finish paint were applied; however, it cannot be confirmed if all the lead paint was removed during this activity.

Bridges are considered regulated structures by the USEPA and require National Emission Standards for Hazardous Air Pollutants (NESHAP) notification to the delegated air district. The

delegated air district for Los Angeles County is the SCAQMD. SCAQMD requires a lead paint survey to accompany the required notification of proposed work on structure.

During the Final Design Phase Caltrans will conduct a Lead Based Paint Survey to determine whether LBP is present at San Gabriel River Bridge.

Prior to and following disturbance of paint systems on the San Gabriel River Bridge soil samples for lead will be collected. Soil samples will be collected as part of Site Investigations by Caltrans during the Final Design Phase and following construction.

A LCP will be required to protect workers from exposure to lead while removing and handling lead based paint.

Aerially Deposited Lead (ADL)
Excavation in unpaved areas will disturb soils potentially contaminated with ADL. During the Final Design Phase Caltrans will conduct a Site Investigation for ADL to characterized soils and determine the appropriate methods for handling and managing project soils at the San Gabriel River Bridge.

Groundwater
It is likely groundwater will be encountered during construction requiring construction dewatering. Groundwater has the potential to be contaminated from offsite releases unrelated to project activities. A review of the State Water Resources Control Board (SWRCB) Geotracker and Department of Toxic Control Substances (DTSC) Envirostor databases did not identify hazardous waste or petroleum sites near the construction area. It is not anticipated that groundwater will contain hazardous waste.

During the Final Design Phase Caltrans will determine if construction dewatering is required. If required, Caltrans will then conduct a Site Investigation to categorize groundwater and determine the appropriate method for handling and disposal.

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

No Impact – No school lies within one-quarter mile of the project**.**

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

No Impact – The proposed project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

e) For a project located within an airport land use plan, or where such a plan has been adopted, within 2 miles of a public airport, would the project result in a safety hazard for people residing, or working in the project area?

No Impact – No airport lies within 2 miles of the project.

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

No Impact – No airport lies within 2 miles of the project.

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

No Impact – There may be a limited, short-term interruption in the flow of traffic during construction at each bridge. However, as standard practice a Traffic Management Plan will be in place to ensure the disruption is minimal and ensure that any emergency response or evacuation is accommodated. This will include notifying the California Highway Patrol and local first responders of any detours to avoid the construction areas.

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

Less Than Significant Impact – Portions of the San Gabriel Mountains are heavily vegetated and subject to potential wildfires. SR-39 is the only north-south route leading out of the mountains in the vicinity of the San Gabriel River Bridge and construction will temporarily affect the flow of traffic on that route. This could impede the evacuation of the few residents north of the bridge and visitors who go to recreate in the mountains. Although it is possible for emergency personnel to escort people through the closed section of SR-39 north to SR-2 (and it has been done before), the southern route toward the City of Azusa is usually the fastest and safest way to exit the mountain.

As standard practice a Traffic Management Plan will be in place to ensure the disruption in traffic is minimal and to ensure that any evacuation required as a result of wildfire is accommodated. This will include notifying the California Highway Patrol and local first responders. The impact is anticipated to be less than significant.

Avoidance and Minimization Measures

HW-1 If Asbestos is identified, all standard measures and Best Management Practices will be followed for the removal and transport of materials to an appropriate disposal facility.

HW-2 A Lead Compliance Plan (LCP) will be required to protect workers from exposure to lead while handling soils.

HW-3 During the Final Design Phase Caltrans will determine if construction dewatering is required. If required, Caltrans will then conduct a Site Investigation to categorize groundwater and determine the appropriate method for handling and

disposal.

HW-4 Electrical equipment will either be reused or disposed of as hazardous waste at an appropriate facility.

HW-5 Standard Special Provision (SSP) 14-11.15 for Electronic Waste in the Revised Standard Specifications will be followed.

HW-6 During the Final Design Phase Caltrans will conduct an asbestos survey to determine whether asbestos containing construction materials are present at San Gabriel River Bridge.

HW-7 During the Final Design Phase Caltrans will conduct a Lead Based Paint Survey to determine whether LBP is present at San Gabriel River Bridge.

HW-8 Prior to and following disturbance of paint systems on the San Gabriel River Bridge soil samples for lead will be collected. Soil samples will be collected as part of Site Investigations by Caltrans during the Final Design Phase and following construction.

HW-9 During the Final Design Phase Caltrans will determine if construction dewatering is required. If required, Caltrans will then conduct a Site Investigation to categorize groundwater and determine the appropriate method for handling and disposal.

2.10 Hydrology and Water Quality

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on-or off-site;	☐	☐	☐	☒
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☐	☒
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☒

(iv) impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Regulatory Setting

The State Water Resource Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB) are responsible for establishing the water quality standards required by the Clean Water Act and for regulating discharges to ensure compliance with those standards. The Porter-Cologne Act provides guidelines for governing water quality regulations in California. The governing Regional Water Quality Control Board is the Los Angeles Regional Water Quality Control Board.

Section 303(d) of the Clean Water Act lists impaired waters, which are waters that do not meet the standard for one or more specific pollutants and must develop a Total Maximum Daily Load (TMDL) based on the severity of the pollution and sensitivity to the use of the water. A TMDL establishes the maximum amount of a pollutant allowed in the body of water and serves as the starting point or planning tool for restoring water quality. Once a TMDL is developed and approved by the United States Environmental Protection Agency (USEPA), the water body is no longer on the 303(d) list, but it is still tracked until the water is fully restored.

Environmental Setting

The receiving water body for the San Gabriel River bridge is the San Gabriel River. The bridge is located in the San Gabriel River Watershed, which receives drainage from 689 square miles of eastern Los Angeles County. Its headwaters originate in the San Gabriel Mountains. The watershed connects to the Los Angeles River through the Whittier Narrows Reservoir, but usually only during high storm flows. The river begins as a soft bottom channel, but the lower part of the river becomes a concrete-lined channel before becoming a soft bottom channel again near the ocean in the city of Long Beach. The San Gabriel River has been dammed less than one mile upstream of the bridge by the Morris Dam, which causes it to have an unnatural and inconsistent hydrology. Downstream of the bridge, the Old Azusa Tunnel has an outlet northeast that conveys groundwater to the river year-round.

The San Gabriel River at this Reach is not on the 303(d) list of impaired Receiving Water Bodies. According to the Federal Emergency Management Agency (FEMA), the bridge is located in Flood Zone A, which means there is a 1% annual chance of flooding.

There are several TMDLs established for the San Gabriel River, Estuary, and Tributaries for other Reaches, including for indicator bacteria, trash, metals and selenium. The TMDL for indicator bacteria will be adopted by the Los Angeles Regional Water Quality Control Board and requires Responsible Agencies, including Caltrans, to achieve compliance with waste load allocations (WLAs) in 20 years. The Trash TMDL for the East Fork of the San Gabriel River has been in effect since April 17, 2001, but Caltrans is not a responsible party. The San Gabriel River and Impaired Tributaries Metals and Selenium TMDL was approved by the USEPA on March 26, 2007. It assigns WLAs to Caltrans for copper in the San Gabriel River Estuary, Reach 1, and Coyote Creek, and for Selenium in San Jose Creek Reaches 1 and 2. It also assigns Wet Weather WLAs to Caltrans for lead in San Gabriel River, Reach 2 and upstream reaches and tributaries as well as copper, lead, and zinc in Coyote Creek and its tributaries. Caltrans will be working with groups of Responsible Agencies to jointly comply with the TMDL.

The Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL became effective on March 23, 2012. The targeted pollutants are copper, lead, zinc, polycyclic aromatic hydrocarbons (PAHs), dichlorodiphenyltrichloroethane (DDT), polychlorinated biphenyl (PCB), benzopyrene, and dieldrin in the water column of the channel, the water column of the harbors, and the sediment in the harbors. This TMDL requires the dischargers of the Los Angeles River and the San Gabriel River to monitor water quality at the mouth of each river. Caltrans participates with other groups of agencies to jointly comply.

The Ridgeway St. Undercrossing is situated in an urbanized area and does not cross a body of water. The receiving water body for the Ridgeway St. Undercrossing is San Jose Creek Reach 2 (from Temple Ave. to I-10 at White Ave.), which is part of the San Gabriel River Watershed. San Jose Creek Reach 2 is on the 303(d) list of impaired Receiving Water Bodies for coliform bacteria. The Rock Creek Watershed has no TMDLs. The bridge is not located in a flood zone.

CEQA Significance Determination

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

Less than Significant – Construction for the Ridgeway St. Undercrossing will not occur over water. Here, activities will occur mostly below the grade of the highway in areas that have already been disturbed or recently maintained, and accessed from the adjacent land level with Ridgeway St.

At the San Gabriel River Bridge, no project work would affect groundwater coming from the Old Azusa Tunnel. There are several TMDLs in place for the San Gabriel River, but none will be affected by the project.

The removal and replacement of barrier railings and the cleaning and painting of the San Gabriel River bridge has the potential for project materials and debris to fall into the river. However, the project will use a containment system to prevent materials from falling into the river. Excavators with wide buckets parked on the bridge deck may also be used to contain project materials, and the bridge superstructure will be wrapped with plastic tarps during painting. With these project features, standard BMPs, and adherence to the guidelines and procedures outlined in the latest Statewide Storm Water Management Plan (SWMP), impacts related to the violation of water quality standards or waste discharge requirements would be less than significant.

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

No Impact – The proposed project would not deplete any groundwater supplies, nor would it interfere with groundwater recharge or any recharge facility. No project work would affect groundwater coming from the Old Azusa Tunnel.

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

(i) result in substantial erosion or siltation on- or off-site;

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

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

(iv) impede or redirect flood flows?

No Impact – The project would not substantially alter any existing drainage pattern at either bridge site. The project will not add any impervious surface to the San Gabriel River, and soil disturbance is extremely minimal (Total Disturbed Soil Area (DSA) is 0.1 acre). There will be a small permanent loss to all jurisdictional areas due to the construction of new piles, but the impact will be negligible and would not result in any of the outcomes described in (i) through (iv).

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

No Impact – The San Gabriel River bridge is located in Flood Zone A, but the project would not risk the release of any stored pollutants due to project inundation. Any generated waste would be contained and managed. It is not in a tsunami or seiche zone.

The Ridgeway St. Undercrossing is not located in any flood hazard, tsunami, or seiche zone.

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

No Impact – The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Avoidance and Minimization Measures

WQ-1 This project requires a Water Pollution Control Program (WPCP), as the total disturbed soil area in the project is less than 1 acre.

WQ-2 Several Job Site Management BMPs are appropriate for this project and will be implemented during construction as necessary to minimize water quality impacts. They include: Sweeping; Spill Prevention and Control; Hazardous Waste Management; Solid Waste Management; Concrete Waste Management; Water Conservation and Practices; Illegal Connection and Discharge Reporting; Vehicle and Equipment Fueling and Maintenance; Concrete Curing; and Paving, Sealing, Sawcutting, and Grinding Operations. They will be implemented as relevant and necessary.

2.11 Land Use and Planning

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Environmental Setting

The project involves the seismic bridge retrofit and barrier replacement of two bridge structures, the San Gabriel River Bridge and Ridgeway Street Undercrossing. The current land use will remain the same and no acquisitions are required.

CEQA Significance Determinations

a) Physically divide an established community?

No Impact – The proposed project does not propose additional lanes to the existing facility and would not physically divide an established community.

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

No Impact – This is a seismic retrofit project on the highways. No change of land use will be required. The proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

2.12 Mineral Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Environmental Setting

Neither the San Gabriel River Bridge nor the Ridgeway Street Undercrossing are located in oil and gas fields or located near any mapped mineral resources.

CEQA Significance Determinations

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

No Impact – The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

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

No Impact – The proposed project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

2.13 Noise

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

CEQA Significance Determinations

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

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

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

No Impact - The Caltrans District 7 Noise & Vibration Branch has determined, based on the scope of this project as listed above, this is not a Type I project as defined in the 2011 Traffic

Noise Analysis Protocol and it is not expected to raise traffic noise levels or cause a substantial noise increase. Therefore, a detailed noise study is not required for this project. However, potential construction noise impacts would need to be addressed since there are noise sensitive receptors near northbound LA-71. Section 14-8.02, Sound Control Requirements, of the Caltrans standard specifications states construction noise levels should not exceed 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m. These requirements also state noise levels generated during construction shall comply with applicable local, state, and federal regulations. Appropriate, standard best management practices will be implemented to ensure construction noise and vibration levels are minimized and to abide by the requirements stated above. Furthermore, the project is not located in the vicinity of any airport or airport land use plan. Therefore, there will be no impacts.

2.14 Population and Housing

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

CEQA Significance Determinations

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

No Impact – The project will not cause or induce growth. Although the existing bridges would be widened, no lanes will be added, and the capacity of the roadway will not increase.

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

No Impact – There would be no impact as the project would not result in relocations or displacements.

2.15 Public Services

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	☐	☐	☐	☒
ii. Police protection?	☐	☐	☐	☒
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

CEQA Significance Determinations

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

i) Fire protection?

ii) Police protection?

iii) Schools?

iv) Parks?

v) Other public facilities?

No Impact - The project would not generate an increase in population and would not generate additional need for other public facilities that would require new or altered facilities. Therefore, there would be no impact.

2.16 Recreation

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

Environmental Setting

Within a 0.5-mile radius of the project site at the San Gabriel River Bridge along SR-39, there are five recreational areas and parks. These five areas and parks include the Angeles National Forest, Pasadena City Parkland, San Gabriel River, Azusa River Wilderness Park, and Azusa Bike Trail Head/Parking Lot.

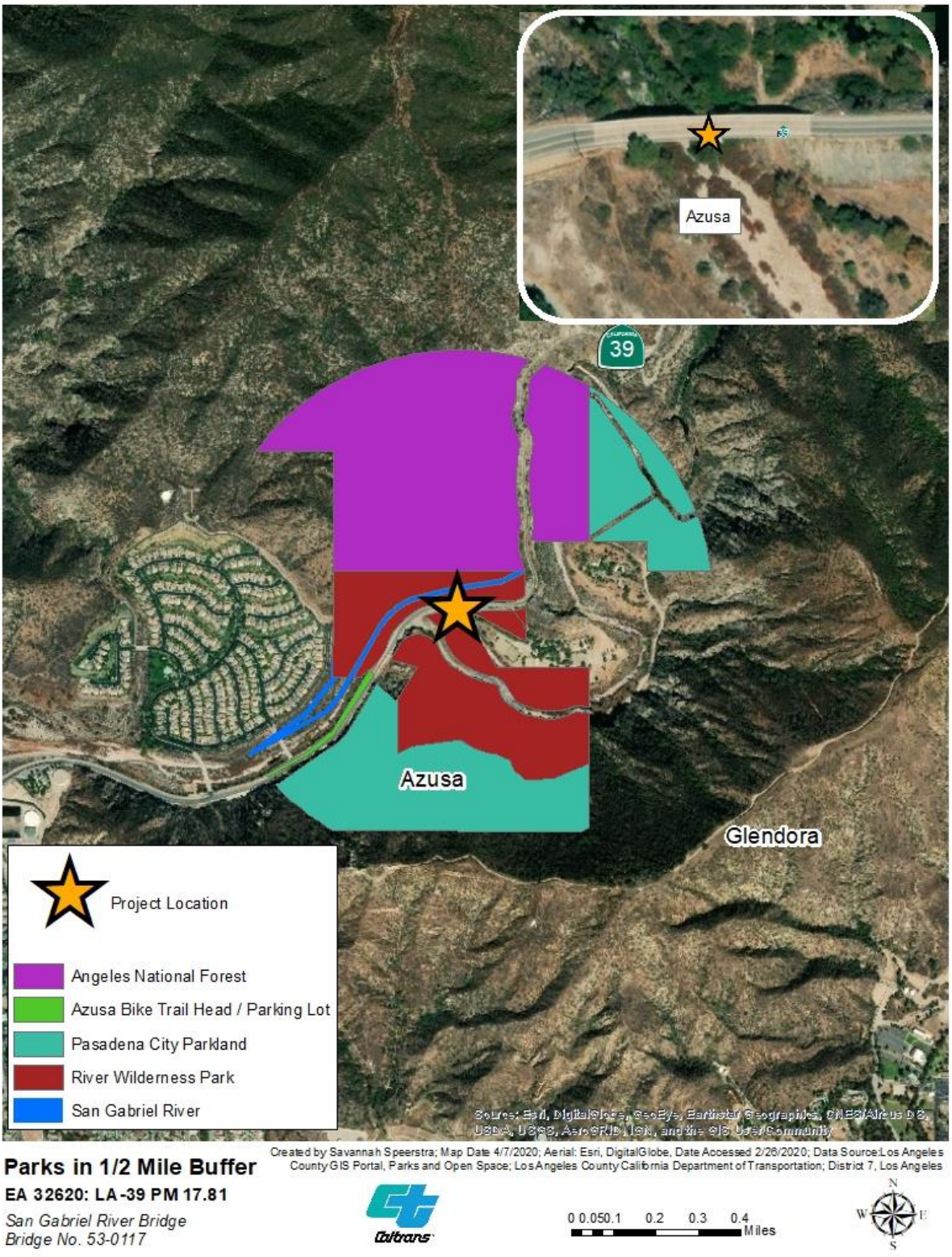

Figure 2.4 Recreation Around San Gabriel River Bridge

Within a 0.5-mile radius of the project site at the Ridgeway Street Undercrossing along SR-71, there is one regional park. This is the Los Angeles County Frank G. Bonelli Regional Park.

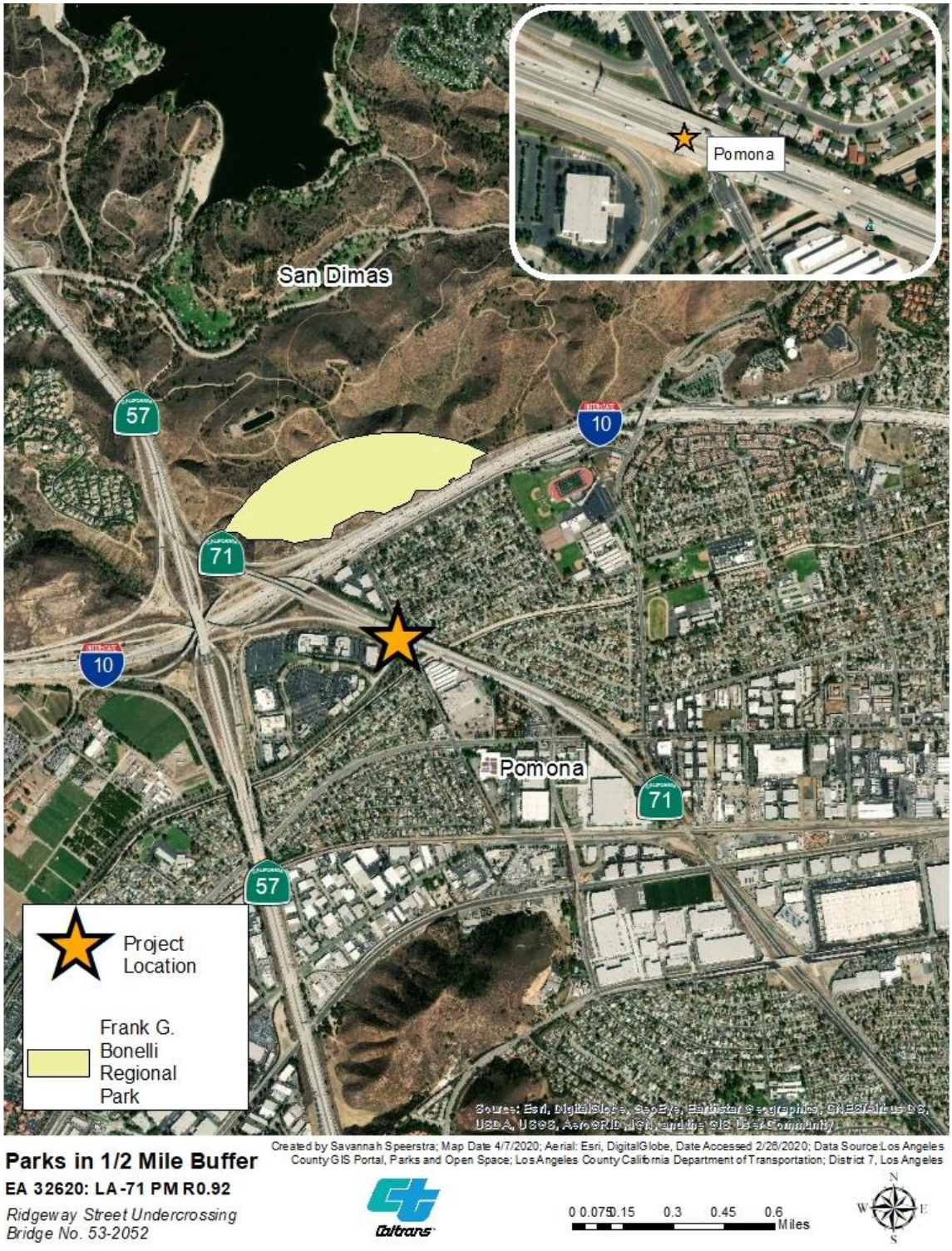

Figure 2.5 Recreation Around Ridgeway St. Undercrossing

CEQA Significance Determinations

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?

No Impact – The project proposes bridge seismic retrofits and bridge barrier replacement; no new travel lanes would be added. This work would not increase the use of these existing recreational facilities and regional parks. The project would not induce population growth nor substantially alter the public's ability to access these facilities. Therefore, the proposed project would have no impact on 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?

No Impact - Access to the surrounding recreational facilities and parks near the project area will not be altered as a result of this project. The project proposes bridge work which would not require the construction or expansion of the existing recreational facilities and parks. Therefore, there would be no adverse physical effect on the environment as a result of the proposed project.

2.17 Transportation

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☒	☐

CEQA Significance Determinations

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

No Impact – The project would improve the long-term viability of the two bridge structures; it would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system.

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

No Impact – No additional travel lanes would be added to the bridges and the project would not alter traffic or traffic patterns except for potential minor delays or detours during construction. The project would not conflict with, or impact vehicle miles traveled.

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

No Impact – This project will improve safety by strengthening the bridge against seismic activity. The project will not introduce new geometric design features along the bridges. All design features of the bridges will be maintained; therefore\, no new hazards would be introduced. Additionally, both bridges will have the guardrails updated to current design standards.

d) Result in inadequate emergency access?

Less than Significant Impact – The proposed project may result in short-term effects on emergency response and evacuation along and in the vicinity of the project sites. Therefore, a Traffic Management Plan (TMP) Data Sheet will be prepared to direct traffic operations during construction. The TMP Data Sheet will addresses lane closure requirements and seek to inform the public and motorists regarding the construction schedule and anticipated traffic delays during construction.

Partial traffic closure will be required during construction work hours at the San Gabriel River Bridge and Ridgeway Street UC. The San Gabriel River Bridge will be reduced from 2 lanes to 1 lane during off-peak hours. A flagger will be used to direct traffic by using the 1 lane to reverse traffic control.

SR-71 at Ridgeway Street UC will be closed in both directions during nighttime off-peak hours. The mainline freeway lanes, interchange ramps, and freeway connectors within this area on SR-71 will be closed, as will the local street lanes on Ridgeway Street. The right shoulder on both bridges will also be closed to traffic using temporary K-rail.

Outside of the hours described above, two through-traffic lanes on each bridge would be provided during construction. Outside of the construction area, traffic will continue to utilize the original highway configuration. As required by the respective standards of Caltrans and the affected jurisdictions, emergency access would be maintained or provided as part of the final project design. As with any freeway or highway construction project, the closure of any lanes during construction will be coordinated with local emergency services. Collectively, these project features would specifically address requirements for coordination with emergency service providers and accommodation of emergency travel routes and access through active construction areas. The proposed project would not impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan. With implementation of the identified project features, potential impacts related to emergency response times and plans would be less than significant.

Avoidance and Minimization Measures

TRAF-1: Traffic Management Plan Data Sheet

A Traffic Management Plan (TMP) Data Sheet shall be developed to implement practical measures to minimize any traffic delays that may result from lane restrictions or closures in the construction work zone. The TMP Data Sheet shall plan and design strategies to improve mobility as well as increase safety for the traveling public and highway workers. These strategies include, but are not limited to, dissemination of information to motorists and the greater public, construction incident management strategies, deployment of flaggers, and alternate route planning/detouring. The TMP Data Sheet would be prepared in accordance with the lane closure charts provided in the Maintaining Traffic Specifications.

2.18 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

Environmental Setting

The project area does not include any historical resources either listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). No California Native American tribal cultural resource will be impacted.

CEQA Significance Determinations

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

No Impact – The project area does not include any historical resources either listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

No Impact – Caltrans consulted with all six tribal representatives identified by the NAHC. From consultation responses, it was determined there would be no impact to California Native American tribal cultural resources and there were no concerns regarding the project scope.

2.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
a) Require or result in the construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

CEQA Significance Determinations

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

No Impact – Other than minor construction dust control or concrete production, the project would not utilize or result in the need for future water or wastewater services. Therefore, there would be no impact.

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

No Impact – Other than minor construction dust control or concrete production, the project would not utilize or result in the need for future water supplies. Therefore, there would be no impact.

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

No Impact – No wastewater facility will be required as a result of the project.

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

No Impact – Other than minor construction-related debris, the project would not result in the production of any solid waste. There would be no conflict with State or local standards nor solid waste reduction goals.

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

No Impact – All sold waste would be disposed of in accordance with federal, state, and local statutes and regulations.

2.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

The San Gabriel River Bridge is located in an area identified as a Local Responsibility Area (LRA) Very High Fire Hazard Severity Zone (VHFHSZ) by the California Department of Forestry and Fire Protection in its Fire and Resource Assessment Program. It is not located in a State Responsibility Area (SRA), but it is near an SRA marked Very High as well (about 650 feet away). See Figure 3.8 for the Fire Hazard Severity Zone map showing the bridge's location.

The Ridgeway Street Undercrossing is not in any Fire Hazard Severity Zone, although it is somewhat near (about 3,500 feet or 0.66 mile) a VHFHSZ in a Local Responsibility Area. See Figure 3.10 for the FHSZ map showing the Ridgeway Street Undercrossing.

CEQA Significance Determinations

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

Less Than Significant Impact – Portions of the San Gabriel Mountains are heavily vegetated and subject to potential wildfires. SR-39 is the only north-south route leading out of the mountains in the vicinity of the San Gabriel River Bridge and construction will temporarily affect the flow of traffic on that route. This could impede the evacuation of the few residents north of the bridge and visitors who go to recreate in the mountains. Although it is possible for emergency personnel to escort people through the closed section of SR-39 north to SR-2 (and it has been done before), the southern route toward the City of Azusa is usually the fastest and safest way to exit the mountain.

As standard practice a Traffic Management Plan will be in place to ensure the disruption in traffic is minimal and to ensure that any evacuation required as a result of wildfire is accommodated. This will include notifying the California Highway Patrol and local first responders. The impact is anticipated to be less than significant.
to emergency response times and plans would be less than significant

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

No Impact – The seismic retrofit of the5 San Gabriel River Bridge will have no impact upon wildfire risk.

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

No Impact – The installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environments is not required**.**

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

No Impact – The project will not add new structures nor is it located in an area that is likely to be affected by runoff, post-fire slope instability, or drainage changes.

2.21 Mandatory Findings of Significance

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?	☐	☒	☐	☐
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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

CEQA Significance Determinations

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?

Less Than Significant with Mitigation Incorporated – The proposed project does have some potential to degrade the quality of the environment around the San Gabriel River bridge and potentially reduce the habitat of a wildlife (but not fish) species. However, with the avoidance, minimization, and mitigation measures described in Section 2.4 Biological Resources, **BIO-1** through **BIO-30**, these impacts will be less than significant. Please refer to Section 2.4 for a more detailed analysis of individual fish and wildlife species and habitats.

Even without mitigation, the proposed project would not 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.

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)?

Less Than Significant Impact– When considered along with other closely related past, present and foreseeable future projects, the proposed project is not expected to contribute to significant impacts related to Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, and Transportation. The only reasonably foreseeable projects are maintenance related and would not have long-term impacts to Biological Resources. The San Gabriel River Bridge at SR-39 is in a biologically sensitive area and is expected to be treated as such during future maintenance projects to avoid biological degradation within the area.

Cumulative effects to biological resources were also considered, and they were determined to be less than significant with avoidance, minimization, and mitigation measures **BIO-1** through **BIO-35** incorporated.

The project will not substantially contribute to the decline of riparian woodlands or the loss of Waters of the U.S. or CDFW jurisdiction with the restoration of project impacts and due to the project's relatively minor disturbance area. The project will remove a small portion of the total vegetation in the San Gabriel River and indirectly cause nesting disturbance to a small area of the San Gabriel Canyon, but there are other places in proximity to the project area for resident coastal sage scrub and riparian birds to nest while the project is being implemented. The project will replace riparian vegetation that will be removed, and the mitigated woodland may be in a location that provides better nesting habitat than the current existing Caltrans-maintained trees. Therefore, the project will not contribute substantially to the cumulative impacts to migratory

birds. The proposed project would affect only a small part of suitable southwestern willow flycatcher and least Bell's vireo habitat (which would be restored), and there are no known projects in the vicinity that would affect the species substantially.

Scale broom scrub is a severely depleted community, especially in southern California, but the proposed project will not contribute to cumulative impacts to scale broom and other associates, and there are no projects in the near future that are expected to affect the species in or near the BSA. There are no known projects that would contribute to cumulative impacts to the slender mariposa-lily, Parry's spineflower, San Gabriel Mountains dudleya, or Robinson's pepper-grass. Most effects to the Crotch bumble bee have occurred due to the spread of agriculture and suburbanization in coastal California; the proposed project would not substantially contribute to cumulative impacts to this species. This proposed project will not induce population growth in the project vicinity and will not contribute to further loss of habitat. The project would not affect any bat maternity roost or change crucial bat habitat.

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

Less Than Significant Impact- As discussed throughout this document, the proposed project has the potential to result in impacts on human beings, either directly or indirectly. The project will produce impacts in the areas of Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, and Transportation. However, these impacts are not considered significant and will be reduced further through implementation of avoidance and minimization measures. Therefore, the proposed project as a whole will not have substantial adverse effects on human beings, either directly or indirectly.

Chapter 3 – 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 gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

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 in 1988 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 generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels). This analysis will include a discussion of both.

Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

Federal

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2019). This approach encourages planning for sustainable highways by addressing

climate risks while balancing environmental, economic, and social values— "the triple bottom line of sustainability" (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Economy (CAFE) Standards. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the CAFE program based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Energy Policy Act of 2005, 109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

The U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) is responsible for setting GHG emission standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. Fuel efficiency standards directly influence GHG emissions.

State

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs) including, but not limited to, the following:

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

Assembly Bill (AB) 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (ARB) create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

EO S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the governor's 2030 and 2050 GHG reduction goals.

Senate Bill (SB) 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

EO B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$).[1] Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

SB 32, Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

SB 1386, Chapter 545, 2016, declared "it to be the policy of the state that the protection and management of natural and working lands … is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

[1] GHGs differ in how much heat each trap in the atmosphere (global warming potential, or GWP). CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent" (CO_2e). The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.

AB 134, Chapter 254, 2017, allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

SB 743**,** Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles travelled, to promote the state's goals of reducing greenhouse gas emissions and traffic related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150**,** Chapter 150, 2017, Regional Transportation Plans: This bill requires ARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.

EO B-55-18 (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

EO N-19-19 (September 2019) advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce GHG emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This EO also directs ARB to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

Environmental Setting

The proposed project involves a seismic retrofit and barrier replacement on two bridge structures in different areas. The first is the San Gabriel River Bridge, located on SR-39, north of the city of Azusa and crossing the San Gabriel River at the bottom of the Angeles National Forest.

The San Gabriel River Bridge is located away from highly urbanized areas and experiences low traffic. A residential neighborhood lies to the west, and a horse-riding school lies to the east, but neither are in direct proximity to the bridge. A bikeway ends 1200 feet south of the beginning of the San Gabriel River Bridge and will be maintained.

The second structure is the Ridgeway Street Undercrossing, located on SR-71, just south of Interstate (I) 10 and east of SR-57 in Pomona. The Ridgeway Street Undercrossing is in an urban area of Los Angeles County with a well-developed road and street network. The area around this bridge is primarily residential on the northeast and south sides and commercial/business plazas on the north, east, and west.

An RTP/SCS by the Southern California Association of Governments (SCAG) guides transportation and housing development in the project area on the regional scale, and the Los Angeles County General Plan Air Quality element addresses GHGs in the project areas.

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4.

National GHG Inventory

The U.S. EPA prepares a national GHG inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change. The inventory provides a comprehensive accounting of all human-produced sources of GHGs in the United States, reporting emissions of CO_2, CH_4, N_2O, HFCs, perfluorocarbons, SF_6, and nitrogen trifluoride. It also accounts for emissions of CO_2 that are removed from the atmosphere by "sinks" such as forests, vegetation, and soils that uptake and store CO_2 (carbon sequestration). The 1990–2016 inventory found that of 6,511 $MMTCO_2e$ GHG emissions in 2016, 81% consist of CO_2, 10% are CH_4, and 6% are N_2O; the balance consists of fluorinated gases (EPA 2018a). In 2016, GHG emissions from the transportation sector accounted for nearly 28.5% of U.S. GHG emissions.

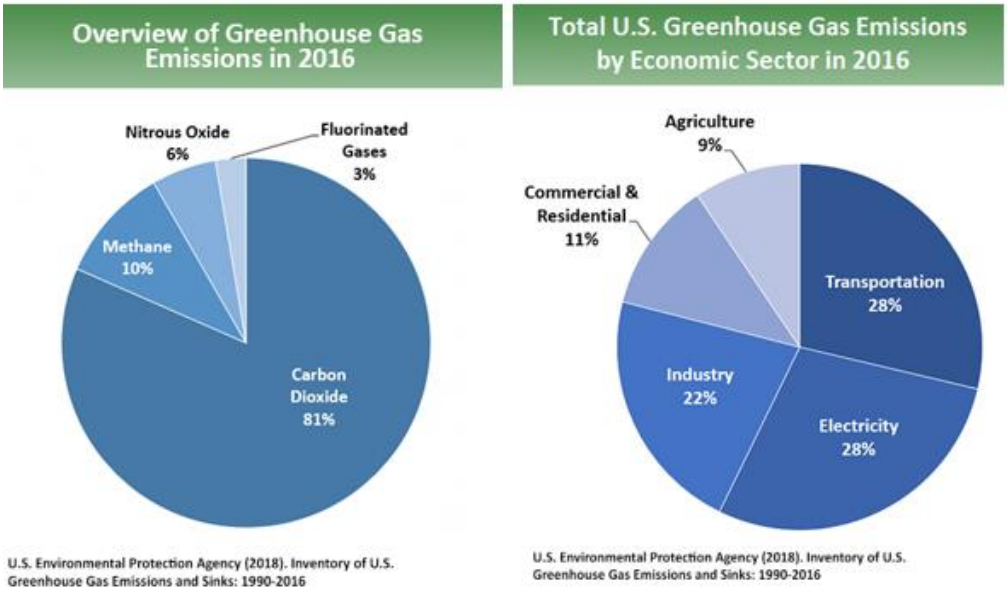

Figure 3.1 U.S. 2016 Greenhouse Gas Emissions

State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions inventory found total California emissions of 424.1 $MMTCO_2e$ for 2017, with the transportation sector responsible for 41% of

total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (ARB 2019a).

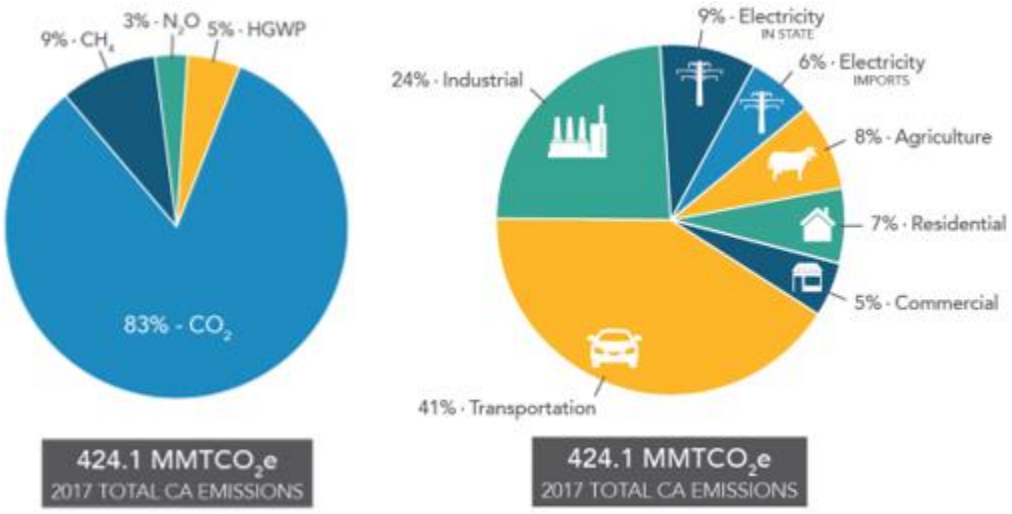

Figure 3.2 California 2017 Greenhouse Gas Emissions

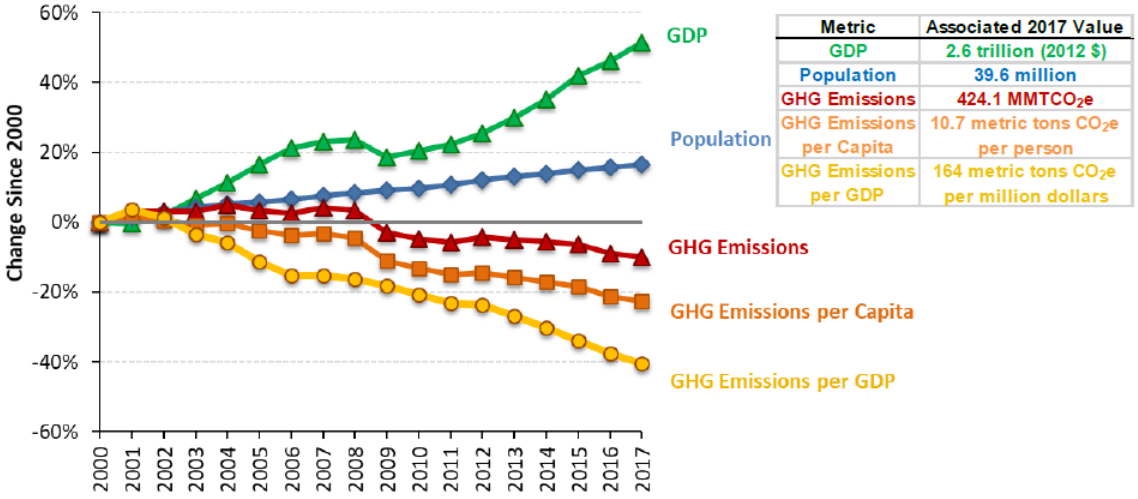

Figure 3.3 Change in California GDP, Population, and GHG Emissions since 2000
(*Source*: ARB 2019b)

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. ARB adopted the first scoping plan in 2008. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions.

Regional Plans

ARB sets regional targets for California's 18 MPOs to use in their Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the SCAG RTP/SCS for 2016-2040. The regional reduction target for SCAG is 8% by 2020 and 19% by 2035 (ARB 2019c).

The proposed project is within the jurisdiction of the SCAG Regional Transportation Planning Agency (RTPA). The SCAG 2016-2040 RTP identifies several measures that address greenhouse gas emissions. They include, but are not limited to, methods based on design, methods based on planning, and methods based on technology and equipment type. Design methods target emission reduction goals through implementation of project features, project design, or other measures; incorporating design measures to reduce GHG emissions from solid waste management through encouraging solid waste recycling and reuse; or incorporating design measures to reduce energy consumption and increase use of renewable energy. Planning methods require the adoption of plans or mitigation programs for the reduction of emissions as required as part of the Lead Agency's decision. Methods based on technology and equipment type include: incorporating Best Available Control Technology (BACT) during design, construction, and operation of projects to minimize GHG emissions; use of energy and fuel efficient vehicles and equipment; use of the minimum feasible amount of GHG emitting construction materials; and construction of buildings to Leadership in Energy and Environmental Design (LEED) certified standards. Additionally, another suggested method is to plant shade trees in or near construction projects where feasible.

Other general plans, land use plans, and local climate action plans (CAPs) also offer strategies that can be incorporated into specific projects. Many cities and counties in District 7 have adopted CAPs designed to mitigate GHG emissions and reduce the impacts of climate change to their communities. The City of Pomona does not have a CAP, but it does have an Energy Action Plan (EAP), which provides and assesses information related to energy use and GHG emissions. The Los Angeles Regional Collaborative (LARC) is a founding agency of the Alliance of Regional Collaboratives for Climate Adaptation (ARCCA), which is a network of regional collaboratives from across California that coordinate and support climate adaptation efforts to enhance public health, protect natural systems, build economies, and improve local qualities of life.

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the SHS and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of CH_4 and N_2O are emitted during fuel combustion. In addition, a small amount of HFC emissions are included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation *v.* San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) 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 the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to preserve the structural integrity of two bridge structures in a safe and economic manner to reduce seismic vulnerabilities and improve safety. It will not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on SR-39 or SR-71, no increase in vehicle miles traveled (VMT) would occur as a result of project implementation. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will 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.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

The Caltrans Construction Emissions Tool (CAL-CET) quantifies the expected construction-related GHG emissions related to the proposed project. The summary results are shown in Table 3.1 below. The total expected GHG emissions for the construction period of two years are 277 tons of carbon dioxide (CO_2), 0.01 tons of methane (CH_4), 0.02 tons of nitrous oxide (N_2O), and 0.01 tons of hydroflourocarbons (HFC).

Table 3.1 Project Total Emissions

	ROG	CO	NOx	PM10	PM2.5	CO2
Daily Average (lbs/day)	1.413	5.96	8.80	0.848	0.596	1988

Annual Average (tons/year)	0.099	0.42	0.61	0.059	0.042	139

Standard conditions and best management practices to reduce or eliminate construction GHG emissions are included in every project.

All construction contracts include Caltrans Standard Specifications Section 7-1.02A and 7-1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all ARB emission reduction regulations; and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

CEQA Conclusion

While the proposed project will result in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction GHG-reduction measures, the impact would be less than significant.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

Statewide Efforts

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 GHG emissions targets. Former Governor Edmund G. Brown promoted GHG reduction goals that involved (1) reducing today’s petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.

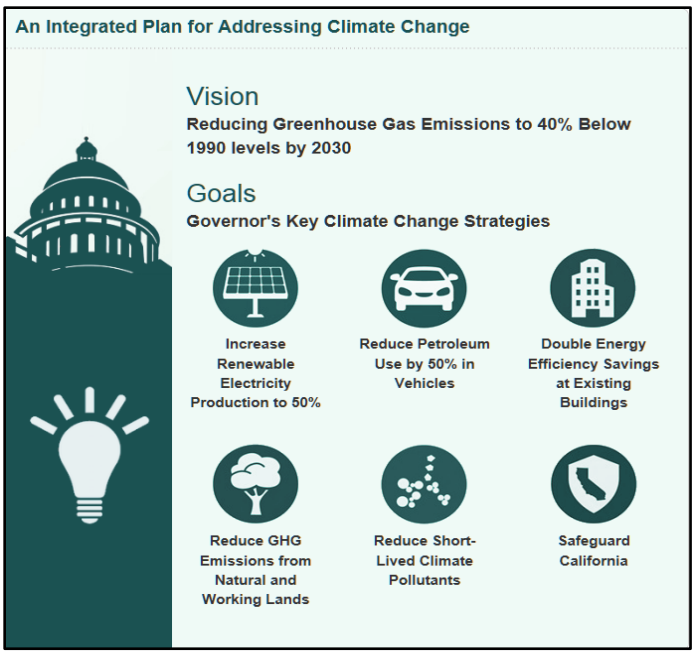

Figure 3.4 California Climate Strategy

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). A key state goal for reducing GHG emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (State of California 2019).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set an interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. In 2016, Caltrans completed the

California Transportation Plan 2040, which establishes a new model for developing ground transportation systems, consistent with CO_2 reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

CALTRANS STRATEGIC MANAGEMENT PLAN

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

FUNDING AND TECHNICAL ASSISTANCE PROGRAMS

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's RTP/SCS; contribute to the State's GHG reduction targets and advance transportation-related GHG emission reduction project types/strategies; and support other climate adaptation goals (e.g., *Safeguarding California*).

CALTRANS POLICY DIRECTIVES AND OTHER INITIATIVES

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Activities to Address Climate Change* (April 2013) provides a comprehensive overview of Caltrans' statewide activities to reduce GHG emissions resulting from agency operations.

Project-Level GHG Reduction Strategies

The following measures will also be implemented in the project to reduce GHG emissions and potential climate change impacts from the project.

Standard conditions and best management practices to reduce or eliminate construction GHG emissions are included in every project. Below are the GHG reductions measures that will be implemented as part of this project.

CC-1 Ensure that all construction equipment is properly tuned and maintained.

CC-2 Minimize idling time to 5 minutes to save fuel and reduce emissions.

CC-3 Minimize unnecessary vehicular and machinery activities, and minimize the number of construction equipment operating simultaneously through efficient management practices.

CC-4 Promote and encourage use of solar-powered equipment when feasible.

CC-5 Incorporate native plants and vegetation to the project design to increase carbon sequestration.

CC-6 Through a combination of preservation and new planting, avoid an ultimate net loss of tree canopy within the project limits (minimum 1:1 replacement of trees lost) or compensate for trees lost to the extent possible with trees on- or off-site.

TRAF-1 A Traffic Management Plan (TMP) Data Sheet shall be developed to implement practical measures to minimize any traffic delays that may result from lane restrictions or closures in the construction work zone.

Adaptation

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must 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, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program (USGCRP) delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. ch. 56A § 2921 et seq). The *Fourth National Climate Assessment*, published in 2018,

presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways." Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime" (USGCRP 2018).

The U.S. DOT Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions" (U.S. DOT 2011).

FHWA order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events,* December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California's Fourth Climate Change Assessment* (2018) is the state's effort to "translate the state of climate science into useful information for action" in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the "capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt."

> Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts to date. Recent state publications produced in response to these policies draw on these definitions.

EO S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

EO S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance) in 2010, with instructions for how state agencies could incorporate "sea-level rise (SLR) projections into planning and decision making for projects in California" in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California – An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change other than sea-level rise also threaten California's infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017, to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

Caltrans Adaptation Efforts

CALTRANS VULNERABILITY ASSESSMENTS

Caltrans is conducting climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects including precipitation, temperature, wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:

- *Exposure* – Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
- *Consequence* – Determine what might occur to system assets in terms of loss of use or costs of repair.
- *Prioritization* – Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the State Highway System, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

Project Adaptation Analysis

It is possible that this project will be subject to climate change effects. The San Gabriel River bridge is located in a severe wildfire hazard area and a flood zone, and the Ridgeway St. Undercrossing experiences a moderate level of concern for wildfire. Recognizing these concerns, it is important to determine whether the project will exacerbate the effects of climate change relating to these topics, which are elaborated upon in the following sections (Floodplains and Wildfire).

Caltrans District 7 completed a climate change vulnerability assessment in September 2019 for Los Angeles and Ventura Counties. It provides a high-level review of potential climate impacts to the State Highway System in District 7 based on a database containing climate stressor geospatial data that was developed as part of the study.

Climate change risk analysis involves uncertainties as to the timing and intensity of potential risks, but some general climate trends are expected in California and the western US. More severe droughts, less snowpack, and changes in water availability are anticipated, and rising sea levels, more severe storm impacts, and coastal erosion can be expected. Increased temperatures and more frequent, longer heat waves as well as longer and more severe wildfire seasons are predicted.

The Governor's Office of Planning and Research prepared *Planning and Investing for a Resilient*

California, a guidebook for state agencies performing climate risk analyses to determine how to integrate climate considerations into planning or investment decisions. The first step is to identify how climate change could affect a project or plan by identifying impacts of concern and assessing the scale, scope, and context of climate disruption. Next, a climate risk analysis can be conducted by selecting climate change scenarios for analysis and selecting an analytical approach. Following that, a climate-informed decision can be made by evaluating the alternatives and design and applying resilient decision principles. Finally, the agency can track and monitor progress by evaluating determined metrics, adjusting as needed. This study will go through the first two steps to inform a decision for the proposed project.

Assessing the scale, scope, and context of climate disruption for this project means considering the timeframe/lifetime, adaptive capacity, and risk tolerance of the project areas. The guidebook states, "If the expected lifetime of a project is less than five years, it may not be necessary to integrate longer-term climate change into the design and analysis." The completed project (i.e., retrofit bridges) is expected to last far longer than five years, so the impacts of extreme events should be considered to ensure that planning and investment decisions reflect the current climate conditions. In the following sections, extreme impacts of climate change-based sea-level rise, flooding, and wildfire will be considered. Other extreme weather impacts, such as drought and extreme heat, are also anticipated as changing climate conditions, but this study will focus on conditions that could potentially affect the project and its proposed structures.

Climate risk is characterized by asking a few key questions, focusing on the scale and scope of the risk, vulnerability and adaptive capacity of the affected area, the nature of the risk, and the economic impacts.

Question 1: How severe are the consequences if your project or plan is disrupted by an extreme event or by changes in average conditions?

If construction of the project is disrupted by an extreme event, schedule delays and increased costs are expected. Economic implications will be addressed in Question 4, and based on the severity, this would be a moderate impact. It is not unacceptable and is not likely to ultimately affect the completion of the project, but it would be an inconvenience and require additional planning and coordination, along with extra work to repair damage done by an extreme condition. In fact, should an extreme event occur in the future, the completion of the project may help to mitigate these effects. Preserving and improving structural integrity will help to increase resilience of the freeway to climate change.

The impact of average conditions disrupting the project or plan depends on the severity of these changes. Assuming the average changes are small or even negligible during the timeframe of project construction and completion by 2024, there would be low or no impact for design, planning, and construction.

Question 2: Who or what will be affected by disruption of the project or plan?

Disruption of the project will affect state highway users in the long term by delaying construction, but not the immediate short term. If disruption occurs during construction,

construction workers would also be affected. With communication and the emergency planning in place, the impact would be low to moderate; communities, systems, and infrastructure should be readily able to adapt or respond to any changes. Detours or other transportation methods could be arranged.

Question 3: What is the nature of this disruption?

Schedule delay would be the primary concern if the project is disrupted during construction; however, it is expected that any disruption by climate change effects would not be permanent. Use of the bridges or construction of the project would be able to continue; therefore, the nature of this disruption is temporary. Future flexibility would be maintained, and Caltrans and drivers would be readily able to respond or adapt.

Question 4: What are the economic implications of climate disruption?

As stated in the response to Question 1, schedule delays and increased costs would be expected as a result of climate disruption. Both could potentially be large, depending on the extent and type of disruption. It is unlikely that the costs of disruption or response to the disruption would be unacceptably high. It is likely that such costs would be fall in the low to medium cost range.

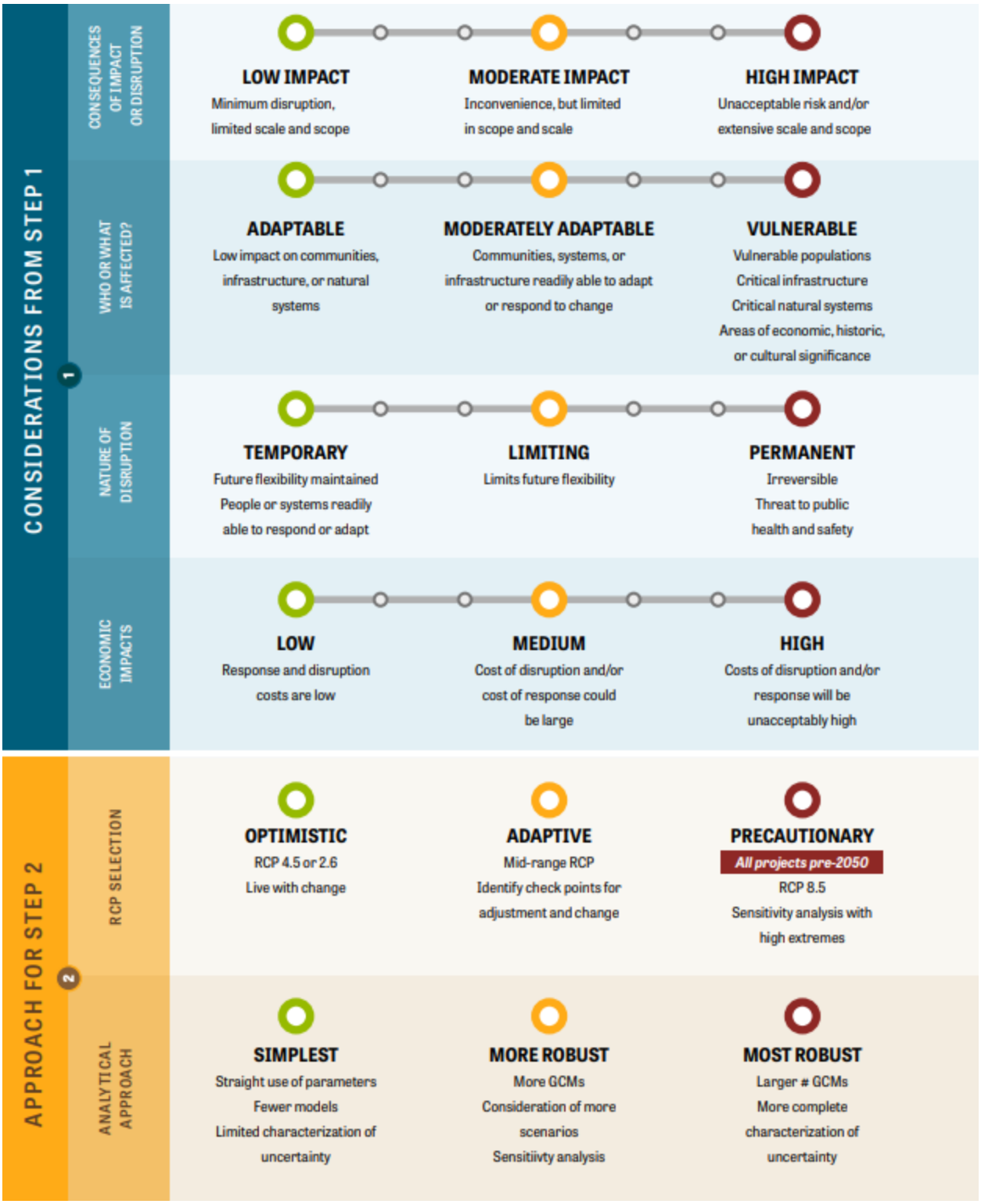

Figure 3.5 Mapping Risk Characteristics to Analytical Approaches

Figure 3.5 above (from Figure 2 in *Planning and Investing for a Resilient California*) matches the answers from the four questions with characteristics of analytical approaches and climate scenarios. For this analysis, because most answers were low or low-moderate, an optimistic

Representative Concentration Pathway (RCP) is selected, and a simple approach is used.

RCP 4.5 is the modeling scenario in which emissions peak around 2040, then decline. RCP 8.5 is the modeling scenario in which emissions continue to rise strongly through 2050 and plateau around 2100.

The Caltrans District 7 Climate Change Vulnerability Assessment Map provides assessments for both RCP 4.5 and 8.5; for this project, there was no difference between the scenarios for disruption on the project's two bridges. Please refer to the following sections for the Climate Change Vulnerability Assessment Maps and further discussion. This is consistent with the conclusion that the proposed project has a low likelihood to be vulnerable to climate change conditions, and it may speak to the fact that the resilience to any disruption would be high for the project and surrounding area.

The proposed project is not expected to exacerbate any of the risks discussed above. Though the risks inherent to climate change already in progress are considered, the project would not contribute to acceleration or increase of any such dangers in any significant way. It would not alter the bridges' relation to the surrounding environment significantly, and it would not cause any significant change to the environment that would allow for increased or greater danger in the future.

SEA-LEVEL RISE

The proposed project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

FLOODPLAINS

Neither bridge in the proposed project is located in the coastal zone, but climate change analyses for bridge and culvert projects in floodplains should consider the risk of climate change. Historical data is no longer a reliable predictor of future conditions, since changes in precipitation scenarios under future climate conditions include more extreme precipitation events. These factors and others, such as land use changes that increase impervious surface in the watershed, can affect flood magnitude and frequency (FHWA 2016).

The figures below show the project area for each bridge on the Los Angeles County Public Works Flood Zone Determination Website. It uses the Federal Emergency Management Agency's (FEMA) published Flood Insurance Rate Maps (FIRMs) to depict areas subject to flood hazards. These Special Flood Hazard Areas (SFHAs), or Flood Zones, include different types and levels of flooding risk. Figure 3.6 shows the San Gabriel River bridge, and Figure 3.7 shows the Ridgeway St. Undercrossing.

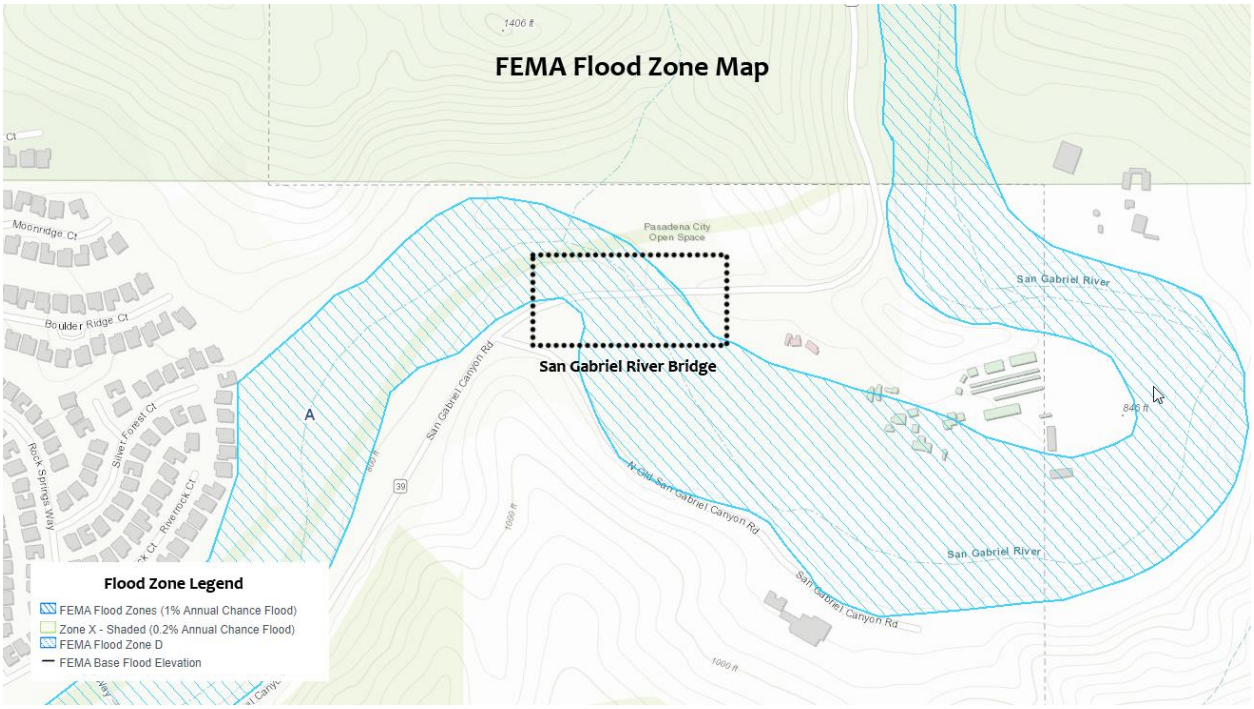

Figure 3.6 FEMA Flood Zone Map – San Gabriel River Bridge

The San Gabriel River bridge is located in a FEMA Flood Zone (Flood Zone A). Flood Zone A designates an area with 1% annual chance of flooding. Detailed analyses are not performed for such areas, so depths or base flood elevations are not shown within these zones.
For this bridge, most construction activities will access the bridge's underside from the bridge deck. Some access will be made from the dirt road which ends next to the bridge, and other staging access will be at the disturbed area to the southwest of the bridge, level with the highway. The proposed project would cause a Total Disturbed Soil Area (DSA) of 0.1 acre at this bridge, and no new impervious surface would be introduced.

Drainage patterns may be altered as a result of topographical changes, such as increased slope, or changes to impervious surfaces, which may increase the velocity of storm water drainage. Because soil disturbance would be so minimal and no new impervious surface would be created, exacerbated flooding impacts caused by changes in drainage patterns are not anticipated. The proposed work would maintain the original line and grade of the bridge as well as the hydraulic capacity of its existing features.

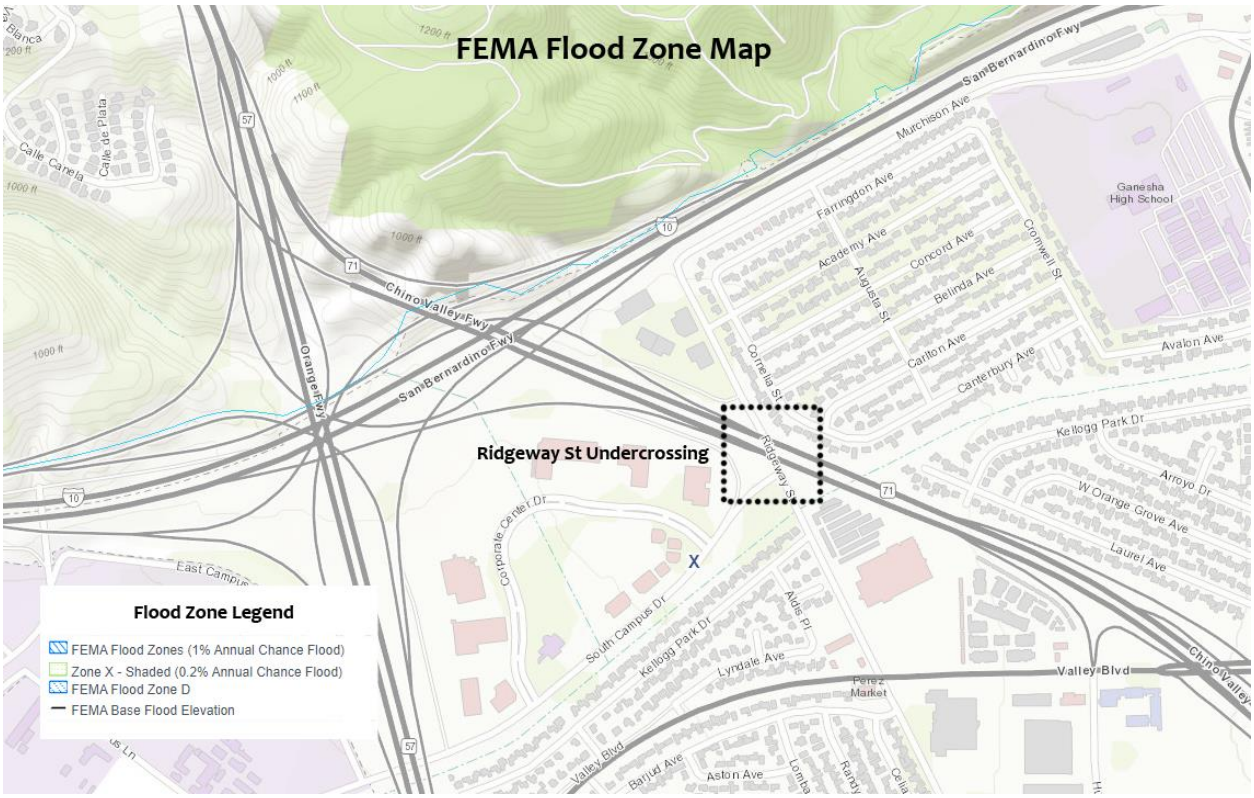

Figure 3.7 FEMA Flood Zone Map – Ridgeway St. Undercrossing

The Ridgeway St. Undercrossing is not located in any flood zone. A flood zone X is located nearby to the north, but the bridge itself does not fall within that area. Therefore, there are no additional risks posed by climate change impacts to floodplains.

WILDFIRE

Given the expectation of longer and more severe wildfire seasons as an effect of climate change, it is worthwhile to note that the San Gabriel River Bridge on SR-39 is located in an area identified as a Local Responsibility Area (LRA) Very High Fire Hazard Severity Zone (VHFHSZ) by the California Department of Forestry and Fire Protection in its Fire and Resource Assessment Program. It is not located in a State Responsibility Area (SRA), but it is near an SRA marked Very High as well (about 650 feet away). See Figure 3.8 below for the Fire Hazard Severity Zone map showing the bridge's location. As such, it is likely that this area is vulnerable to exacerbated wildfire danger as a result of climate change.

Additionally, District 7's Climate Change Vulnerability Assessment Map indicates a moderate level of concern for all RCP scenarios 2025 through 2085, for both RCP 4.5 and 8.5. See Figure 3.9 below for the Wildfire Exposure level of concern for SR-39 in this area; it ends shortly after the San Gabriel River bridge.

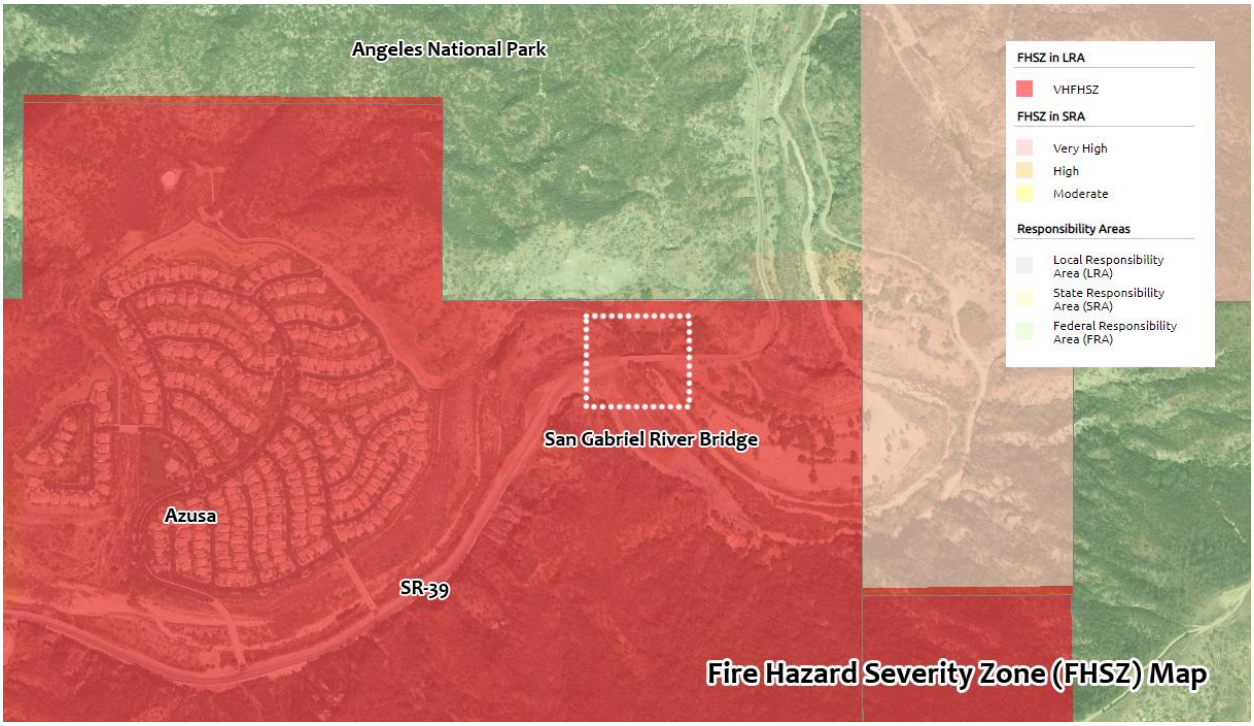

Figure 3.8 Fire Hazard Severity Zone (FHSZ) Map – San Gabriel River Bridge

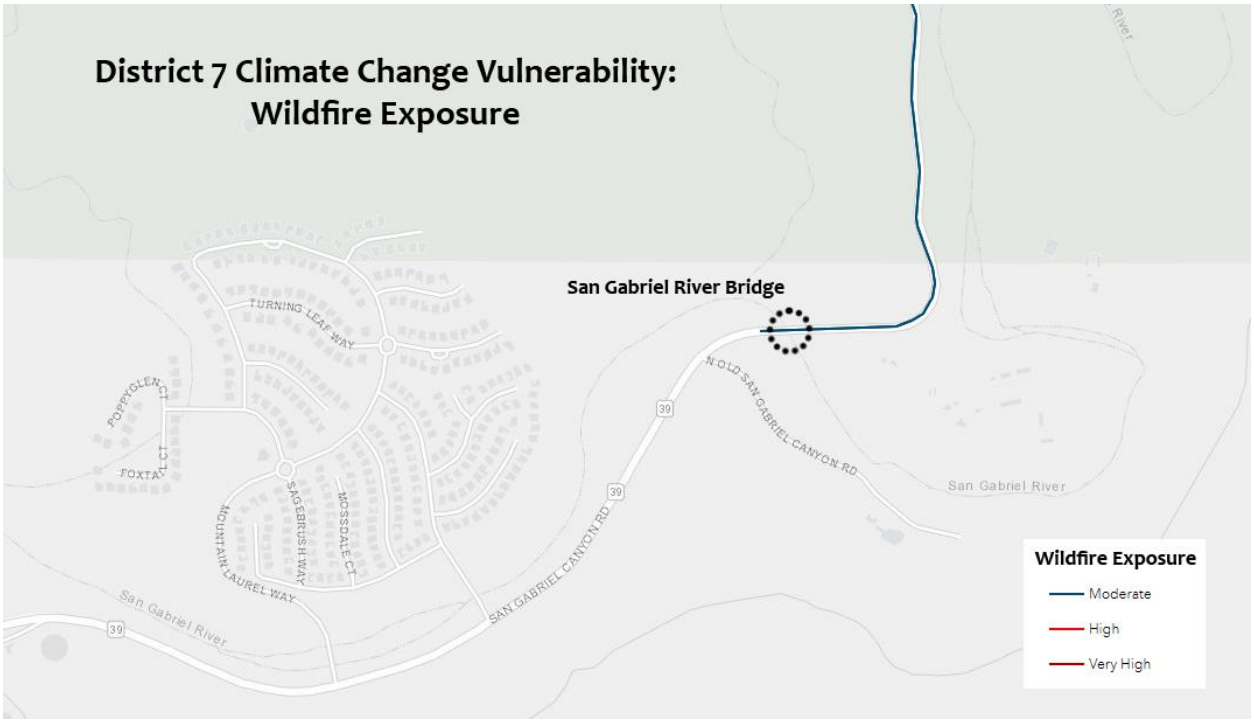

Figure 3.9 District 7 Climate Change Vulnerability: Wildfire Exposure – San Gabriel River Bridge

The Ridgeway Street Undercrossing is not in any Fire Hazard Severity Zone, although it is somewhat near (about 3,500 feet or 0.66 mile) a VHFHSZ in a Local Responsibility Area. See Figure 3.10 below for the FHSZ map showing the Ridgeway Street Undercrossing. This bridge is much less exposed to wildfire dangers.

The District 7 Climate Change Vulnerability Assessment Map does indicate a moderate level of concern for this bridge. See Figure 3.11 below for the extent of concern on SR-71 in this area; it ends shortly after the Ridgeway Street Undercrossing. Similar levels are shown for I-10 and SR-57 in this area as well.

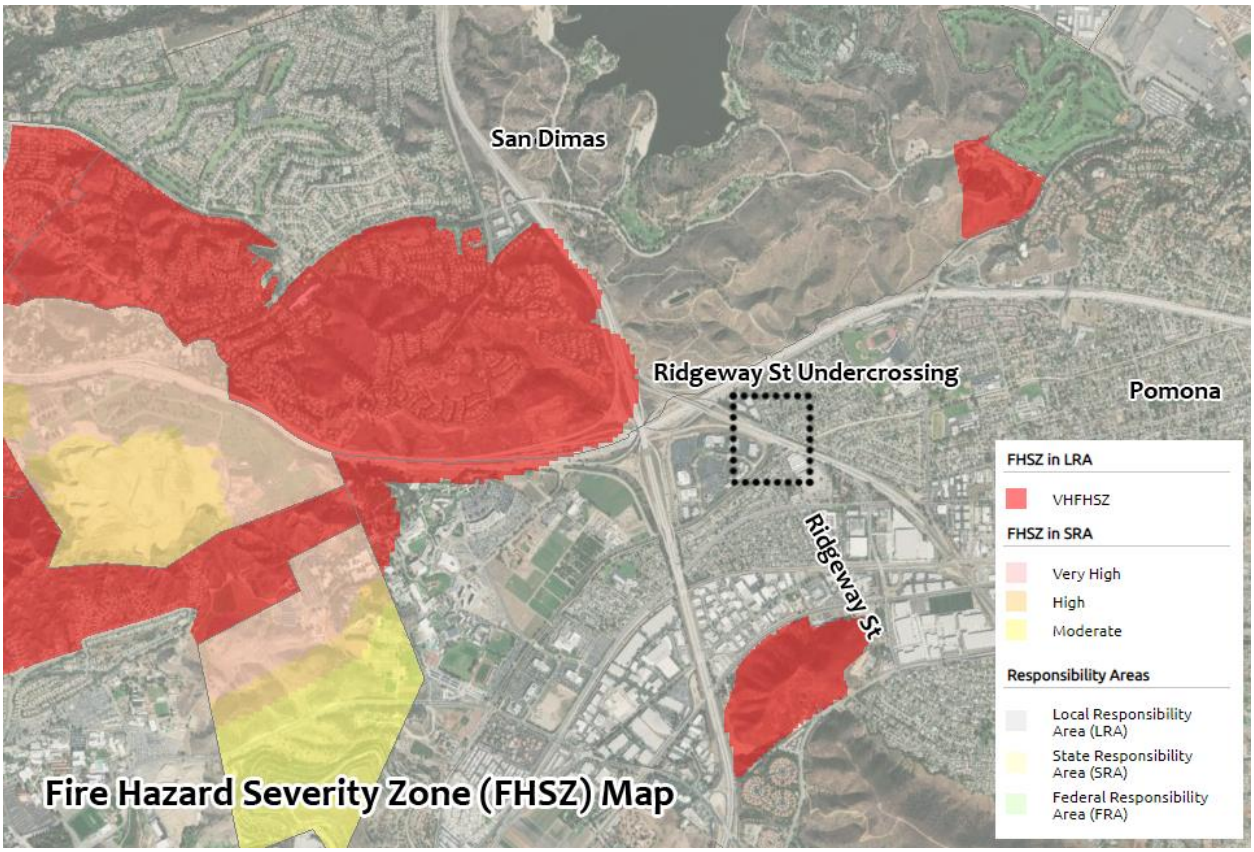

Figure 3.10 Fire Hazard Severity Zone (FHSZ) Map – Ridgeway St. Undercrossing

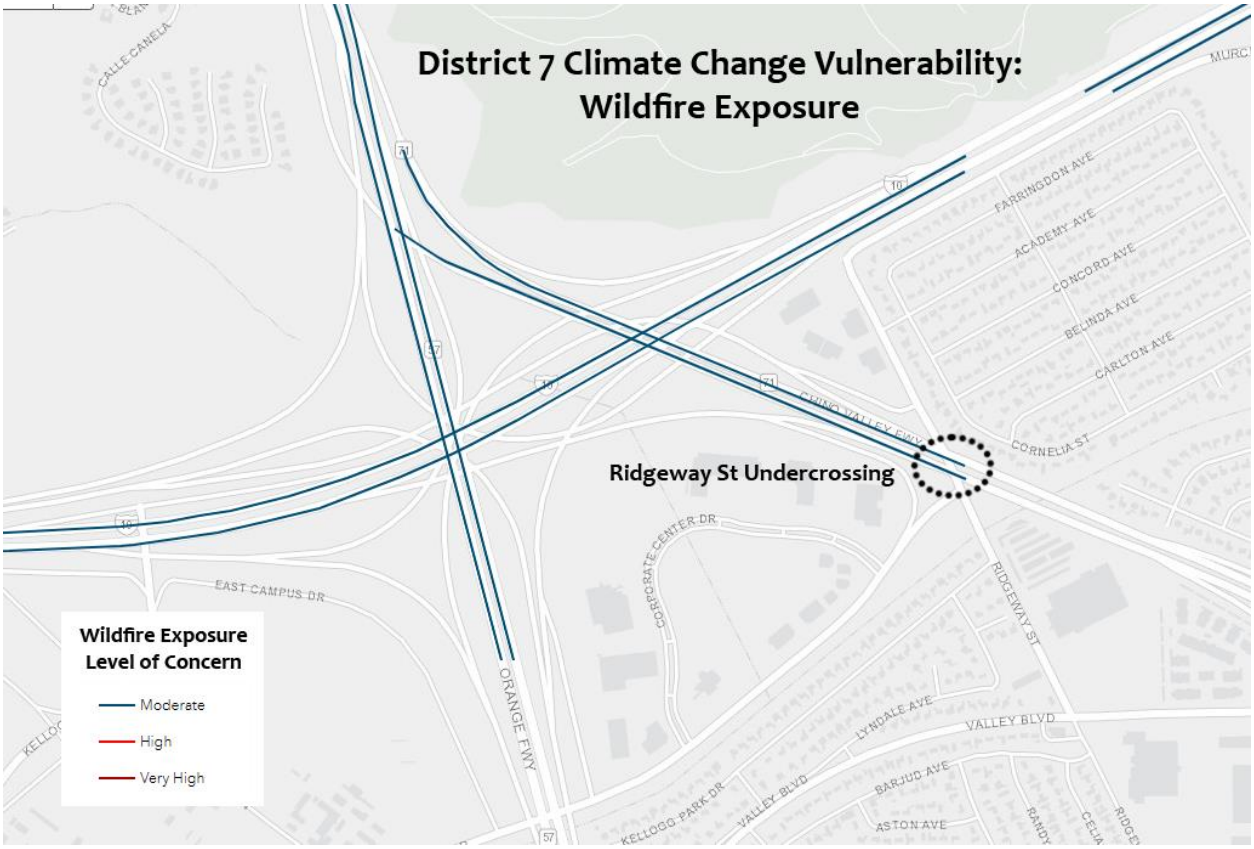

Figure 3.11 District 7 Climate Change Vulnerability: Wildfire Exposure – Ridgeway St Undercrossing

The proposed project would not negatively or positively change either bridge's vulnerability to these dangers, nor the surrounding project areas' vulnerability. Because the project's purpose is to preserve the existing structure's integrity, the bridges before and after the project is completed would be essentially unchanged in relation to their surroundings and wildfire vulnerability. Both vulnerability and level of concern would remain the same. However, the respective retrofit work for each bridge would reduce seismic vulnerability, which may be a benefit should wildfire or floods damage the seismic integrity of the project locations.

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Chapter 4 – Coordination

Native American Coordination Letters and Responses

On October 28, 2019 a request form with project map was emailed to the Native American Heritage Commission (NAHC) for information regarding the presence of sacred lands and cultural resources recorded within or near the APE by Caltrans archaeologist, Diana Valadez for both project locations. On November 13, 2019 the NAHC emailed two response letters for SR-39 San Gabriel River Bridge and for SR-71 Ridgeway Street UC Bridge. The NAHC included a contact list for each project location of who may have additional data and information regarding tribal cultural resources within or near the APE. Five Native American representatives were on both project location contact lists, and a sixth tribal representative was only on the SR-39 project location contact list. All six representatives identified by the NAHC were contacted for a formal request for consultation. Native American correspondence included the following tribal representatives: Gabrieleno Band of Mission Indians - Kizh Nation, Gabrieleno/Tongva San Gabriel Band of Mission Indians, Gabrielino/Tongva Nation, Gabrielino Tongva Indians of California Tribal Council, Gabrielino-Tongva Tribe, San Fernando Band of Mission Indians (SR-39 only). The NAHC referred to the Gabrieleno Band of Mission Indians - Kizh Nation for more specific information regarding SR-71.

On December 2, 2019 certified letters were mailed to all six tribal representatives regarding the project location, activities, identification efforts thus far and to request formal consultation. Four project location maps were also included.

On December 17, 2019, during a monthly coordination meeting with the Gabrieleno Band of Mission Indians - Kizh Nation, Ms. Valadez spoke with the Chairman and a tribal member over the phone to discuss potential concerns. For the SR-39 San Gabriel River Bridge location, based on the scope of work directly in the path of the river they did not have any concerns nor require further review. However, for SR-71 Ridgeway Street UC Bridge location they stated it was sensitive and asked for more details on the excavation and geology/soil removal, borrow, and/or fill.

On January 13, 2020, follow-up letters were e-mailed to the remaining five Native American representatives who had not yet responded. Four project location maps were also included in the follow-up email. For continuation of consultation with the Gabrieleno Band of Mission Indians - Kizh Nation, a project update letter, which summarized the project changes, previous questions answered, and As-Built review were also delivered to their office in Covina, CA and digital copies were uploaded and shared to the Caltrans file sharing program the same day.

On January 14, 2020, on the next over the phone meeting with the Gabrieleno Band of Mission Indians - Kizh Nation, Ms. Valadez spoke with the Chairman and a tribal member to discuss the project updates and address the previous questions. Ms. Valadez summarized the changes to the SR-71 Ridgeway Street UC Bridge location, including the removal of the CIDH piles from the scope and relayed the results of the review of the As-Built plans. Ms. Valadez relayed soil type information from the original geotechnical borings and that all proposed activities would take

place within the original excavated (graded) area and fill locations. Due to the new information, they no longer had concerns and they determined the project would not impact any cultural resources or tribal landscapes. No further review was required.

No other responses from other Native American Groups were received.

Biological Coordination

The project has the potential to affect species that are listed as proposed, threatened, or endangered under the Federal Endangered Species Act (FESA) by the US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). When a project has the potential to affect listed species, it is necessary to write a biological assessment and conduct consultation with the USFWS to determine the magnitude of the effect and develop conservation measures that would enable the project to avoid, minimize, or mitigate effects to listed species. Project impacts that will have no effect to listed species do not require consultation. Potential impacts that may result in "take" of migratory birds would have to be prevented for the project to be compliant with the Migratory Bird Treaty Act (MBTA).

Potential impacts to species listed by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act would require avoidance and minimization measures. Similar to the MBTA, sections 3500 et seq. of the California Fish and Game Code prohibit take of non-game migratory birds. The California Migratory Bird Protection Act extends the protections that nongame migratory birds were granted prior to January 1, 2017. Caltrans standard specifications (2018) are written to comply with the MBTA and California Migratory Bird Protection Act. Therefore, projects must avoid take to be compliant with the California Fish and Game code and Caltrans policy.

Early coordination was conducted with USFWS, starting in February 2019. USFWS indicated that there is some risk that Santa Ana sucker (*Catostomus santaanae*) could be introduced to the project site from the upstream reaches of the San Gabriel River. However, through further consultation it was determined that they are very unlikely to occur in the project site. However, if there were any fish in the site, then they would be prevented from being affected through the same measures that would be required by the CDFW (intended for the protection of native fishes, Santa Ana speckled dace and arroyo chub). USFWS also confirmed that there were concerns about least Bell's vireo, southwestern willow flycatcher, and coastal California gnatcatcher during the initial consultation and that protocol surveys could be required for them.

Early coordination was conducted with NMFS in February 2019. Caltrans contacted Jessica Adams of NMFS to determine the potential for the project to affect southern steelhead. Due to the interruption of the San Gabriel River at the Whittier Narrows Dam, the project site is cut off from the Pacific Ocean for steelhead migration and there aren't resident steelhead present. For further explanation of the coordination with State Agencies, see the Biological section of this document.

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Appendix A List of Studies and Technical Reports

Aesthetics
"Visual Impact Assessment Questionnaire"
George Olguin
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Office of Stormwater and Landscape Architecture

Air Quality
"Air Quality Review of The Bridge Retrofit of San Gabriel Bridge, No. 53-0113, Ridgeway Street Undercrossing, No. 53-2052 Project on State Routes 39 (SR-39) and 71 (SR-71) in Los Angeles County"
Andrew Yoon
Senior Transportation Engineer, Air Quality Branch
Office of Environmental Engineering

Biological Resources
"Natural Environment Study
The Azusa Area and City of Pomona"
Mario Mariotta IV
Associate Environmental Planner, District Biologist
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Cultural Resources
"Historical Property Survey Report"
Diana Valadez
PQS Co-Principal Investigator, Prehistoric Archaeology
Division of Environmental Planning

Geology and Soils
"Structure Preliminary Geotechnical Report for San Gabriel River Bridge "
Krishnakant Andurlekar – Project Engineer
Office of Geotechnical Design

"Structure Preliminary Geotechnical Report for Ridgeway Street Bridge "
Krishnakant Andurlekar – Project Engineer
Office of Geotechnical Design

Hazards and Hazardous Materials
"Preliminary Hazardous Waste Assessment For Seismic Bridge Retrofit and Barrier Replacement"
Michael Cronin

Environmental Engineer, Hazardous Waste Branch
Division of Environmental Planning, Office of Environmental Engineering (OEE)

“Seismic Retrofit SR-71/Ridgeway Street UC
Michael Cronin
Environmental Engineer, Hazardous Waste Branch
Division of Environmental Planning, Office of Environmental Engineering (OEE)

Hydrology and Water Quality
(07-Los Angeles-39, 71), (17.81, R0.92) Stormwater Data Report (EA 326200)
Loi Lam
Hydrology Engineer
Office of Stormwater and Landscape Architecture

Noise
“TECHNICAL NOISE MEMORANDUM”
Samia Soueidan
Environmental Engineer/Noise & Vibration Branch
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Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

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Making Conservation a California Way of Life.

November 2019

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page: https://dot.ca.gov/programs/business-and-economic-opportunity/title-vi.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

Toks Omishakin
Director

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

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Appendix C Environmental Commitment Record

Environmental Commitments Record for EA 07-32620_ / ID 0716000113001

Last updated: 5/1/2020

39, 71 Seismic Retrofit
LA-039-17.82, LA-071-R0.92
Current Project Phase: 0,9

EP: Eric Dietrich 213-897-2824
CL:
RE:

Permits

Permit	Agency	Date Submitted	Date Received	Expiration	Requirements Completed Name	Requirements Completed Date	Comments
1602 Lake or Streambed Alteration Agreement	California Department of Fish & Wildlife						Application will be submitted after Final Environmental Document approval.
Nationwide Permit under Section 404 of the Clean Water Act	United States Army Corps of Engineers						Application will be submitted after Final Environmental Document approval.
Section 401 Water Quality Certification	Regional Water Quality Control Board						Application will be submitted after Final Environmental Document approval.
Waste Discharge Requirements	Regional Water Quality Control Board						Application will be submitted after Final Environmental Document approval. To be bundled with Section 401 Water Quality Certification.

Commitments

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
PS&E/Before RTL							
Biology							
BIO-11: Bat Focused Surveys Caltrans will perform more focused bat surveys during the permitting phase as part of obtaining the lake or streambed alteration agreement with CDFW.	NES	n/a	Project Biologist				
Hazardous Waste							
HW-3 During the Final Design Phase Caltrans will determine if construction dewatering is required. If required, Caltrans will then conduct a Site Investigation to categorize groundwater and determine the appropriate method for handling and disposal.	HWA	n/a	RE				

Environmental Commitments Record for EA 07-32620_ / ID 0716000113001

Last update: 5/1/2020

39, 71 Seismic Retrofit

LA-039-17.82, LA-071-R0.92

Current Project Phase: 0,9

EP: Eric Dietrich 213-897-2824

CL:

RE:

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
HW-6 During the PS&E Phase Caltrans will conduct an asbestos survey to determine whether asbestos containing construction materials are present at San Gabriel River Bridge (LA-39-#53-0113).	HWA	n/a	PE				
HW-7 During the PS&E Phase Caltrans will conduct a Lead Based Paint Survey to determine whether LBP is present at San Gabriel River Bridge (LA-39-#53-0113).	HWA	n/a	PE				
HW-8 Prior to and following disturbance of paint systems on the San Gabriel River Bridge (LA-39-#53-0113) soil samples for lead will be collected. Soil samples will be collected as part of Site Investigations by Caltrans during the Final Design Phase and following construction.	HWA	n/a	PE				
HW-9 During the Final Design Phase Caltrans will determine if construction dewatering is required. If required, Caltrans will then conduct a Site Investigation to categorize groundwater and determine the appropriate method for handling and disposal.	HWA	n/a	PE				
Water Quality							
WQ-1 This project requires a Water Pollution Control Program (WPCP), as the total disturbed soil area in the project is less than 1 acre.	Env Doc	n/a	PE, RE				
Greenhouse Gas Emissions and Climate Change							
CC-5 Incorporate native plants and vegetation to the project design to increase carbon sequestration.	Env Doc	n/a	PE				
Pre-Construction							

Environmental Commitments Record for EA 07-32620_ / ID 0716000113001

Last update: 5/1/2020

39, 71 Seismic Retrofit
LA-039-17.82, LA-071-R0.92
Current Project Phase: 0,9

EP: Eric Dietrich 213-897-2824
CL:
RE:

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
Biology							
BIO-1: Pre-construction Surveys – Listed Plant Species A qualified biologist will survey the project impact area for these species during the bloom periods prior to construction. If plants are found in the project impact area, then Caltrans will conduct consultation with CDFW to determine the appropriate course of action and will not continue construction where the plant occurs until consultation is complete.	NES	n/a	RE, Project Biologist				
BIO-13: Pre-Construction Survey - Bats The project will perform pre-construction surveys for tree roosting bats in riparian trees prior to their removal. If the trees are found to have tree roosting bats, then those trees will be removed during the night when bats are foraging.	NES	n/a	RE, Project Biologist				
BIO-15: Pre-Construction Surveys - Insects A qualified entomologist will perform surveys in suitable habitat for special status insect species one year prior to the removal of vegetation and the disturbance of soil in the BSA. If Crotch bumble bee colonies or overwintering queens are found in the BSA, then the project will implement a 500-ft no-work buffer around the colony or occurrence and conduct consultation with CDFW.	NES	n/a	Project Biologist				
BIO-22: Worker Education Program The project biologist will present a worker education program. The project will instruct construction staff about the biological resources present in the project impact area, the relevant laws and regulations and permit conditions protecting them, and the conservation measures that are required to limit impacts to those resources. All construction staff that are scheduled to work on site for longer than 30 minutes will be required to receive the program before performing work.	NES	n/a	RE, Project Biologist				
BIO-24: Pre-Construction Surveys Caltrans will conduct pre-construction surveys for special	NES	n/a	RE, Project Biologist				

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
status species in suitable habitat. No work shall begin until the species have left the BSA or Caltrans has completed consultation with the appropriate agencies to determine and agree upon the following steps in construction while the species is present.							
BIO-25: Pre-Construction Nest Removal Caltrans will remove bird nests from the bridges prior to construction, but outside of the bird nesting season, when the nests are inactive.	NES	n/a	RE, Project Biologist				
BIO-27: Worker Education Program The worker education program will also discuss scale broom scrub and how to avoid impacts to it.	NES	n/a	RE, Project Biologist				
BIO-3: Pre-Construction Surveys – Listed Bird Species A qualified biologist will perform surveys in suitable habitat for special status avian species one year prior to the removal of vegetation in the BSA and prior to the beginning of noise-generating activities, such as pile driving, during the bird nesting and migration season. A lapse in vegetation removal or construction lasting longer than three days will warrant a repeat survey. If southwestern willow flycatchers are found in the BSA, then the project will implement a 500-foot no-work buffer around the nest or occurrence and conduct consultation with the resource agencies.	NES	n/a	RE, Project Biologist				
BIO-33: Pre-Construction Surveys - Nesting Birds To avoid “taking” migratory birds and yellow warbler, a biologist will perform nesting bird surveys no later than three days before initiation of vegetation removal is scheduled during the nesting bird season. If nesting birds are observed within vegetation to be removed or habitat to be disturbed, then the project will avoid removing that vegetation until the nestlings have fledged.	NES	n/a	RE, Project Biologist				
BIO-35: Worker Education Program A qualified biologist will make a presentation to	NES	n/a	RE, Project Biologist				

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
construction staff who are on site for longer than 30 minutes. The staff will be advised on the bird species that have been known to occur in the project area, their nest appearance and siting factors, the project's conservation measures, and the procedures for reporting and avoiding nesting migratory birds and yellow warbler.							
Hazardous Waste							
HW-2 A Lead Compliance Plan (LCP) will be required to protect workers from exposure to lead while handling soils.	HWA	n/a	RE				
Construction							
Air Quality							
AQ-1 Objectionable odors should also be minimized by conducting certain construction activities in areas at least 500 feet from the sensitive receptors as feasible.	Air Quality Memorandum	n/a	RE				
AQ-2 This project must comply with all applicable AQMD rules. SCAQMD Fugitive Dust Implementation Rule 403 requires minimization of temporary emissions during construction of the project as applicable and appropriate.	Air Quality Memorandum	n/a	RE				
AQ-3 This project must comply with all applicable AQMD rules. SCAQMD Rule 113 (Architectural Coating) limits the amount of VOC emissions from paving, asphalt, concrete curing, and cement coatings operations.	Air Quality Memorandum	n/a	RE				

Environmental Commitments Record for EA 07-32620_ / ID 0716000113001

Last update: 5/1/2020

39, 71 Seismic Retrofit
LA-039-17.82, LA-071-R0.92
Current Project Phase: 0,9

EP: Eric Dietrich 213-897-2824
CL:
RE:

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
Biology							
BIO-12: Night Lighting Minimization The project will use the minimum lighting feasible to perform night work. A bat biologist will monitor the positioning and use of lighting to ensure that light is not unnecessarily shone upon the potential bat habitat surrounding the project impact area.	NES	n/a	RE, Project Biologist				
BIO-14: Staged Tree Removal The project will remove and trim riparian trees in a staged fashion. First, the limbs of the trees will be removed, and the tree is left in place over night. Leaving the tree overnight allows tree roosting bats to leave tree cavities. After the bats have left the trunk of the tree, the trunk will be removed, and tree removal will be complete.	NES	n/a	RE, Project Biologist				
BIO-16: Habitat Impact Minimization The project biologist will coordinate with the resident engineer and construction contractor to ensure that impacts to Crotch bumble bee habitat are minimized to the extent feasible.	NES	n/a	RE, Project Biologist				
BIO-17: Dust Suppression The project will implement standard dust control measures to minimize the spread of dust beyond the project impact area and staging area onto adjacent foraging and burrowing habitat.	NES	Std.Spec	RE				
BIO-19: Non-Native Weed Suppression The project will suppress non-native weeds in the project staging area to allow native pollen species to revegetate the area.	NES	n/a	RE, Project Biologist				
BIO-2: Equipment Hygiene The project will clean project equipment of invasive plant materials and vectors prior to their entry to the project impact area to prevent the introduction or proliferation of invasive plants that would affect coastal sage scrub	NES	n/a	RE				

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
species.							
BIO-20: Construction Monitoring The project will have biologists on site during construction to monitor and quantify impacts to special status resources, observe and document the implementation of project conservation measures, and report project impacts. The monitors will pause construction if an unexpected biological resource is present in the impact area during construction.	NES	n/a	RE, Project Biologist				
BIO-21: Impact Minimization The project will limit the direct impacts to jurisdictional waters, riparian resources, and natural communities of concern to the extent feasible.	NES	n/a	RE, Project Biologist				
BIO-23: Environmentally Sensitive Area (ESA) Designation and Fencing The project will designate the river and special status natural communities as environmentally sensitive areas. Prior to the beginning of construction, fencing and signage will be installed at the project disturbance boundaries. The project biologist will monitor the construction activities and verify that ground disturbance occurs outside of the environmentally sensitive areas. If it is found that the project requires further disturbance of jurisdictional waters or special status natural communities during construction, that disturbance will not occur until after Caltrans has conferred with the resource agencies.	NES	n/a	RE, Project Biologist				
BIO-26: Construction Monitoring The project biologist will monitor the implementation of permit conditions and environmental commitments. The project biologist will monitor and watch project construction. The biologist will have the authority to pause construction and advise construction staff on the risks associated with disturbing areas that have not been authorized for disturbance.	NES	n/a	RE, Project Biologist				

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
BIO-28: Equipment Hygiene The project will clean project equipment of invasive plant materials and vectors prior to their entry to the project impact area to prevent the introduction or proliferation of invasive plants that would affect scale broom scrub.	NES	n/a	RE				
BIO-29: Construction Monitoring-Permit Conditions The project biologist will monitor the implementation of permit conditions. The biologist will monitor and quantify impacts to WOUS/WOTS, the CDFW jurisdiction, and riparian trees; and record and report them. The biologist will monitor and document the implementation of the project's conservation measures.	NES	n/a	Project Biologist				
BIO-30: Best Management Practices (BMPs) The project will implement Caltrans standard stormwater BMPs.	NES	Std.Spec	RE				
BIO-31: Impact Minimization The project will limit the direct impacts to jurisdictional waters, riparian resources, and natural communities of concern to the extent feasible.	NES	n/a	RE, Project Biologist				
BIO-32: Environmentally Sensitive Area (ESA) Designation and Fencing The project will designate the river and special status natural communities as environmentally sensitive areas. Prior to the beginning of construction, fencing and signage will be installed at the project disturbance boundaries. The project biologist will monitor the construction activities and verify that ground disturbance occurs outside of the environmentally sensitive areas. If it is found that the project requires further disturbance of jurisdictional waters or special status natural communities during construction, that disturbance will not occur until after Caltrans has conferred with the resource agencies.	NES	n/a	RE, Project Biologist				
BIO-34: Construction Monitoring – Vegetation Removal and Noise Generating Activities	NES	n/a	RE, Project Biologist				

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
A qualified biologist will monitor the project during vegetation removal other noise generating activities. The monitor will survey nesting birds in the BSA, if any have been identified during surveys or monitoring, and detect whether they are being disturbed by project activities. If the monitor observes migratory bird nest disturbance caused by the project, then construction will have to be paused within 150 feet (300 to 500 feet for species of special concern) of the project activities until the nestlings have fledged.							
BIO-4: Habitat Impact Minimization The project biologist will coordinate with the resident engineer and construction contractor to ensure that impacts to southwestern willow flycatcher habitat is minimized to the extent feasible.	NES	n/a	RE, Project Biologist				
BIO-7: Invasive Plants The project will also enhance the riparian vegetation in the BSA by removing the stands of invasive plants outside of the PIA, such as thoroughwort, giant cane, and tamarisk, and allow native species to reclaim those areas in the BSA to mitigate impacts to native riparian vegetation. Invasive vegetation will be removed in a way that causes the least disturbance to the surrounding native vegetation.	NES	n/a	RE				
Cultural Resources							
CUL-1: If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.	Section 106	Std.Spec	RE				
CUL-2: If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the	Section 106	n/a	RE				

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coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Claudia Harbert, Senior District 7 Cultural Resource Specialist so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.							
Hazardous Waste							
HW-1 If Asbestos is identified, all standard measures and Best Management Practices will be followed for the removal and transport of materials to an appropriate disposal facility.	HWA	Std.Spec	RE				
HW-4 Electrical equipment will either be reused or disposed of as hazardous waste at an appropriate facility.	HWA	n/a	RE				
HW-5 Standard Special Provision (SSP) 14-11.15 for Electronic Waste in the Revised Standard Specifications will be followed.	HWA	SSP 14-11.15	RE				
Water Quality							
WQ-2 Several Job Site Management BMPs are appropriate for this project and will be implemented during construction as necessary to minimize water quality impacts. They include: Sweeping; Spill Prevention and Control; Hazardous Waste Management; Solid Waste Management; Concrete Waste Management; Water Conservation and Practices; Illegal Connection and Discharge Reporting; Vehicle and Equipment Fueling and Maintenance; Concrete Curing; and Paving, Sealing, Sawcutting, and Grinding Operations. They will be implemented as relevant and necessary.	Env Doc	n/a	RE				

Environmental Commitments Record for EA 07-32620_ / ID 0716000113001

Last update: 5/1/2020

39, 71 Seismic Retrofit

LA-039-17.82, LA-071-R0.92

Current Project Phase: 0,9

EP: Eric Dietrich 213-897-2824

CL:

RE:

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Greenhouse Gas Emissions and Climate Change							
CC-1 Ensure that all construction equipment is properly tuned and maintained.	Env Doc	n/a	RE				
CC-2 Minimize idling time to 5 minutes to save fuel and reduce emissions.	Env Doc	n/a	RE				
CC-3 To the extent possible, minimize unnecessary vehicular and machinery activities, and minimize the number of construction equipment operating simultaneously through efficient management practices.	Env Doc	n/a	RE				
CC-4 Promote and encourage use of solar-powered equipment when feasible.	Env Doc	n/a	RE, PE				
Traffic							
TRAF-1: Traffic Management Plan Data Sheet A Traffic Management Plan (TMP) Data Sheet shall be developed to implement practical measures to minimize any traffic delays that may result from lane restrictions or closures in the construction work zone. The TMP Data Sheet shall plan and design strategies to improve mobility, as well as increase safety for the traveling public and highway workers. These strategies include, but are not limited to, dissemination of information to motorists and the greater public, construction incident management strategies, deployment of flaggers, and alternate route planning/detouring. The TMP Data Sheet would be in accordance with the lane closure charts provided in the Maintaining Traffic Specifications.	Env Doc	n/a	PE, RE				
Post-Construction							

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Biology							
BIO-10: Non-Native Vegetation The project will replace part of the non-native vegetation surrounding the pond to the northeast of the bridge. This area currently is vegetated with Mexican fan palms and figs, which are used by migratory birds (such as orioles). The trees will be replaced gradually, so as to ensure that at least 50% of the current nesting capacity is maintained in the pond area.	NES	n/a	RE, Project Biologist				
BIO-18: Decompacting Soil The project will mitigate for temporary effects to potentially suitable Crotch bumble bee habitat by decompacting soil after project construction and staging are complete. The disturbed area will be reseeded with native plants.	NES	n/a	RE, Project Biologist				
BIO-5: Riparian Woodland Riparian woodland square footage will be replaced at a 1:1 ratio, but lost riparian trees will be replaced generally at a ratio of 3:1. The project will replant 27 sycamores, 3 ashes, 6 black willows, and 6 red willows, all from cuttings.	NES	n/a	RE, Project Biologist				
BIO-6: Riparian Thickets The project will replace mulefat scrub by taking cuttings from undisturbed mulefat plants and installing one cutting per three square feet of scrub disturbed.	NES	n/a	RE, Project Biologist				
BIO-8: Streambed The project will restore all temporary impacts by re-contouring the river's streambed and replacing removed plants after the completion of construction in the river.	NES	n/a	RE, Project Biologist				
BIO-9: Habitat Mitigation and Monitoring Plan The habitat restoration for these impacts and others will be implemented under a habitat mitigation and monitoring plan, to be approved by the resource agencies	NES	n/a	RE, Project Biologist				

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prior to the beginning of construction. The implementation of this plan will be overseen by a qualified biologist.							
Greenhouse Gas Emissions and Climate Change							
CC-6 Through a combination of preservation and new planting, avoid an ultimate net loss of tree canopy within the project limits (minimum 1:1 replacement of trees lost) or compensate for trees lost to the extent possible with trees on- or off-site.	Env Doc	n/a	PE, RE, Project Biologist				