

Cosumnes River Bridge Replacement Project

Sacramento County

03-Sac-99-PM: 7.1/9.4

EA: 0F280

EFIS: 0312000069

2019039070

Initial Study with Proposed Negative Declaration/Draft Section 4(f) De Minimis Determination



Prepared by the
State of California, Department of Transportation



March 2019

General Information about This Document

What's in this document:

The California Department of Transportation (Department), as assigned by the Federal Highway Administration (FHWA), has prepared this Initial Study which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Sacramento County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read this document.
- Additional copies of this document and the related technical studies, are available for review at the Caltrans District 3 office at 703 B Street, Marysville, CA 95901. Copies of the Initial Study are available for review at the Valley Hi-North Laguna Library, 7400 Imagination Parkway, Sacramento, CA 95823.
- This document has also been made available online at the following website:
- We'd like to hear what you think. If you have any comments about the proposed project, please send your written comments to Caltrans by the deadline.
- Send comments via postal mail to:
Cara Lambirth, Environmental Coordinator
Department of Transportation, District 3 Environmental Planning
703 B Street, Marysville, CA 95901
- Send comments via email to: cara_lambirth@dot.ca.gov.
- Be sure to send comments by the deadline: April 16, 2019.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, the Department could design and construct all or part of the project.

Alternative Formats:

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Rodney Murphy, 703 B Street, Marysville, CA 95901, (530) 701-1305 or use, the California Relay Service TTY number, 1 (800) 735-2929.

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INITIAL STUDY with (Proposed) Negative Declaration

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

THE STATE OF CALIFORNIA
Department of Transportation

2/8/2019
Date of Approval

Suzanne Melim
Suzanne Melim
Office Chief
California Department of Transportation
CEQA Lead Agency

PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (the Department) proposes a bridge replacement project on SR 99 between post miles 7.1 to 9.4 near the City of Elk Grove in Sacramento County, from 0.3 miles south of Dillard Road overcrossing (OC) to 0.6 miles south of Grant Line Road. (See Figure 1-1). The scope of work will include:

- Replacing four bridge structures with two bridge structures spanning the entire width of the roadway including the median; the Cosumnes River Bridges (Br Nos. 24-0020R and 24-0020L) and the Cosumnes River Overflow Bridges (Br Nos. 24-0021R and 24-0021L),
- Improving the Dillard Road Overcrossing,
- Relinquishing the McConnell Underpass (Br. No. 24-0048L) under the Union Pacific Railroad (UPRR) rail line,
- Constructing a southbound (SB) McConnell OH structure adjacent to the existing McConnell OH northbound (NB) structure or replacing the existing NB McConnell OH structure with a single McConnell OH for both NB and SB SR 99,
- Realigning the Southbound (SB) lanes of SR 99 at to align with the northbound (NB) SR 99 lanes,
- Abandoning the Eschinger Road on and off ramps from SB SR 99 due the realignment of SB SR 99 lanes.

Determination

This proposed Negative Declaration [ND] is included to give notice to interested agencies and the public that it is the Caltrans' intent to adopt an ND for this project. This does not mean that the Department's decision regarding the project is final. This ND 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 agriculture and forest resources, cultural resources, geology/soils/seismic, land use and planning, mineral resources, population and housing, public services, transportation and traffic, tribal cultural resources, recreation and utilities and service systems.

In addition, the proposed project would have less than significant effects to visual/aesthetics, water quality, floodplain/hydrology, paleontology, hazardous waste, air quality, noise and biology.

Suzanne Melim, Chief
North Region Environmental Services, South

Date

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Chapter 1. Proposed Project

Introduction

The California Department of Transportation (Caltrans) proposes a bridge replacement project on SR 99 between post miles 7.1 to 9.4 near the City of Elk Grove in Sacramento County, from 0.3 miles south of Dillard Road overcrossing (OC) to 0.6 miles south of Grant Line Road. (See Figure 1 Project Location and Vicinity Map). The proposed project would replace four bridge structures, the Cosumnes River Bridges (Br Nos. 24-0020R and 24-0020L) and the Cosumnes River Overflow Bridges (Br Nos. 24-0021R and 24-0021L) with two new bridge structures. The new bridge structures will span the width of the roadway supporting all travel lanes and provide a median.

Additionally, the project would improve the Dillard Road Overcrossing, relinquish the SB McConnell Underpass (UP) (Br. No. 24-0048L) under the Union Pacific Railroad (UPRR) rail line, construct a new southbound (SB) McConnell Overhead (OH) structure adjacent to the existing McConnell OH northbound (NB) structure or replace the existing NB McConnell OH structure with a single McConnell OH for both NB and SB SR 99, and realign the Southbound (SB) lanes of SR 99 at to align with the northbound (NB) SR 99 lanes. Eschinger Road on and off ramps from SB SR 99 will be abandoned due the realignment of SB SR 99 lanes since the geometrics of the current on/off ramps will not allow for connection to the realigned SB SR 99. It is understood that closing the Eschinger ramps will not preclude the local community from developing future access to SR 99 at Eschinger Road. Caltrans is considering phased construction for the project.

Project Funding

The project is funded in the SHOPP Program for delivery in the 19/20 fiscal year.

Purpose and Need

The purpose of this project is to address the current structural and seismic deficiencies of the four Cosumnes River bridges, the non-standard horizontal and vertical clearances of the existing SB McConnell UP, and the structural deficiencies of the Dillard Road Overcrossing as well as improve freight mobility and safety along this segment of SB SR 99.

The need for this project is multifaceted; first, to remedy the structural and seismic deficiencies of the bridges because of scour and non-standard design. Structurally, all four of the Cosumnes River Bridges are scour critical. A load rating analysis indicates that if calculated scour occurs, live loads from permit vehicles would exceed the design capacity of a majority of the piles for each structure. The existing bridges are too old and structurally deficient for rehabilitation. Additionally, the existing bridges are below the current flood standard and require soffit elevations at least 3' above the 100 year flood level to satisfy requirements of the Central Valley Flood Protection Board (CVFPB).

Also, the two SB Cosumnes River bridges (Br No. 24-0020L and 24-0021L) have sub-standard freeway/expressway bridge shoulder widths that may contribute to collisions. The latest collision history for this section of SR 99 is higher than the statewide average. See Table 1 for collision data for both NB and SB SR 99 directions.

Table 1. TASAS Collision Summary Three Year Collision History (2013-2015)

Co	Rte	PM	Dir	Tot	Fat	Inj	F + I	Actual			Average		
Sac	99	7.1/9.4	Both	125	2	30	32	0.01	0.16	0.61	0.008	0.18	0.52

The accident rate total in this segment is higher than the statewide average. The number of accidents increased each year from 2013 to 2015. Most of the accidents appear to be attributed to traveling too fast for conditions and making improper turns. This project is anticipated to reduce the collision rate due to improved clearance at bridge rails and approach rails by replacing the two SB bridges to include consistent freeway/expressway bridge shoulder widths to current standards (Br No. 24-0020L and 24-0021L).

Additionally, the existing SB McConnell UP has non-standard horizontal and vertical clearances per UPRR rail line requirements as well as sight distance and super-elevation deficiencies. Sight distance and super-elevation deficiencies of the McConnell SB UP make it more difficult for drivers to react to unexpected situations with other vehicles. Moreover, the existing SB McConnell UP constrains freight mobility since the non-standard vertical clearance limits the types of loads that can use the roadway. Further, the Dillard Road Overcrossing has a deficient, non-standard bridge railing that does not comply with current safety standards.

Project Description

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project. The alternatives include two build alternatives and a No-Build Alternative.

The California Department of Transportation proposes a bridge replacement project on SR 99 between post miles 7.1 and 9.4 near the City of Elk Grove in Sacramento County. The proposed project would replace four bridge structures with two bridge structures, each spanning the entire width of the roadway including the median; relinquish the McConnell Underpass (Br No. 24-0048L) under the UPRR rail line, construct a southbound (SB) McConnell OH structure adjacent to the existing McConnell OH northbound (NB) structure or replace the existing NB McConnell OH structure with a single McConnell OH for both NB and SB SR 99, realign the SB lanes of SR 99 at McConnell to align with the NB SR 99 lanes, improve the Dillard Road Overcrossing and abandon the Eschinger Road on and off ramps from SB SR99. Two build alternatives; Alternative 1 and Alternative 2, and a no-build alternative are being considered for the proposed project. The two build alternatives include common design features.

Common Design Features of the Build Alternatives (Alternative 1 and Alternative 2)

The build alternatives will include the following shared design features:

Cosumnes River Bridges, Cosumnes Overflow Bridges

- Replace the Cosumnes River Bridges (Br Nos. 24-0020R and 24-0020L)
- Replace the Cosumnes River Overflow Bridges (Br Nos. 24-0021R and 24-0021L)

The project proposes to replace the four Cosumnes River Bridges with two bridge structures, each spanning the entire width of the roadway including the median. The proposed design of these two bridge structures will satisfy the requirements of the Central Valley Flood Protection Board (CVFPB); namely that the two new bridges must have soffit elevations at a minimum of 3 feet above the 100-year flood level.

SB McConnell Underpass (UP)

The project proposes to relinquish the existing southbound (SB) McConnell Underpass (UP) (Br No. 24-0048L) and abandon and obliterate the SB on and off ramps to Eschinger Road since the geometrics of the current on/off ramps will not allow for connection of Eschinger Road to the realigned SB 99.

Realignment of SB SR 99

The SB lanes of SR 99 will be aligned with the NB SR 99 lanes.

Dillard Road Overcrossing (OC)

The project proposes to replace the non-standard bridge rails with type 842 bridge rail and strengthen the existing bridge deck to withstand the higher impact load of the new 842 bridge rail. The existing AC deck surfacing will be replaced with a polyester concrete deck overlay as well as reconstruct the overcrossing (OC) approaches and ramps. Additionally, a Roadway Informational System (RWIS) will be installed on the freeway and ramps, just north and south of the Dillard Road OC.

Project activities will also include utility relocation, equipment staging areas, borrow sites, grinding, constructing access roads, traffic striping and metal beam guard railing removal and replacement, upgrading the existing lighting, installing fiber optic cable along the freeway, reconstructing the existing 2:1 slope of the roadway embankment where it has eroded and upgrading drainage as needed. The project could also include recycling road base.

Stage construction, Traffic Management Plans and Lane Closure Charts will be developed to minimize public impacts during construction. Construction is estimated to take a maximum of four construction seasons. Right of way acquisition and Temporary Construction Easements will be required for the two build alternatives. See Figure 2 for Environmental Study Limit (ESL mapping).

Unique Features of Build Alternatives

Alternative 1

McConnell Overhead

Alternative 1 proposes to construct a SB McConnell OH structure closely parallel to the existing NB McConnell Overhead. The proposed McConnell SB OH structure must keep minimum side and overhead clearances* per Union Pacific Rail Road (UPRR) requirements.

Alternative 2

McConnell Overhead

Alternative 2 proposes to demolish the existing northbound (NB) McConnell OH structure and replace it with a single bridge structure for both NB and SB spanning the entire width of the roadway (both NB and SB lanes, including the median). The proposed NB and SB McConnell OH structure must keep a minimum side and overhead clearances per Union Pacific Rail Road (UPRR) requirement.

No-Build (No-Action) Alternative

With the No-Build Alternative, Caltrans would not replace the Cosumnes River Bridges, Cosumnes River Overflow Bridges, relinquish the McConnell Underpass under the UPRR rail line, construct a SB McConnell OH structure or replace the existing McConnell OH structure for both NB and SB, realign the SB lanes of SR99 at McConnell to align with the NB SR 99 lanes, improve the Dillard Road Overcrossing or abandon the Eschinger Road on and off ramps from SB SR 99.

This alternative would not meet the purpose of the current project, which is to address the current structural and seismic deficiencies of the four bridges, the non-standard horizontal and vertical clearances of the existing McConnell UP structure, and the deficiencies of the Dillard Road Overcrossing as well as improve freight mobility and safety along this segment of SB SR 99.

Alternatives Considered But Eliminated From Further Discussion

None

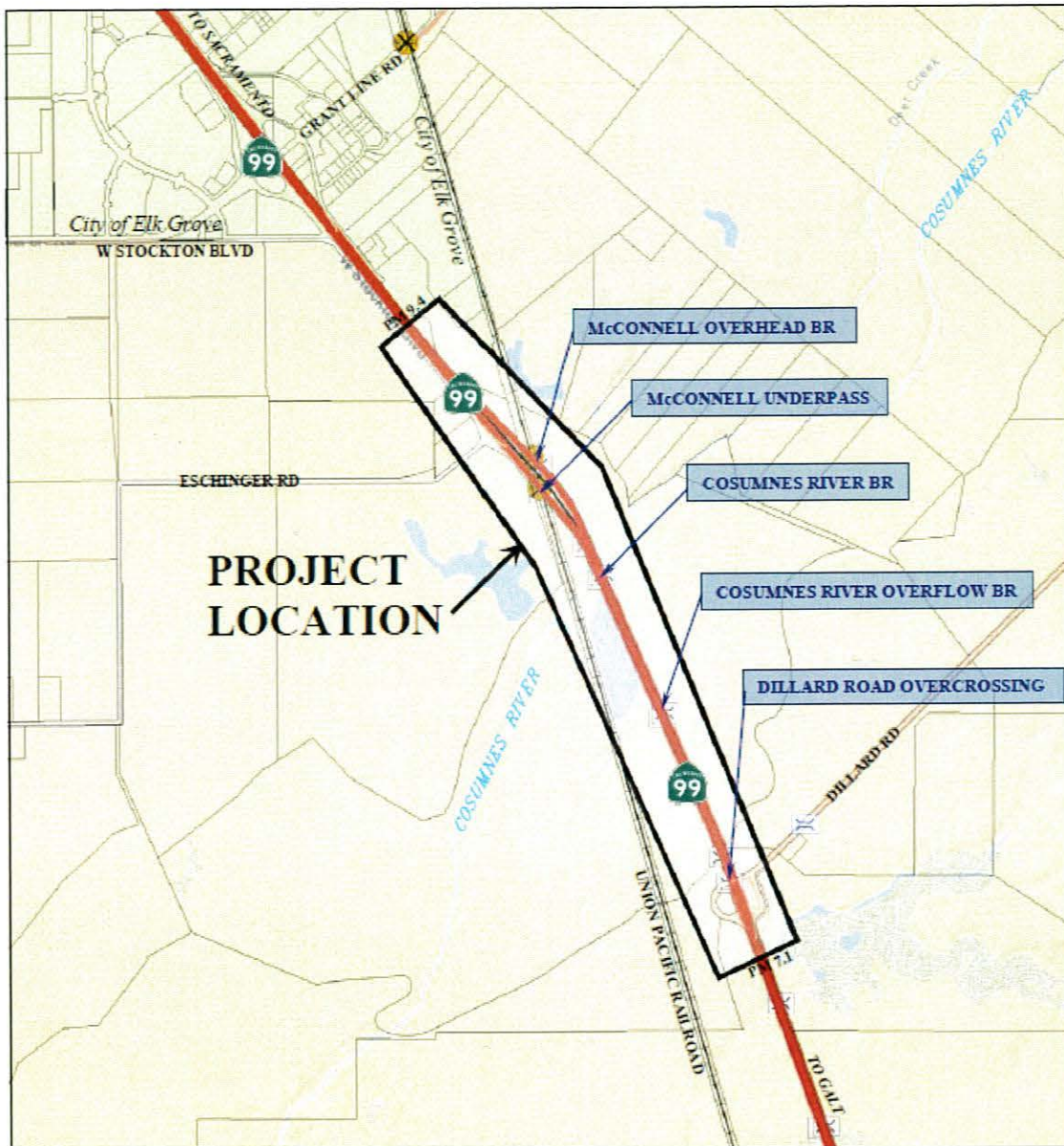
Permits and Approvals Needed

The following permits and other agency approvals are required:

Agency	Permits/Approvals	Status
Regional Water Quality Control Board	Section 401 Water Quality Certification	To be obtained prior to construction
US Army Corps of Engineers	Section 404 Nationwide Permit	To be obtained prior to construction
California Department of Fish and Wildlife	Section 1602 Streambed Alteration Agreement	To be obtained prior to construction
Central Valley Flood Protection Board	Floodplain Encroachment Permit	To be obtained prior to construction
California Department of Fish and Wildlife	Temporary Access Permit for Dillard Unit of Cosumnes Ecological Reserve	To be obtained prior to construction

**Project Location Map
&
Environmental Study Limits (ESL) Mapping**

Figure 1. Project Location Map – Cosumnes River Bridge Replacement Project



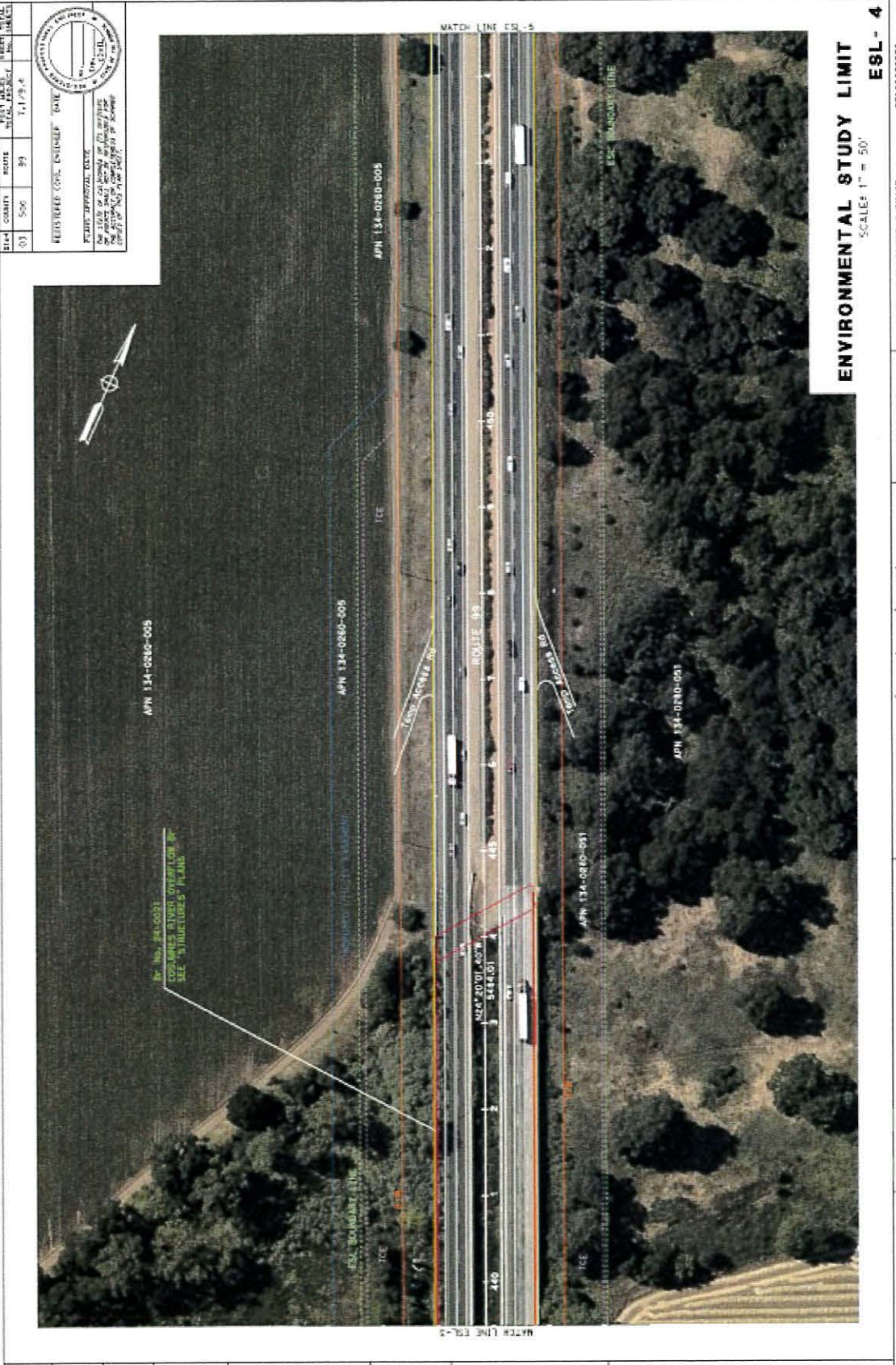
IN SACRAMENTO COUNTY
03-0F280, PM 7.1/9.4

PROJECT LOCATION & VICINITY MAP

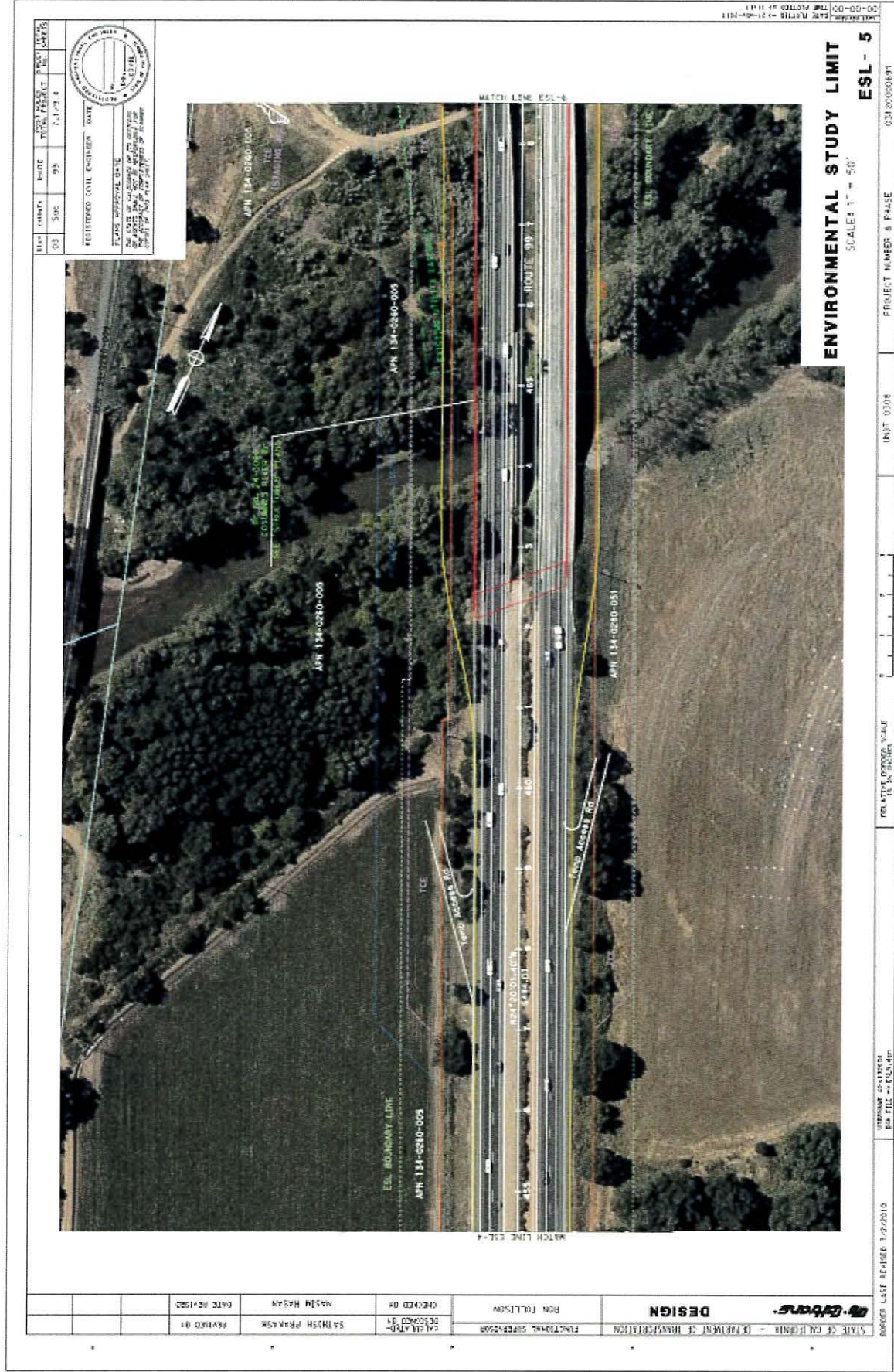
Cosumnes River Bridge Replacement Project



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		DESIGN	
FUNCTIONAL SURVEYOR	RON TOLLSON	CHECKED BY	NASH HASAN
DESIGNED BY	SATHISH PRASAD	DATE REVISED	



DATE	09-02-00
TIME	10:00 AM
PROJECT	03120000691
UNIT CODE	
PROJECT NUMBER & PHASE	ESL-4
SCALE	1" = 50'







Chapter 2. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project as indicated by the checklist on the following pages

X	Aesthetics		Agriculture and Forestry	X	Air Quality
X	Biological Resources	X	Cultural Resources		Geology/Soils
	Greenhouse Gas Emissions	X	Hazardous Materials and Emissions	X	Hydrology/Water Quality
	Land Use Planning		Mineral Resources	X	Noise
	Population/Housing		Public Services		Recreation
	Transportation/Traffic		Tribal Cultural Resources		Utilities/Service Systems
X	Mandatory Findings of significance				

Chapter 3. California Environmental Quality Act (CEQA) Evaluation

The proposed project is a joint project by the California Department of Transportation (Department) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans. The Department is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the Department to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation for a, b, d: The "No Impact" determinations in this section are based on the project scope, field reviews, and information provided in the Historic Property Survey Report and Archaeological Survey Report, prepared December 2018. The inventory effort consisted of (1) a literature and records research at the North Central Information Center and Northeast Information Center and a records search of Caltrans project files, (2) consultation with the Native American Heritage Commission, including a search of the Sacred Lands Files, as well as with local Native American tribes and individuals, (3) consultation with local historic societies, (4) field surveys of the project area conducted by professional archaeologists who meet the Secretary of Interior's qualification standards, and (5) Extended Phase I and Geoarchaeological Testing in the form of trenching with a backhoe to identify any archaeological resources in the project area. The Studies resulted in a Finding of No Adverse Effect with Standard Conditions as two archaeological resources were identified within the project limits, however, these resources can be protected in their entirety with the establishment of Environmentally Sensitive Areas. The only cultural resources that are considered to be exempt from evaluation per Attachment 4 of the First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act (January 1, 2014) (PA) were identified in the project area. No other cultural resources were found within the project limits.

Explanation for c: The "Less than Significant Impact" determination was based on the project scope and best available information documented in the Paleontological Identification Report (PIR), prepared November 7, 2018. Although the PIR indicates that the area underlying the proposed project area meets the criteria for having high sensitivity for paleontological resources, there are no paleontological resources that have been identified and documented in the project area. The following measures will further reduce any potential impacts during construction:

1) Preparation of a Paleontological Evaluation Report (PER) and Paleontological Mitigation Plan (PMP). A California licensed geologist, or qualified staff under the direction of a licensed geologist, should prepare a PER and PMP prior to construction. These documents, along with refined design plans/layouts, will outline where and when paleontological monitoring will be required on the job site and the protocol to following in the event fossils are discovered. Generally, excavation and ground-disturbing activities (including drilling holes for CIDH piles) should be monitored by a qualified paleontological monitor. Excavation tailing piles will be inspected by the monitor, and if fossils are discovered the monitor would initiate stop-work protocol outlined in SSP 14-7.04 (below). The PMP would detail the protocol for fossil evaluation, when to begin work again in the area around a discovery and identify and secure a curation facility to house any fossils discovered on the project.

2) Construction Personnel Paleontological Awareness Training – Prior to any ground-disturbing activities, all construction personnel, including the contractor site supervisor and the Caltrans Resident Engineer (RE)/Site Supervisor, should attend an awareness training delivered by a qualified paleontological specialist. This training would include education about the types of fossils which could be discovered (stop work within protective radius, notification of RE and supervising paleontologist, etc.)

3) Stop Work Protocol – Caltrans Standard Specification 14.7.04 should be included in the specification/bid package as a requirement for the project. It requires any paleontological resources discovered at the job site to not be disturbed, all ground-disturbing work to stop within the vicinity (usually a 60-foot radius) of the discovery, and immediate notification of the resident engineer, site supervisor, and supervising paleontologist. The discovery would then be assessed, and an appropriate treatment identified. Treatment may include preparation and recovery of fossil material, so they may be housed in a curation facility (museum, university, etc.), and will include preparation of a report for publication describing the discovery. The Paleontological Mitigation Plan will outline the exact protocol to follow in the event discovery of significant paleontological resources occurs.

VI. GEOLOGY AND SOILS: Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation for a-e: "No Impact" determinations in this section are based on the project scope and field reviews. No faults, unstable geologic units or soil, or expansive soil was identified within the project limits.

VII. GREENHOUSE GAS EMISSIONS: Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

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 of the document.

Explanation: Please refer to Chapter 4 – Climate Change for additional information.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation for (a): This "Less than Significant Impact" determination was based on the project scope and Initial Site Assessment (ISA), prepared March 23, 2018. Lead contaminated soil may exist within and near the project's right-of-way due to the historical use of leaded gasoline. An ADL site investigation was conducted on August 8, 2016 site investigation report concluded that between PM 7.3 and PM 7.43 site soil is Non-hazardous. Any excess soil within these project limits shall be disposed of in accordance with Standard Special Provision (SSP) 7-1.02K(60)(j)(iii) Earth Material Containing Lead. Between PM 8.288 and PM 8.65, soil excavated from the surface to a depth of 1 foot is identified as a California hazardous waste and shall be managed and disposed of in accordance with SSP 701.02K(60)(j)(iii) Earth Material Containing Lead with Soil Management. Between PM 8.288 and PM 8.65, excavated soil from underlying depth intervals of 1 to 3 feet can be reused without restrictions or disposed of as non-hazardous soil with respect to lead content. Hazardous chemicals are known to exist in the wood posts associated with guardrail and sign posts. If wood posts are to be removed, they shall be disposed of in accordance with Standard Special Provision (SSP) 14-11.14 (Treated Wood Waste). Asbestos may be present in cement pipe in the ground. If the project involves any asbestos pipe, removal and disposal of the asbestos pipe shall be in accordance with N-SSP 14-11.11 (Management or Asbestos Cement Pipe in the Ground). Per National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation, the contractor must perform demolition activities in accordance with SSP 14-9.02 Asbestos NESHAP Notification. Hazardous levels of lead and chromium are known to exist in the yellow color traffic stripes. Since traffic stripes and pavement marking will be removed while grinding the pavement surface, removal shall be in accordance with Standards Special Provision (SSP) 36-4 (Residue Containing Lead from Paints) which requires a Lead Compliance Plan (LCP). For removal of new yellow and other colors of paint, removal must be in accordance with SSP-84-9.03C Removal of Traffic Stripe and Pavement Markings Containing Lead.

Explanation for (b) – (h): The "No Impact" determinations are based on project scope and Initial Site Assessment (ISA) prepared March 23, 2018. The proposed project scope would not create a hazard to the public or environment through the release of hazardous materials.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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Explanation for b-e, g, i-j: The "No Impact" determinations are based on the project scope and the Water Quality Assessment Report prepared August 15, 2018. Due to the nature of the proposed project, no impacts to Water Quality are anticipated.

Explanation for h: The "Less than Significant Impact" determination is based on project scope and the Floodplain Hydraulic Study prepared April 2, 2018 which determined that the project as proposed is expected to have a less than significant impact on the floodplain. The risk of any additional flooding associated with the proposed project is low.

Explanation for a, f: The "Less than Significant Impact" determinations are based on the project scope and Water Quality Assessment Report. The proposed project would comply with the conditions of the Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order No. 2012-0011-DWQ, NPDES Permit No. CAS000003) and statewide NPDES General Permit For Storm Water Discharges Associated With Construction And Land Disturbance Activities (CGP) Order No. 2009-0009-DWQ, NPDES No. CAS000002 and all adopted amendments to this General Permit is required for projects that disturb one or more acres of land surface. All applicable guidelines and requirements in the 2015 Caltrans Standard Specifications (CSS) Section 13 regarding water pollution control and general specifications for preventing, controlling, and abating water pollution in streams, waterways, water conveyance systems, and other bodies of water would be implemented. Batch plants and/or rock crushing activities within Caltrans right-of-way (ROW) will require the preparation of an Air Space Lease Agreement prior to mobilization. The Lessee shall obtain an Industrial Storm Water General Permit Order 97-03-DWQ (General Industrial Permit) from the State Water Resource Control Board (SWRCB). The Lessee shall submit a copy of the Notice of Intent (NOI) to comply with the terms of the General Industrial Permit, a copy of the receipt letter with the Waste Discharge Identification (WDID) Number from the SWRCB, an approved Storm Water Pollution Prevention Plan (SWPPP) and a monitoring plan when filing for a Caltrans Encroachment Permit. The Lessee shall submit any amendments to the SWPPP, copies of any sampling/monitoring results, a copy of the annual report, and any reporting requirements covered by the General Industrial Permit. Batch plant or rock crushing activities outside of Caltrans ROW will require additional coordination.

X. LAND USE AND PLANNING: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Explanation for a, b, c: The "No Impacts" determinations are based on the project scope and field reviews. The proposed project scope would not physically divide an established community or conflict with any applicable habitat or natural community conservation plan. While Eschinger Road on and off ramps will be abandoned by the project since the geometrics of the current on/off ramps will not allow for connection to the realigned SB SR 99, there are no planned developments along Eschinger Road at this time. Per the Elk Grove General Plan Public Review Draft, the City of Elk Grove has identified potential infill areas along Eschinger Road for study, South Study Area and West Study Area. These areas have neither been annexed by the City of Elk Grove nor are there planned developments.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XI. MINERAL RESOURCES: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Explanation a-b: The "No Impacts" determinations are based on the project scope and field reviews. The proposed project scope would not result in the loss of availability of a known or locally-important mineral resource.

XII. NOISE: Would the project result in:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Explanation a-c, e-f: The "No Impacts" determinations are based on the project scope and field reviews. The proposed project scope would not result in the exposure of persons to of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, excessive ground Bournne vibration or ground borne noise levels, substantial permanent increase in ambient noise levels in project vicinity and the project is not within the vicinity of a public airport or private airstrip.

Explanation d: The "Less Than Significant" determination is based the Noise Study dated September 20, 2018. During construction, noise may be generated from the contractors' equipment and vehicles. The proposed project will comply with Caltrans Standard Specification 14-8.02 Noise Control.

Refer to Chapter 2 – Construction Impacts for additional information about temporary noise impacts.

XIII. POPULATION AND HOUSING: Would the project:

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanation for a-c: The "No Impacts" determinations are based on project scope and field reviews. The proposed project scope would not induce substantial population growth, displace substantial numbers of existing housing, or displace substantial numbers of people necessitating the construction of replacement house elsewhere.

XIV. PUBLIC SERVICES:

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

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanations a-b: The "No Impact" determinations in this section are based on information provided in the Historic Property Survey Report and Archaeological Survey Report prepared December 2018 which includes consultation with the Native American Heritage Commission and local Native American tribes and individuals. No Tribal Cultural Resources were identified within the project limits.

XVIII. UTILITIES AND SERVICE SYSTEMS: Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explanations a-g: The "No Impacts" determinations are based on project scope and field reviews.

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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XIX. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

☐
☐
☒
☐

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?

☐
☐
☐
☒

Explanation for a: The "Less than Significant" determination is based on the project scope, field reviews and technical studies. The proposed project would result in less than significant impacts to riparian habitat, wetlands and waters of the United States, VELB.

Explanation for b-c: The "No Impact" determinations are based on the project scope, field reviews, and technical studies. The proposed project will not have any cumulative impacts or environmental effects on human beings.

Chapter 4. Affected Environment, Environmental Impacts, and Avoidance, Minimization, and/or Mitigation Measures

4.1. Human Environment

4.1.1. LAND USE

The purpose of this project is to replace four structurally and seismically deficient bridge structures with a single bridge structure spanning the entire width of the roadway including the median; the Cosumnes River Bridges (Br. Nos. 24-0020R and 24-0020L) and the Cosumnes River Overflow Bridges (Br Nos. 24-0021R and 24-0021L). Additionally, the project will relinquish the existing SB McConnell Underpass (UP) (Br. No. 24-0048L), which crosses under the Union Pacific Railroad (UPRR) rail line. The SB McConnell UP will be replaced with a new, realigned SB McConnell Overhead structure since the existing SB McConnell UP has non-standard horizontal and vertical clearances. Eschinger Road on and off ramps from SB SR 99 will be abandoned due the realignment of SB SR 99 lanes since the geometrics of the current on/off ramps will not allow for connection to the realigned SB SR 99. It is understood that closing the Eschinger ramps will not preclude the local community from developing future access to SR 99 at Eschinger Road.

Existing and Future Land Use

Existing Land Use

The project area is located in Sacramento County near the City of Elk Grove, from the Dillard Road Overcrossing to 0.6 miles south of Grant Line Road. Presently, land use in the project area is rural and zoned either Agricultural or designated as a Natural Preserve according to the Sacramento County General Plan. Within the project limits, on the easterly side of NB SR 99 extending north from approximately Dillard Road to Eschinger Road, land use is designated as a Natural Preserve and comprises a portion of California Department of Fish And Wildlife's Cosumnes River Preserve. To the west of SB SR 99, land is zoned Agricultural and is largely comprised of crop land and cattle facilities along with a few, scattered rural residential properties. Additionally, several businesses, including Elk Grove Milling, Inc., a horse and animal feed milling company and Scotts Company, a fertilizer facility, are located approximately 3 miles southwest from the Eschinger Road on/off ramp.

Along SB SR 99, the on/off ramp at Eschinger Road currently provides access to property along the west side of the project area. The SB SR 99 on and off ramps at Eschinger Road have the following Average Daily Traffic (ADT) counts from August 2018:

Eschinger Rd Offramp from SB SR 99		Eschinger Rd Onramp to SB SR 99	
Weekday Avg. Vol.	Weekend Avg. Vol.	Weekday Avg. Vol.	Weekend Avg. Vol.
194 ADT	134 ADT	139 ADT	103 ADT

By comparison, the Kammerer Road SR 99 on and off ramps for both NB and SB SR 99, located approximately 1 mile north of the Eschinger Road, have the following Average Daily Traffic counts from Spring 2018.

Kammerer Rd Offramp from SB SR 99 Spring 2018	Kammerer Rd Slip Onramp to SB SR 99 Spring 2018
Average Volume	Average Volume
3,685 ADT	1,954 ADT

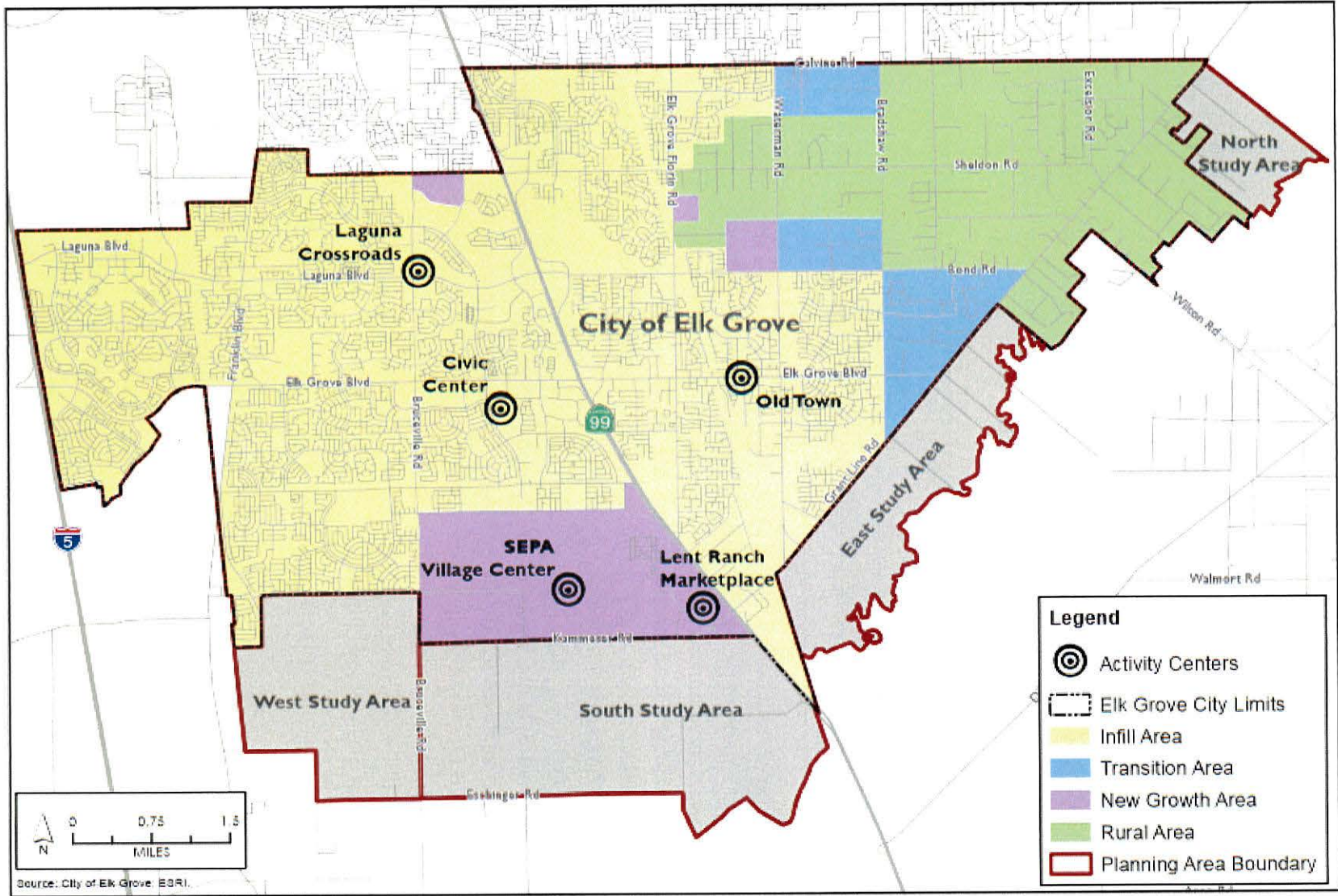
SR 99 ramp hourly and daily volumes at Eschinger Road are low, especially when compared to the Kammerer Road ramps, located in close proximity approximately 1 mile north of the Eschinger Road on and off ramps. The Kammerer Road/SR 99 ramps have the capacity to absorb the Eschinger Road ramp volumes. Moreover, local intersections (Promenade Parkway/W. Stockton Blvd. and Eschinger Road/W. Stockton Blvd.) also have the capacity to absorb the Eschinger Road ramp volumes.

Elk Grove Unified School District (EGUSD) reports that Eschinger Road is currently used for a school bus stop for one student in the District. EGUSD transportation staff report that closure of Eschinger Road on/off ramp would not impact this school bus stop since the driver would use West Stockton Boulevard as an alternate route. Closure of Eschinger Road on/off ramp would not affect City of Elk Grove public transit since, currently, there are no City public transit routes that require use of Eschinger Road.

Future Land Use

In terms of future land use, the *City of Elk Grove Public Review Draft July 2018 General Plan* identifies four Study Areas as new growth areas that may accommodate future development beyond the current City limits west of the project area (See Figure 3). Two of these areas; the South and West Study areas, lie along Eschinger Road which presently provides connection to SB SR 99. However, currently there are neither any planned developments nor a formal request for annexation to the City.

Figure 3. Potential Activity and Infill Areas In Elk Grove



Environmental Consequences

Avoidance, Minimization, and Mitigation Measures

No potential conflicts with current or planned land uses in the study area are anticipated. Therefore, no measures are proposed to reduce impacts related to land use.

CEQA Significance

The project as proposed is expected to have no impacts related to land use pursuant to CEQA.

4.2. Physical Environment

4.2.1. Hydrology and Floodplain

Regulatory Setting

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

To comply, the following must be analyzed:

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

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

Affected Environment

The floodplain impact of proposed project was evaluated through Floodplain Hydraulic Study completed on April 2, 2018. The entire project area is within the Federal Emergency Management Agency (FEMA) Floodplain Insurance Rate Map (FIRM) No. 0602620475E dated July 6, 1998. The project is within Flood Zone A, AE and Zone X of the Cosumnes River 100-year floodplain (Figure 4).

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

SACRAMENTO COUNTY,
CALIFORNIA
UNINCORPORATED AREAS

PANEL 475 OF 705

DATE MAP ISSUED: 08/01/00
EFFECTIVE DATE: AUGUST 1, 2000

MAP NUMBER
0607C0475H

EFFECTIVE DATE
AUGUST 1, 2000

Federal Emergency Management Agency

City of Elk Grove 060767

Sacramento County Unincorporated Areas 060262

ESCHINGER ROAD

DILLARD ROAD

Deer Creek

Cosumnes River

HIGHWAY 99

PROFILE BASELINE

ZONE AE

ZONE A

Eschinger Rd

McConnell OH Br No. 24-73R/L

JS127

McConnell UP Br No. 24-0048L

Cosumnes River Bridge, Br No. 24-0020R/L

Cosumnes River Overflow Bridge, Br No. 24-0021R/L

Dillard Rd OC Br No. 24-0163

River Above State Highway 99

18

99

53

49

54

55

Environmental Consequences

The bridge replacements of BR No. 24-0020R/L and Br. No. 2424-0021/L, the section of SR 99 embankment to be elevated, and the improvements at Dillard Road OC (Br. No. 24-0163) project lay within critical floodplain (Zone A and AE). These improvements are encroaching in transverse directions of the 100-year floodplain of the Cosumnes River and its Overflow. McConnell Underpass (Br. No. 24-0048) to be relinquished, the new McConnell Overhead (Br No. 24-73L) to be constructed, and the proposed work at Eschinger Road are within Flood Zone X with no impact to critical floodplains. The project also proposes to upgrade existing freeway lights and communication system by installing fiber optic cable along the project area using trenching method. These activities will also have no impact on critical floodplains.

The 100-year floodplain surrounding the project is incorporating the Cosumnes River and its overflow structures. The proposed encroachment crosses the 100-year floodplain of the Cosumnes River in transverse directions, but it is expected to have a less than significant impact to the existing floodplain. The encroachment will not likely alter the hydraulics of the study area considering that the project is mostly replacing and upgrading the existing facilities with minor changes to current configuration.

The four bridge replacements (Br. No. 24-0020R/L & Br. No. 2424-0021 R/L) will result in less of a footprint within the floodplain given that the net cross-section areas of the new bridge supports will be less than the current bridge supports' area. In addition, the new bridge decks will be placed at a higher elevation allowing for additional freeboard.

The sections of SR99 embankment to be elevated from STA 430+00 to 516+00, as a result of the new southbound realignments, will have no significant impact on the current 100-year floodplain given that the current ground surfaces to be elevated are already above the 100-year floodplain elevations. The only section of SR99 that is likely to remain below the 100-year flood plain is a small portion near Dillard Road at STA 410+00, where the embankment will not be elevated or altered as part of this project.

The proposed improvements at Dillard Road OC (Br. No. 24-0163) that includes replacing the non-standard bridge railings on and beneath the OC and replacing the road surfaces of the OC approaches and deck will have no impact on the floodplain as most of the work will be performed above the 100-year floodplain elevation.

McConnell UP (Br. No. 24-0048) to be relinquished, the new McConnell Overhead (Br. No. 24-73L) to be constructed and the proposed work at Eschinger Road are within Flood Zone X with no impact to critical floodplains.

The project also proposes to upgrade existing freeway lights and communication system by installing fiber optic cable along the project area using trenching method. This work will have no impact on critical floodplain and the work will be performed underground without adding fill to the floodplain.

Avoidance, Minimization and/or Mitigation Measures

No avoidance, minimization and/or mitigation measures are required. The project as proposed is expected to have a less than significant impact on the floodplain. The risk of any additional flooding associated with the project is low.

4.3.2. Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

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

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

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

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or the Department, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no

practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

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

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for more details.

Affected Environment

Jurisdictional wetlands and waters are present within the project limits. The term "jurisdictional wetlands" refers to areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Jurisdictional wetlands generally include swamps, marches, bogs, natural drainage channels, and seasonal wetlands.

Jurisdictional waters of the United States are defined as those waters that are currently used, or were used in the past, or may be susceptible to use in interstate commerce, including all waters subject to the ebb and flow of the tide and all interstate waters including interstate wetlands. This definition includes interstate lakes, rivers, streams (including intermittent and ephemeral), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds where the use degradation or destruction of which could affect interstate or foreign commerce.

A Natural Environmental Study (NES) was completed in November 2018. In October 2013 Caltrans biologists delineated one potentially jurisdictional waters and seven potentially jurisdictional wetlands within the BSA. A Wetland Delineation was completed in December 2013 and a Preliminary Jurisdictional Determination was issued on April 17, 2014. No vernal pools or depressional features were identified at that time. A follow-up botanical survey was conducted on April 24, 2014 and May 29, 2018 (for special-status plants). The April 2014 survey identified a vernal pool complex located at the northern most extent of the project within an area that has been identified as a potential staging area for equipment and material during the construction of the project. No grading or excavation near or adjacent to this feature is

being proposed. This is an isolated feature and is located directly adjacent to an access road that is regularly used by the current landowners to access the surrounding agricultural fields. A map showing the extent and location of this feature is located in Figure 5 - Permanent and Temporary Impacts to Wetlands and Waters of the U.S. and State.

[illegible]

Environmental Consequences

Temporary and permanent impacts are anticipated to occur within the Cosumnes River channel. However, the project has been designed to minimize temporary and permanent impacts to the Cosumnes River as it has been identified as a Water of the U.S. and the State. Use of best management practices (BMPs) and compensatory mitigation required by USACE would offset project related cumulative impacts to jurisdictional waters. Prior to the start of construction activities, Caltrans will obtain all necessary regulatory permits for this project. These permits are expected to include a CWA Section 401 Water Quality Certification from the RWQCB, a CWA Section 404 Nationwide Permit from the USACE, a Fish and Game Code 1602 Streambed Alteration Agreement from CDFW and a Floodplain Encroachment Permit from the Central Valley Flood Protection Board.

Avoidance and Minimization Measures

The following project avoidance and minimization measures would reduce/avoid impacts to wetlands/waters:

- Best management practices will be implemented to guarantee the smallest practical footprint to minimize temporary and permanent impacts to jurisdictional waters of the United States and State.
- Vernal pools will be fenced with ESA fencing to prevent any impacts from the proposed project.

Permanent Impacts

The Project will permanently affect approximately 0.69 acres of jurisdictional wetlands. Removal of the two larger piers and replacement of them with smaller piers will result in a net gain of 0.01 acres of jurisdictional waters of the U.S. and State (Cosumnes River).

Temporary Impacts

The proposed project will temporarily impact 0.33 acres of waters of the U.S. and the State if there is water present in the channel and a work pad or trestle is required.

Although the impacts to wetlands and waters of the U.S. and State are considered to be less than significant, through consultation with USACE it was required that impacts be offset by the purchase of credits for a 0.69 acre loss of jurisdictional wetlands through USACE's "In-lieu-fee" program.

Mitigation Measures

No mitigation measures are proposed.

CEQA Significance

The proposed project would result in less than significant impacts to wetlands and other waters.

4.3.3. Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA).

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

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000-21177.

Affected Environment

Botanical surveys were conducted on August 6, 2013, April 24, 2014 and April 27, 2018. Various special status species were evaluated for potential occurrence within the project limits. No special plant species were observed within the Biological Study Area (BSA)

Environmental Consequences

No special status plant species were observed within the project limits. Therefore, no impact to special-status plant species is anticipated.

Mitigation Measure

No mitigation measures are proposed

CEQA Significance

The proposed project would result in no impact to special-status plant species.

4.3.4. Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and

permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed further below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Affected Environment

Migratory Birds

All migratory birds, including feathers or other parts, nests, eggs or products are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16USC 703-712). The Migratory Bird Treaty Act makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, except as allowed by implementing regulations (50 CFR21).

Disturbance that causes nest abandonment or loss of nest productivity (e.g., killing of abandonment of eggs or young) may be considered a “take” and is potentially punishable by fines and imprisonment.

Naïve birds, protected under the MBTA and similar provisions under CDFW code, currently nest or have the potential to nest within the Biological Study Area (BSA) and the project impact area. During biological surveys, both the NB and SB Cosumnes River Bridges contain swallow nests. There are no swallows on the Cosumnes River Overflow Bridge or the McConnell OHN Bridge.

Environmental Consequences

Avoidance and Minimization Measures

The following project avoidance and minimization measures would reduce/avoid impacts to migratory birds:

- Prior to construction, swallows will be excluded from nesting on the structure by either installation of exclusion devices prior to the nesting season, use of nesting-prevention measures or removal and disposal of partially constructed and unoccupied nests of migratory and nongame birds on a regular basis to prevent their occupation.
- The proposed project would remove shrubs that provide potential nesting habitat for nesting birds that are protected under the Migratory Bird Treaty Act. Standard special provisions would be included in the construction contract to allow the removal of trees and shrubs during the non-nesting season. The nesting season is defined as February 1 to September 30, therefore, trees will be removed October 1 to January 31st. Shrubs may also be removed during the nesting season after being cleared by a qualified Caltrans biologist. If a nesting bird is found, the tree/shrub would not be removed until the qualified Caltrans biologist confirms that all birds have fledged. Swallows nests will be removed and bats will be excluded during the non-nesting season also (October 1 to January 31).

Mitigation Measures

No mitigation measures are proposed.

CEQA Significance

The proposed project would result in no impact to special-status animal species.

Bats

Affected Environment

Approximately 15 to 20 Mexican free-tailed bats (*Tadarida brasiliensis*) were observed in a hinge joint of the NB Cosumnes River Bridge near the Cosumnes River (northern side of the Cosumnes River). The Mexican re-tailed bat or Brazilian free-tailed bat is a medium-sized bat that is native to the Americas, regarded as one of the most abundant mammals in North America. Its proclivity towards roosting in large numbers at relatively few locations makes it vulnerable to habitat destruction in spite of its abundance. Caltrans has been monitoring the

Cosumnes River Bridge to determine the dates that these bats migrate. Bats migrate at different times of the year depending on various factors such as bat species, temperature, etc.

Environmental Consequences

Avoidance and Minimization Measures

The following project avoidance and minimization measures would reduce/avoid impacts to bats:

Caltrans will direct the contractor to fill the hinge joint with foam, or some other exclusionary device, in order to prevent the bats from returning to the hinge joint during that time period. This will ensure no impacts to bats since they will not be present when construction begins.

Mitigation Measures

No mitigation measures are proposed.

CEQA Significance

The proposed project would result in no impact to bats.

4.3.5. Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA) (and the Department, as assigned), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement or a Letter of Concurrence. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency

responsible for implementing CESA. Section 2080 of the California Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

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

Affected Environment

Swainson's Hawk

The Swainson's Hawk (*Buteo swainsoni*) is a state threatened species and federal species of concern. The Swainson's hawk is a summer migrant in the Central Valley that breeds in riparian and oak savannah habitat and forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures. The hawk roosts in large trees but will roost on the ground if no trees area available. Breeding occurs from late March to late August, with peak activity occurring in late April through July.

Giant Garter Snake

The giant garter snake (GGS)(*Thamnophis gigas*) is a federal and State threatened species. Giant garter snakes inhabit marshes, sloughs, ponds, small lakes, low gradient streams and other waterways. This species also frequents agricultural wetlands such as irrigation and drainage canals and rice fields, and their adjacent uplands. The breeding season extends through March and April, and females give birth to live young from late July through early September. Current threats that contribute to the decline of GGS throughout its range are habitat loss, habitat fragmentation, predation by introduced species, parasites, and water pollution. Habitat loss and fragmentation are commonly caused by flood control activities and changes in agricultural and other land management practices.

Essential habitat components consist of the following elements: 1) adequate water during the snake's active period (i.e., early spring through mid-fall) to provide a prey base and cover, 2) emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat; 3) upland habitat for basking, cover, and retreat sites; and 4) higher elevation uplands for cover and refuge from flood waters.

Vernal Pool Fairy Shrimp (VPFS) (*Branchinecta lynchi*)

Vernal pool Fairy Shrimp (*Branchinecta lynchi*) is a federal and state threatened species. VPFS are distributed from southern Oregon to southern California in a wide variety of habitat types

(Eriksen and Belk 1999). Soil types associated with vernal pool fairy shrimp vary greatly with geography and influence the ecology of the species. This species is usually associated with vernal pools (79%) but can also be found in association with other ephemeral habitats including alkali pools, seasonal drainages, stock ponds, vernal swales and rock outcrops (Vollmar 2001).

Vernal pools are subject to seasonal variations, and vernal pool fairy shrimp are dependent on the ecological characteristics of such variations. These characteristics include duration of inundation and presence or absence of water at specific times of the year (U.S. Fish and Wildlife Service 1994). The vernal pool fairy shrimp is capable of living in Central Valley vernal pools of relatively short duration (pond 6 to 7 weeks in winter and 3 weeks in spring) (Eriksen and Belk 1999). Other factors contributing to the suitability of pools for vernal pool fairy shrimp include alkalinity, total dissolved solids (TDS), and pH (U.S. Fish and Wildlife Service 1994; Eriksen and Belk 1999).

Valley Elderberry Longhorn Beetle (VELB)

The Valley Elderberry Longhorn Beetle (VELB) is listed as a federally threatened species. Elderberry shrubs are hosts for VELB larvae. The VELB's range has been reduced and greatly fragmented due to a loss of elderberry inhabited communities, most especially riparian habitat loss. Habitat loss is derived from agricultural development, urbanization, levee maintenance and pesticide drift where aerial application or fogging of crops occurs near riparian habitats.

Adult VELB feed on elderberry foliage and are present from March through early June. During this time, adults mate within the canopy and females lay their eggs, either singularly or in small clusters, in living elderberry bark crevices or at the junction of stem/trunk or leaf petiole/stem. After eggs hatch, the first instar larvae burrow into the host elderberry stems to feed on pith for one to two years. As the larvae becomes ready to pupate, it chews outward from the center of the stem through the bark. After the larvae plugs the newly constructed emergent hole with shavings, it returns to the pupal chamber to metamorphose, and will emerge from the stem or trunk in mid-March through June as adults.

Central Valley Steelhead

Central Valley Steelhead is listed as a Federally Threatened Species. The Cosumnes River has been documented to contain hatchery raised fish as well as wild populations of steelhead. However, due to the river being seasonally intermittent, the proposed project area can only be utilized as an adult migration corridor and juvenile emigration corridor. The timing in which the Cosumnes River dries varies from year to year but generally occurs from June to December (DWR 2018). Historically groundwater has supported flows during late summer and early fall months. However, due to heavy agriculture use the lowered water table has created an extended period of low-flow and dry conditions (Moyle et al, 2003).

The winter of 2016/2017 was an exceptionally wet year and the Cosumnes River held water for most of the year; however, during field visits during the summer of 2017 the water was very low (approximately 1-3 feet), warm, stagnant and not optimal conditions for migratory movement of steelhead. There was water present into the month of July in the year of 2018. However, the water was only 1-2 feet deep, very warm, murky and very slow velocity. If there is water present, Caltrans intends to adhere to a work window from June 15 to October 15th when

steelhead would most likely not be present due to the water conditions. Steelhead are generally favored by cooler temperatures and permanent flows (Marchetti & Moyle 2001).

Another factor that can preclude steelhead from utilizing the project limits as habitat is the high percentage of invasive predator fish species in the alluvial river segment where the project is located. Spotted bass and largemouth bass were common in the warm, low-elevation pool habitats (Moyle et al, 2003). The reduction of native fish in the Cosumnes River is believed to be caused by the predation on early life history stages by non-native fish and by competitive interactions by size classes (Moyle et al, 2003).

Based upon the information presented above, it is not likely that Central Valley steelhead will occupy the project limits during construction.

Essential Fish Habitat (EFH) for fall-run Chinook salmon

EFH consists of all waters currently or historically accessible to salmon. Through consultation with CDFW fisheries biologist Mike Healy and NMFS biologist Dylan Van Dyne, the seasonal presence of fall-run Chinook salmon is known to occur within the project area. See Table 2

Table 2. Generalized Life History Timing for fall-run Chinook Salmon (Yoshiyama et al. 1998)

Sacramento River Basin	Migration Period	Peak Migration	Spawning Period	Peak Spawning	Juvenile Emergence Period	Juvenile Stream Residency
Fall run Chinook	June-December	September-October	Late September-December	October-November	December-March	1-7 months

Although salmon are present in the Sacramento Basin for the entire year at different stages of its life cycle, year-round occurrence is not expected in the project area because of dry summer conditions that preclude juvenile residency and over-summer rearing. Due to the river being seasonally intermittent the propose project area can only be utilized as an adult migration corridor and juvenile emigration corridor. The presence of fall-run Chinook would be dependent on suitable water conditions that occur in the project area during winter months, when precipitation maintains appropriate water temperature and volume.

Environmental Consequences

Swainson's Hawk

Nest surveys during the inactive season identified ten potential raptor nests within 500 feet and sixteen nests within a half mile of the Cosumnes River Bridge and the Cosumnes River Overflow Bridge. Swainson's hawk pairs were identified flying over the project area during their breeding season in July. Although there were ten observed raptor nests identified within 500 feet of the project area, it is likely that most of these nests would be occupied by other raptor species, not Swainson's

There are many observed occurrences along the SR 99 corridor and throughout the Cosumnes River corridor. Between Elk Grove and Galt along SR 99, there are 21 observed occurrences of

Swainson's Hawk according to the California Natural Diversity Database (CNDDB). Excluding those 21 occurrences, there are an additional 53 observed occurrences of Swainson's Hawk within a 5 mile radius from the project. Thus, the temporary impacts to Swainson's Hawk as a result of the project are anticipated to be minimal in comparison to the larger population of Swainson's Hawk in the surrounding area. Additionally preconstruction surveys will occur to avoid any impacts to the species.

Avoidance and Minimization Measures

The following project avoidance and minimization measures would reduce/avoid impacts to Swainson's Hawks.

- Preconstruction surveys will be conducted no less than 14 days and no more than 30 days before the project starts.
- If an active nest is found, a qualified biologist will monitor the active nest during construction activities to ensure that no interference with the hawks' breeding activities occurs.
- Removal of any trees within the Biological Study Limit (BSA) should be done outside of the nesting season, however, if a tree in the BSA needs to be removed during nesting season a qualified biologist will inspect the tree prior to removal to ensure that no nests are present.

Mitigation Measures

No mitigation measures are proposed for Swainson's Hawk.

CEQA Significance

The project would result in less than significant impacts to Swainson's Hawks.

Giant Garter Snake (GGS)

No essential GGS habitat components occur within the BSA per survey results:

- The Cosumnes River, within the project area, is dry during the majority of the GGS active season. On average, the Cosumnes River is dry from June to December. The river is intermittent and cannot provide GGS a consistent source of aquatic prey.
- The Cosumnes River does not have a consistent enough source of water to support emergent herbaceous wetland vegetation that is essential for GGS cover.
- The river within the BSA is surrounded by an approximate 300-foot-wide riparian corridor which is unusable for GGS basking. GGS rarely travel more than 200 ft. from an aquatic water source for upland habitat (USFWS 1999b).
- GGS are absent from large rivers with sand substrate, which is present within the BSA (USFWS 1999b).

Within 5 miles of the project, there are 6 observed occurrences of GGS according to the CNDDDB. While habitat for the species lies 900 feet south of the project area, there is no connectivity between the project area and the nearest habitat. Since there is no habitat for GGS within the project area, it is anticipated that there will be no impacts to the species. The avoidance and minimization measures outlined below will further ensure no impacts to GGS.

Avoidance and Minimization Measures

The following project avoidance and minimization measures will be implemented to ensure there are no impacts to GGS.

- Implementation of Caltrans' standard BMPs throughout the proposed project for the duration of construction, including erosion and sediment control.
- On-site monitoring during all ground disturbing activities of the proposed project will be conducted using a U.S. Fish and Wildlife Service-approved biologist during both the snake's active and inactive season.
- A Worker Environmental Awareness Training Program for construction personnel will be conducted by a Service-approved biologist for all construction workers including contractors, prior to the start of construction activities. This training instructs workers to recognize the snake and its habitat.
- Twenty-four hours prior to construction activities, the project area will be surveyed for the snake by a Service-approved biologist. Surveys will be repeated if a two-week or greater lapse in construction activity occurs.
- Disturbed soil areas within the action area that are outside the active channel of the Cosumnes River will be seeded using native plant species.
- After completion of construction activities, any temporary fill and construction debris will be removed and disturbed areas will be restored to pre-project conditions.

Mitigation Measures

No mitigation measures are proposed for GGS.

CEQA Significance

The project would result in less than significant impacts to GGS.

Vernal Pool Fairy Shrimp (VPFS)

Small vernal pools (0.01 acres) were identified as occurring in the project area. Although the habitat is not ideal, Caltrans will assume presence of the VPFS. Refer to figure 6 below identifying the locations of the vernal pools. Within 5 miles of the project area there are approximately 6 observed occurrences of VPFS within vernal pool habitat according to the CNDDDB. These vernal pool complexes provide more ideal habitat conditions than the very small, isolated and disturbed pools in the project area. The avoidance and minimization

measures outlined below, which include fencing to exclude construction equipment, personnel and materials out of the sensitive area, will further ensure no impacts to VPFS.

Figure 6. Vernal Pool Locations and Acreage



Avoidance and Minimization Measures

The following project avoidance and minimization measures would reduce/avoid the direct and indirect impacts to VPFS:

- Install orange construction fencing between the construction area and vernal pool branchiopod habitat. The protected areas will be designated as environmentally sensitive areas (ESAs) and clearly identified on the construction plans and described in the specifications.
- Caltrans will require its contractor to avoid and minimize the introduction of new invasive plants and the spread of invasive plants previously documented in the project area.
- Upon project completion, Caltrans will require the contractor to restore all temporarily disturbed grassland to pre-project or better conditions. To the extent feasible, native grasses and forbs will be used to reseed disturbed areas.
- Caltrans will retain a qualified biologist to conduct environmental awareness training for construction crews before project implementation. The awareness training will be provided to all construction personnel and will brief them on the need to avoid effects on listed, threatened, and candidate species and vernal pool.

Mitigation Measures

No mitigation measures are proposed for VPFS.

CEQA Significance

The project would result in less than significant impacts to VPFS given the avoidance and minimization measures incorporated to protect the vernal pools within the BSA.

Valley Elderberry Longhorn Beetle (VELB)

Surveys for elderberry shrubs within the BSA were conducted November 3, 2017, January 22, 2018, April 18, 2018, May 29, 2018 June 1, 2018 and July 6, 2018. All shrubs with at least one stem greater than one inch at ground level were mapped with GPS units. Within the BSA there are 68 elderberry shrubs located in both riparian and non-riparian habitat. Mature riparian habitats occur along the Cosumnes River corridor and a smaller band of riparian occurs at the Cosumnes River Overflow bridge. The majority of elderberry shrubs mapped within the BSA were mature with a few that were very large and arborescent.

Due to the size of the project and the amount of elderberries present, Caltrans separated the analysis of VELB within the BSA into 8 groups determined by location. Group 1 consists of the elderberries located on the north side of the Cosumnes River. Group 2 consists of elderberries located on the south side of the Cosumnes River. Group 3 consists of elderberries located just south of group 2, south of the Cosumnes River, east of SR-99. Group 4 consists of elderberries located next to the Cosumnes River Overflow Bridge. Group 5 is just south of the Cosumnes River Overflow Bridge on the east side of SR-99. Groups 6 through 8 area elderberries that

parallel SR-99 on the west side in between SR-99 and an agriculture field. A map showing the locations of the shrubs (groups) is located below **Figure 7**.

Although the project will impact elderberry shrubs within the project area, the Cosumnes River corridor is predominately surrounded by riparian habitat intermixed with elderberry shrubs along the entire corridor. Moreover, the Cosumnes River Preserve lies east of the project area and serves to protect various native habitat types, including elderberry shrubs. Also, within the larger Sacramento Valley area, there are many riparian areas that have suitable habitat to support elderberry shrubs as well. The project has been designed to avoid elderberry shrubs to the greatest extent practicable. Since elderberry shrubs will be transplanted, as determined through consultation with USFWS, impacts to elderberry shrubs (host for VELB) will be temporary in nature. Thus, the temporary impacts to elderberry shrubs as a result of the project are anticipated to be minimal in comparison to the larger population of elderberry shrubs in the surrounding area.

1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to understand what consumers want and what problems they are trying to solve. Once a need is identified, the next step is to develop a concept that addresses that need. This is often done through brainstorming and sketching ideas. The third step is to create a prototype, which is a physical model of the product that can be used to test and refine the design. This is followed by a series of iterations where the design is improved based on feedback from users and testing. Finally, the product is ready for production and distribution.



Permanent Direct Impacts

Due to the historic occurrence of VELB along the Cosumnes River and the presence of elderberry shrubs, VELB are inferred to be present in the BSA. The direct effects of this project will be the relocation of 49 of the 68 elderberry shrubs, including stems which may contain larvae, resulting in potential direct "take" of VELB. The project *may affect and is likely to adversely affect* VELB; therefore, through the consultation process, the United States Fish and Wildlife Service requires compensatory mitigation. The proposed project work window also includes three months of the adult flight period, increasing the chances of adult mortality.

Temporary Direct Impacts

Temporary direct impacts include the transplanting of the elderberry and the temporary disturbance of the elderberries original habitat for 3 years or less.

Indirect Impacts

Indirect impacts that would result from the proximity to construction may include impacts from construction dust, changes in hydrology, shading, soil compaction, and removal of associated riparian woodland species.

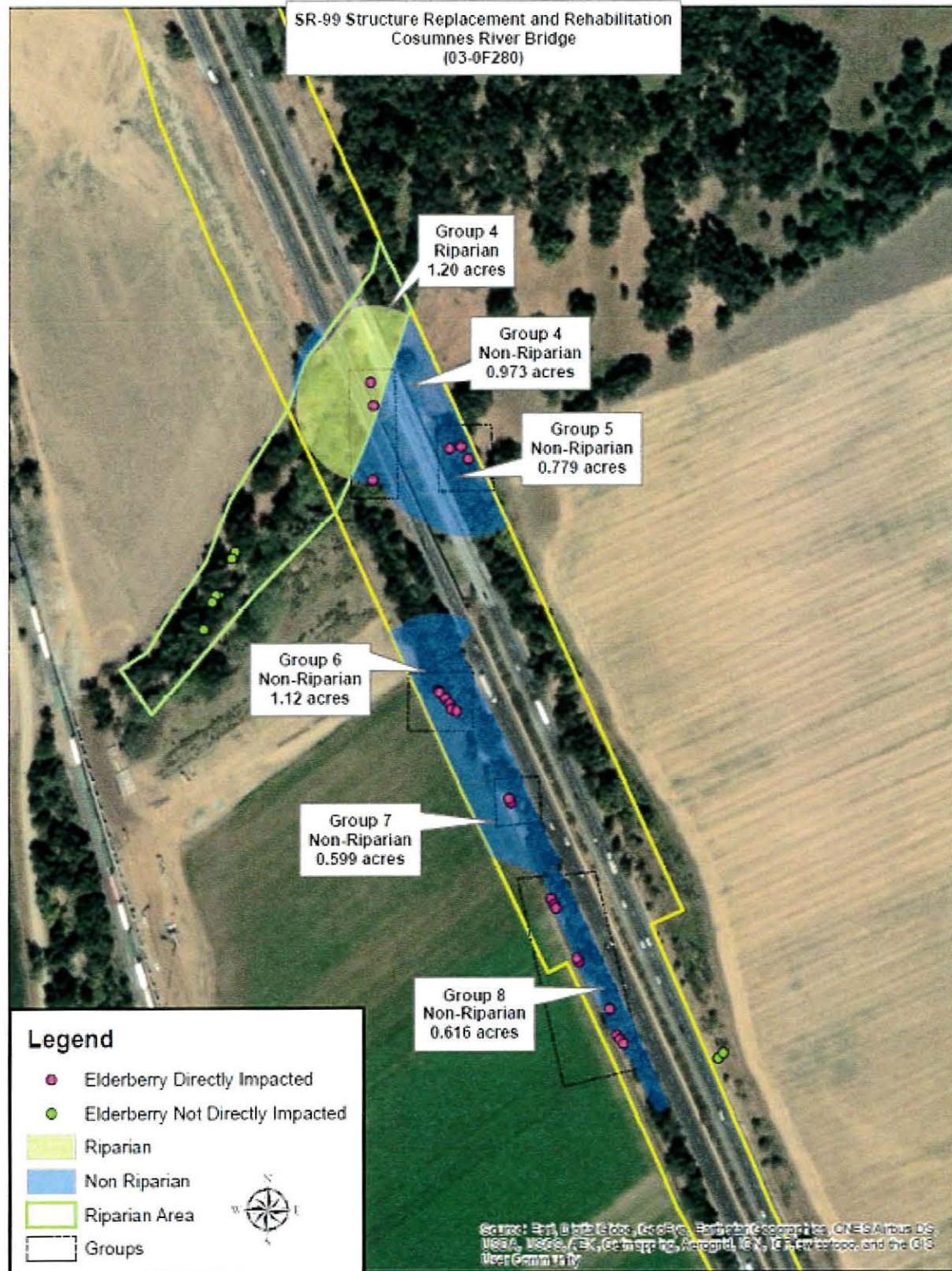
With the exception of the slightly larger bridge, there will be no permanent structures built in VELB habitat. Some elderberry were located alongside the bridges but none were located directly under the existing bridges. Additionally, all stockpiling and staging will occur outside of VELB habitat.

Due to the size of the project and the amount of elderberries present, Caltrans separated the analysis of VELB within the BSA into 8 groups determined by location. Group 1 consists of the elderberries located on the north side of the Cosumnes River. Group 2 consists of elderberries located on the south side of the Cosumnes River. Group 3 consists of elderberries located just south of group 2, south of the Cosumnes River, east of SR-99. Group 4 consists of elderberries located next to the Cosumnes River Overflow Bridge. Group 5 is just south of the Cosumnes River Overflow Bridge on the east side of SR-99. Group 6 through 8 are elderberries that parallel SR-99 on the west side in between SR-99 and an agriculture field. Refer to figures 8 and 9 below for maps of groups 1 through 3 and groups 4 through 8, respectively, and to table 3 for a summary of the habitat level compensation for all groups.

Figure 8. Elderberry Groups 1 through 3



Figure 9. Elderberry Groups 4 through 8



Group 1 consists of 15 elderberries within a riparian area. No exit holes were identified in any of these elderberry shrubs; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. They are all located within riparian habitat. All elderberries within group 1 will be permanently directly impacted because they will be transplanted and they will be impacted for more than one year. All permanently impacted elderberry shrubs will be transplanted to a USFWS-approved mitigation bank. Caltrans proposes to mitigate for 2.33 acres of riparian habitat and 0.21 acres of non-riparian habitat.

Group 2 consists of 8 elderberries; 6 are within a riparian area and 2 are located in a non-riparian area. No exit holes were identified; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. All elderberries within group 2 will be permanently directly impacted because they will be transplanted and they will be impacted by the project for more than one year. All permanently impacted elderberry shrubs will be transplanted to a USFWS-approved mitigation bank. Caltrans proposes to mitigate for 1.53 acres of riparian habitat and 1.12 acres of non-riparian habitat.

Group 3 consists of 3 elderberries; all 3 are in non-riparian habitat. No exit holes were identified; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. All elderberries within group 3 will be permanently directly impacted because they will be transplanted and they will be impacted by the project for greater than one year. All permanently impacted elderberry shrubs will be transplanted to a USFWS-approved mitigation bank. Caltrans proposes to mitigate for 0.578 acres of non-riparian habitat.

Group 4 consists of 3 elderberries; 2 are located within riparian habitat and one is located in non-riparian habitat. No exit holes were identified; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. All elderberries within group 4 will be permanently directly impacted because they will be transplanted and they will be impacted by the project for greater than one year. All permanently impacted elderberry shrubs will be transplanted to a USFWS-approved mitigation bank. Caltrans proposes to mitigate for 1.20 acres of riparian habitat and 0.97 acres of non-riparian habitat.

Group 5 consists of 3 elderberry shrubs all within non-riparian habitat. No exit holes were identified; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. All elderberry shrubs within group 5 will be permanently directly impacted because they will be transplanted and will be impacted for greater than one year. All permanently impacted elderberry shrubs will be transplanted to a USFWS-approved mitigation bank. Caltrans proposes to mitigate for 0.78 acres of non-riparian habitat.

Group 6 consists of 6 elderberry shrubs within non-riparian habitat. No exit holes were identified; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. All elderberry shrubs within group 6 will be permanently directly impacted because they will be transplanted and will be impacted for greater than one year. All

permanently impacted elderberry shrubs will be transplanted to a USFWS-approved mitigation bank. Caltrans proposes to mitigate for 1.12 acres of non-riparian habitat.

Group 7 consists of 2 elderberry shrubs within non-riparian habitat. No exit holes were identified; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. All elderberry shrubs within group 7 will be permanently directly impacted because they will be transplanted and will be impacted for greater than one year. All permanently impacted elderberry shrubs will be transplanted to a USFWS-approved mitigation bank. Caltrans proposes to mitigate for 0.60 acres of non-riparian habitat.

Group 8 consist of 9 elderberry shrubs within non-riparian habitat. No exit holes were identified; however, exit holes are difficult to detect so it is conceivable that exit holes may have been present and not detected. All elderberry shrubs within group 8 will be permanently directly impacted because they will be transplanted and will be impacted for greater than one year. All permanently impacted elderberry shrubs will be transplanted to a USFWS-approved mitigation bank. Caltrans proposes to mitigate for 0.62 acres of non-riparian habitat.

Table 3. Proposed Habitat Level Compensation VELB

Habitat Level Compensation								
	Riparian				Non Riparian			
Group #	acre	sqft	Credit	3:1 ratio	acre	sqft	Credit	1:1 Ratio
Group 1	2.332457	101601.4	56.44522	169.33567	0.206752	9006.068	5.003371	5.003371
Group 2	1.535416	66882.72	37.156925	111.47077	1.117651	48684.69	27.04705	27.04705
Group 3					0.577816	25169.55	13.98308	13.98308
Group 4	1.199364	52244.08	29.02449	87.073462	0.97364	42411.61	23.562	23.562
Group 5					0.779793	33967.63	18.8709	18.8709
Group 6					1.121468	48850.96	27.13942	27.13942
Group 7					0.599607	26118.79	14.51044	14.51044
Group 8					0.616673	26862.15	14.92342	14.92342
Total	5.067237	220728.2	122.6266	367.87991	5.9934	261071.4	145.0397	145.0397

Avoidance and Minimization Measures:

The following project avoidance and minimization measures would reduce/avoid impacts to VELB.

All areas to be avoided during construction activities will be fenced and/or flagged as close to construction limits as feasible.

- Fencing will be inspected daily by the contract biologist and maintained by construction under the biologist's supervision.
- A USFWS qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for noncompliance.
- A USFWS qualified biologist will monitor the work area at project appropriate intervals to assure that all avoidance and minimization measures are implemented.
- In order to avoid and minimize adverse effects to VELB when trimming, trimming will occur between November and February and will avoid the removal of any branches that are ≥ 1 inch in diameter.
- Erosion control will be implemented and the affected area will be re-vegetated where feasible with appropriate native plants
- All elderberry shrubs with stems greater than one inch in diameter that cannot be avoided will be transplanted following the most current version of the ANSI A300 guidelines for transplanting. They are voluntary industry consensus standards developed by Tree Care Industry Association and written by a committee called the Accredited Standards Committee (ASC) A300, whose mission is to develop consensus performance standards based on current research and sound practice for writing specifications to manage trees, shrubs, and other woody plants.
- Dust control measures will be implemented for all ground-disturbing activities in the project area. These measures may include applying water to graded and disturbed areas that area unvegetated. To avoid attracting ants, water will not be sprayed within the driplines of elderberry shrubs at any time.

Mitigation

No mitigation measures are proposed for VELB.

CEQA Significance

Although the temporary and permanent impacts to riparian elderberry habitat and non-riparian elderberry shrubs are considered less than significant pursuant to CEQA, through consultation with USFWS, in addition to transplanting elderberry shrubs with stems greater than one inch in diameter that cannot be avoided, it was required that impacts be offset by the purchase of credits at a USFWS approved mitigation bank. Caltrans proposes to compensate for permanent losses using habitat level compensation. Permanent riparian impacts will be compensated at a 3:1 acreage ratio and permanent non-riparian impacts will be mitigated at a 1:1 acreage ratio as follows:

- Caltrans proposes to compensate for 5.07 acres (123 credits) of permanent impacts to riparian elderberry habitat and compensate for 5.99 acres (145 credits) of permanent impacts to non-riparian elderberry shrubs. In total, per Caltrans consultation with USFWS, Caltrans proposes to further reduce impacts to VELB with purchase of 513 credits at a USFWS approved mitigation bank.

Central Valley Steelhead

The majority of the construction impacts to Central Valley Steelhead are temporary in nature and would occur at a time when the river is dry and they are not present (DWR 2018). The proposed project involves constructing the new median bridge structure and the NB and SB bridges which will result in one bridge structure when complete. There will be 5 Cast-In-Drilled-Hole (CIDH) piles located within the river channel. These piles include one 84-inch pile for the median bridge structure, two 66-inch piles for the SB bridge, and two 66-inch piles for the NB bridge. This will result in approximately 0.01 acres (484 square feet) of permanent fill into the river. However, there are two existing piers within the river channel at the SB bridge and two piers within the channel at the NB bridge that are four feet by 52 feet which will be removed. This removal of the existing piers will result in approximately 0.02 acres (832 square feet) of impacts. Removing the larger piers and replacing them with smaller CIDH piles will result in an additional 0.01 acres (348 square feet) of Steelhead habitat.

Caltrans is not proposing to compensate for installing the smaller CIDH piles within the river channel since there is a gain of Steelhead habitat from removing the larger piers. Additionally, it is very likely there will be no water present within the river channel.'

Temporary Impacts from Construction Methods

Timing of construction will likely occur when the river is dry; however, it is possible that water will be present. If water is present, the contractor may require work pads or trestles to facilitate construction. Cofferdams or 13-foot diameter steel hollow casings would also be required to isolate the CIDH piles from water. Caltrans construction personnel have been consulted and believe the contractor would most likely use work pads if water is present since the water would be very shallow in summer, even if it was an unusually wet year. Caltrans only included the trestle in this analysis as a worst case scenario; trestles would not likely be used.

Work pad: If water is present and the contractor decides to utilize a work pad, it would be approximately 40 feet wide by 120 feet long. Three work pads would be required; one for

the median bridge structure, the SB bridge, and the NB bridge. There would be approximately 14,400 square feet (0.33 acres) of temporary impacts to steelhead.

Trestle: *If water is present*, the contractor may utilize a trestle to access the bridge construction area. Each construction stage (each of the 3 bridges) would require its own trestle. Trestles are typically designed by the contractor at the time of construction; therefore, specific details about the trestle are not known currently. The following information is based on the engineer's best estimate on where the piles would be located, how the piles would be installed, how many piles are required, and the type of pile that would be used to span the active 120-foot river channel. Assuming the water levels are low in the summer months, the contractor should be able to install the trestle piles outside of the Cosumnes River. The trestle would be approximately 40 feet wide by 120 feet long. The trestle would be able to span approximately 120 feet which would result in approximately four temporary piers spaced at approximately 30 to 40 feet. Each pier would need approximately four to six 24-inch steel pipe piles. There would be three trestles constructed requiring approximately 16 to 24 piles per trestle.

The contractor would most likely install the piles with an impact hammer. There could be up to six piles installed per day and it is estimated that each pile would require approximately 200 blows. If a trestle is constructed, the falsework needed for the bridge would use the same supports as the trestle. The remaining falsework for the bridge would be located outside of the active channel and be constructed out of timber on flat ground. There will be three trestles constructed requiring approximately 16 to 24 piles per trestle. Assuming the worst-case scenario of 72 piles (24-inch steel piles), there would be approximately 1,500 square feet (0.034 acres) of temporary impacts to steelhead. The contractor would most likely install the piles with an impact hammer.

Cofferdams or 13-Foot Diameter Dewatered Casings: *If water is present*, a cofferdam or 13-foot dewatered casing may be required to isolate the construction area for the CIDH piles in the river channel. The cofferdam to isolate the 84-inch CIDH pile for the new median bridge structure will be approximately 12 feet by 12 feet resulting in approximately 144 square feet (0.003 acres) of temporary impacts to Essential Fish Habitat (EFH). Four cofferdams would be required for the SB and NB bridges since there are two CIDH piles within the channel per bridge. The cofferdams required for the 66-inch CIDH piles will be approximately 10 feet by 10 feet resulting in approximately 400 square feet (0.009 acres) of temporary impacts to EFH.

One 13-foot diameter dewater casing to isolate the 84-inch CIDH pile for the new median bridge structure and four 13-foot diameter dewatered casings to isolate the four 66-inch CIDH piles would be required for the SB and NB bridges. The total temporary impacts for the 5 dewatered casings would be 132.73 square feet per casing, totaling 663.65 square feet (0.01 acres). Refer to table 4 below.

Table 4. Temporary In-water Impacts to Steelhead

Temporary In-water Impacts	Square Feet	Acres
72 Trestle Piles at 24 inches	1,500 square feet	(0.03 acres)

If Work-pad utilized by Contractor (3 Work-pads) 40 feet by 120	14,400 square feet	(0.33 acres)
One Cofferdam for 84-inch CIDH Piles at 12 feet by 12 feet	144 square feet	(0.003 acres)
Four Cofferdams for 66-inch CIDH Piles at 10 feet by 10 feet	400 square feet	(0.009 acres)
13-Foot Dewatered Casings (5 total)	664 square feet	(0.015 acres)
Total Temporary In-water Impacts if Trestle Used	2,708 square feet	(0.05 acres)
Total Temporary In-water Impacts if Work-pad Used	15,608 square feet	(0.33 acres)

Removing the larger piers and replacing them with smaller CIDH piles will result in an additional 348 square feet (0.01 acres) of Steelhead habitat. If temporary trestles are utilized there would be approximately 1,500 square feet (0.33 acres) of temporary impacts to Steelhead habitat. If work pads were utilized there would be approximately 14,400 square feet (0.33 acres) of temporary impacts to Steelhead habitat. If the channel is wet, cofferdams would be required resulting in approximately 400 square feet (0.009 acres) of temporary impacts to Steelhead habitat.

Based on the information presented above it is not likely that Central Valley steelhead will occupy the project limits during construction.

Temporary Project Impacts From Construction Activities

The types of impacts that could result from construction activities include; increased erosion, sedimentation and turbidity; loss of shaded riverine area; decreased water quality due to a potential for hazardous materials and chemical spills, and physiological effects associated with production of hydraulic pressure waves and noise during potential in-river pile driving activities.

Erosion, Sedimentation and Turbidity

Increased sediment, primarily in the form of fine sediment, has been reported to lead to changes in spawning bed composition, decreased benthic vertebrate abundance, increase stress responses in fish, and increased fish mortality (Burns 1970; Cordone and Kelly 1961; Moyle 2002; Redding et al. 1987; Reid and Anderson 1999).

The construction window (June 15- October 15) occurs during the summer months when the dry river precludes the presence of Central Valley steelhead (DWR 2018). Nevertheless, appropriate erosion control measures will be implemented during construction (e.g., hay bales, filter fences, vegetative buffer strips) to reduce siltation and contaminated runoff from the

construction site. Additionally, construction activities will comply with Federal and State water quality standards (e.g., Sections 401 and 404 of the Clean Water Act).

Loss of Shaded Riverine Habitat/ Streamside Vegetation

Activities associated with stream channel alterations may include the removal of riparian vegetation and large woody debris (LWD). Riparian vegetation is critical to salmonid habitat. Riparian vegetation stabilizes stream banks, creates shade that provides temperature control, and increases the complexity of fish habitat providing fish refuge and prey habitat.

Widening of the bridge would result in the loss of some shaded riverine habitat and streamside vegetation. Currently, there is a riparian corridor that surrounds the Cosumnes River Bridge. Implementation of the proposed project would result in the temporary loss of approximately 340 linear feet (0.69 acres - 30,056 square feet) of exposed shoreline. Construction of the widened bridge (median bridge structure) will create shaded riverine habitat totaling approximately 5,663 square feet (0.13 acres). There will be a temporary loss of 0.56 acres (24,393 square feet) of shaded riverine area. This loss of shaded riverine is not expected to adversely affect steelhead dispersing through the BSA. All temporarily impacted areas will be restored to pre-construction conditions and replaced at a 1:1 ratio.

Hazardous Material and Chemical Spills

Activities associated with bridge construction could potentially impair water quality if chemicals (e.g., hydrocarbon-based fuels and lubricants) or other construction materials are spilled or enter waterways. Construction-related chemical spills could affect fisheries resources by increasing physiological stress, reducing biodiversity, altering primary and secondary production, and possibly causing direct mortality (NMFS and USFWS 1998).

Based on the implementation of BMPs, the potential for a hazardous material or chemical spill to occur is unlikely. Adherence to predetermined criteria identified during the permitting process is expected to prevent potential effects on fish or habitat. Additionally, the construction window occurs during the summer months when the dry river will preclude the presence of Central Valley steelhead in the construction area (DWR 2018).

Hydraulic Pressure Waves and Noise

Pile driving will only occur within the salmonid work window (June 15-October 15) when the dry river will prevent the presence of Central Valley steelhead (DWR 2018). Thus, there will likely be no effect to steelhead from pile driving.

If the Cosumnes River is not dry during construction, pile driving may be necessary to install approximately 72 trestle piles (24-inch). Additionally, the steel hollow casings used to stabilize the drilled shaft excavation for the CIDH piles may require pile driving depending on geo-

technical investigations; but it is very unlikely the casings would require pile driving. The casings will most likely be installed using vibratory methods. If pile driving of the steel hollow casings is necessary, the pile driving is not expected to exceed fish injury thresholds since the steel hollow casings have shallow tip elevations and the probable presence of soft soils in the river channel. However, if pile driving is necessary there could be impacts to steelhead which is analyzed in a Hydroacoustics Assessment.

Timing of construction will likely occur when the river is dry, thus there will be no affects to steelhead from pile driving. There will likely be no impact pile driving required for the project unless it is an unusually wet winter season and the contractor chooses to use a trestle; this is unlikely since it is predicted by Caltrans construction that a work pad would be utilized instead. Therefore, there will be no permanent impacts to steelhead. Even if water is present, steelhead would not likely be present during construction due to the warm, shallow, and low flow conditions of the Cosumnes River during summer months.

Avoidance and Minimization Measures

The following project avoidance and minimization measures would reduce/avoid impacts to Central Valley Steelhead.

- All in-water work shall be restricted to when the Cosumnes River is dry and/or within the Salmonid work window (June 15- October 15). This is a period when no listed salmonids will be present.
- Clearing will be confined to the minimal area necessary within 200 feet of aquatic habitat to facilitate construction activities.
- Standard construction BMPs will be implemented throughout construction, in order to avoid and minimize adverse effects to the future water quality within the project impact area. All disturbed soils will undergo erosion control treatment immediately after construction is terminated. Appropriate erosion control measures will be used (e.g., hay bales, filter fences, vegetative buffer strips or other accepted equivalents) to reduce siltation and contaminated runoff from project sites.
- Construction by-products and pollutants such as petroleum products, chemicals, or other deleterious materials will not be allowed to enter the river. A plan for the emergency clean up of any spills of fuel or other material will be available when construction equipment is in use.
- Equipment will be refueled and serviced at designated construction staging areas. All construction material and fill will be stored and contained in a designated area that is

median bridge structure and one each for the SB/NB bridge structures. There would be approximately 14,400 square feet (0.33 acres) of temporary impacts to EFH.

Trestle: *If water is present*, the contractor may utilize a trestle to access the bridge construction area. Each construction stage (each of the 3 bridges) would require its own trestle. Trestles are typically designed by the contractor at the time of construction; therefore, specific details about the trestle are not known currently. The following information is based on the engineer's best estimate on where the piles would be located, how the piles would be installed, how many piles are required, and the type of pile that would be used. It is assumed that the trestle would be used to span the active 120-foot river channel. Assuming the water levels are low in the summer months, the contractor should be able to install the trestle piles outside of the Cosumnes River. The trestle would be approximately 40 feet wide by 120 feet long. The trestle would be able to span approximately 120 feet which would result in approximately four temporary piers spaced at approximately 30 to 40 feet. Each pier would need approximately four to six 24-inch steel pipe piles. There would be three trestles constructed requiring approximately 16 to 24 piles per trestle. The contractor would most likely install the piles with an impact hammer. There could be up to six piles installed per day and it is estimated that each pile would require approximately 200 blows. If a trestle is constructed, the falsework needed for the bridge would use the same supports as the trestle. The remaining falsework for the bridge would be located outside of the active channel and be constructed out of timber on flat ground.

Cofferdams or 13-Foot Diameter Dewatered Casings: *If water is present*, a cofferdam or 13-foot dewatered casings may be required to isolate the construction area for the CIDH piles. The cofferdam to isolate the 84-inch CIDH pile for the new median bridge structure will be approximately 12 feet by 12 feet resulting in approximately 144 square feet (0.003 acres) of temporary impacts to EFH. Four cofferdams would be required for the SB and NB bridges since there are two CIDH piles within the channel per bridge. The cofferdams required for the 66-inch CIDH piles will be approximately 10 feet by 10 feet resulting in approximately 400 square feet (0.009 acres) of temporary impacts to EFH.

One 13-foot diameter dewatered casing to isolate the 84-inch CIDH pile for the new median bridge structure and four 13-foot diameter dewatered casings to isolate the four 66-inch CIDH piles would be required for the SB and NB bridges. The total temporary impacts for the 5 dewatered casings would be approximately 132.73 square feet per casing, totaling 663.65 square feet (0.01 acres). See Table 6 – Temporary EFH Impacts.

Table 6. Temporary EFH Impacts

Temporary In-water Impacts	Square Feet	Acres
72 Trestle Piles at 24 inches	1,500 square feet	(0.034 acres)
If Work-pad utilized by Contractor (3 Work-pads) 40 feet by 120	14,400 square feet	(0.33 acres)
One Cofferdam for 84-inch CIDH Piles at 12 feet by 12 feet	144 square feet	(0.003 acres)

Four Cofferdams for 66-inch CIDH Piles at 10 feet by 10 feet	400 square feet	(0.009 acres)
13-Foot Dewatered Casings (5 total)	663.65 square feet	(0.015 acres)
Total Temporary In-water Impacts if Trestle Used	2,044 square feet	(0.05 acres)
Total Temporary In-water Impacts if Work-pad Used	14,944 square feet	(0.33 acres)

Temporary Impacts to Shaded Riverine Area: There will be approximately 0.69 acres of riparian habitat removed from the eastern and western sides of the bridges, and in between the bridges, to facilitate construction (**figure 3**). However, the expanded bridge deck will provide additional shade over the Cosumnes River. The area between the NB and SB bridges (0.13 acres) will provide shade since a new median bridge will fill in this area. The area of the new median bridge structure providing shade over the river is approximately 0.13 acres. There will be a total temporary loss of shaded riverine area of 24,393 square feet (0.56 acres) (**table 7**). Caltrans will restore shaded riverine habitat with on-site restoration at a 1 to 1 ratio.

Table 7. Temporary Impacts to Shaded Riverine Area

Temporary Impacts to Shaded Riverine Area	Square Feet	Acres
Shaded Riverine Habitat Removal	30,056	(0.69 acres)
Shade Provided from New Median Bridge Structure	5,663	(0.13 acres)
Total Temporary Loss	24,393	(0.56 acres)

Removing the larger piers and replacing them with smaller CIDH piles will result in an additional 348 square feet (0.01 acres) of EFH. The temporary loss of shaded riverine area totaling approximately 24,393 square feet (0.56 acres) from construction related activities will be mitigated with on-site restoration at a 1 to 1 ratio. If trestles are utilized there would be approximately 1,500 square feet (0.034 acres) of temporary impacts to EFH. If work pads were utilized there would be approximately 14,400 square feet (0.33 acres) of temporary impacts to EFH. If the channel is wet, cofferdams or 13-foot diameter dewatered casings would be required resulting in approximately 400 square feet (0.009 acres) or 663.65 square feet (0.01 acres) of temporary impacts to EFH.

Timing of construction will likely occur when the river is dry, thus there will be no affects to fall-run chinook salmon. There will likely be no impact pile driving required for the project unless it is an unusually wet winter season and the contractor chooses to use a trestle; this is unlikely since it is predicted that a work pad would be utilized instead. And, depending on upcoming geo-tech investigations, the steel hollow casings used to stabilize the drilled shaft excavation for the CIDH piles may require pile driving; but very unlikely. The casings will most likely be installed using vibratory methods. If pile driving of the steel hollow casings is necessary the pile driving is not expected to exceed fish injury thresholds since the steel hollow casings have shallow tip elevations and the presence of soft soils in the river channel. The project will result in additional

EFH habitat by reducing the existing pier size. Additionally, shaded riverine habitat will be restored. Therefore, there will be no permanent impacts to EFH.

Mitigation Measures

No mitigation measures are proposed for Essential Fish Habitat for Chinook Salmon. The project will result in additional EFH habitat by reducing the existing pier size. Additionally, shaded riverine habitat will be restored.

CEQA Significance

The proposed project would result in less than significant impacts to Essential Fish Habitat for Chinook Salmon.

4.4. Construction Impacts

Temporary Air Quality and Noise Impacts During Construction

The construction of roadway improvements could generate temporary visual air quality impacts (e.g., increase in diesel fumes and dust) and noise impacts from heavy equipment operations. From a human environment perspective, the impacts would be most pronounced in parts of the project area where developed land uses are adjacent to or near the project site. The project site is situated in a rural and semi-rural area with only the northern limits of the project in closer proximity to developed land uses.

4.4.1. Air Quality

The proposed project may result in the generation of short-term construction-related air emissions, including fugitive dust and exhaust emissions from construction equipment. Fugitive dust, sometimes referred to as windblown dust of PM 10, would be the primary short-term construction impact, and may be generated during excavation, grading and hauling activities. However, both fugitive dust and construction equipment exhaust emissions would be temporary and transitory in nature and minimized with the following measures:

- Caltrans Standard Specifications Section 14-9.02 will be included in the construction contract for Contractor compliance with all applicable laws and regulations related to air quality including the Sacramento Metropolitan Air Quality Management District regulations and local ordinances.
- Water or a dust palliative will be applied to the site and equipment as often as necessary to control dust emissions.
- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by CA Code of Regulations Title 17, Section 93114.

- A dust control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely re-vegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
- Equipment and materials storage sites will be located as far away from residential and park used as practicable. Construction areas will be kept clean and orderly.
- Environmentally sensitive areas will be established near sensitive air receptors. Within these areas, construction activities involving the extended idling of diesel equipment or vehicles will be prohibited, to the extent feasible.
- Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic will be used.
- All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) will be provided to minimize emission of dust during transportation.
- Dust and mud that are deposited on paved, public roads due to construction activity and traffic will be promptly and regularly removed to reduce PM emissions.
- To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak times.

Mitigation Measures

No mitigation measures are proposed for temporary Air Quality impacts.

CEQA Significance

The proposed project would result in less than significant impacts to Air Quality..

4.4.2. Noise

During construction, noise may be generated from the contractors' equipment and vehicles. To minimize temporary noise impacts from construction, Caltrans requires the contractor to conform to the provisions of Caltrans Standard Specification, Section 14-8 "Noise Control":

- Control and monitor noise from work activities
- Do not exceed noise levels of 86dBA LMax at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.

Mitigation Measures

No mitigation measures are proposed for temporary Noise impacts.

CEQA Significance

The proposed project would result in less than significant Noise impacts.

4.5. 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 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (1,1,1, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation.¹ In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.² The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

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).

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.

¹ <https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014>

² <https://www.arb.ca.gov/cc/inventory/data/data.htm>

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.³ This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—the triple bottom line of sustainability.”⁴ 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. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

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 Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

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.

Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel 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 Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

U.S. EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme

³ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

⁴ <https://www.sustainablehighways.dot.gov/overview.aspx>

Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions.

U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010⁵ and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules' long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and ARB will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025. However, the EPA finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Trump ordered EPA to reopen the review and reconsider the mileage target.⁶

NHTSA and EPA issued a Final Rule for "Phase 2" for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO₂ emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

State

With the passage of legislation including State Senate and Assembly bills and executive orders, California has been innovative and proactive in addressing GHG emissions and climate change.

Assembly Bill 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005): The goal of this executive order (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 32 in 2006 and SB 32 in 2016.

Assembly Bill 32 (AB 32), Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that 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 Section

⁵ <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>

⁶ <https://www.federalregister.gov/documents/2017/03/22/2017-05316/notice-of-intention-to-reconsider-the-final-determination-of-the-mid-term-evaluation-of-greenhouse>

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.

Executive Order 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 97 (SB 97), Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (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.

Senate Bill 391 (SB 391), Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

Executive Order 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.

Executive Order B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 in order 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}). 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.

Senate Bill 32, (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.

Environmental Setting

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. 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. The Scoping Plan was

first approved by ARB in 2008 and must be updated every 5 years. 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. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California.⁷ ARB is responsible for maintaining and updating California's GHG Inventory per H&SC Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in Figure 10 represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO₂e⁸. The 2018 edition of the GHG emissions inventory found total California emissions of 429 MMTCO₂e for 2016.

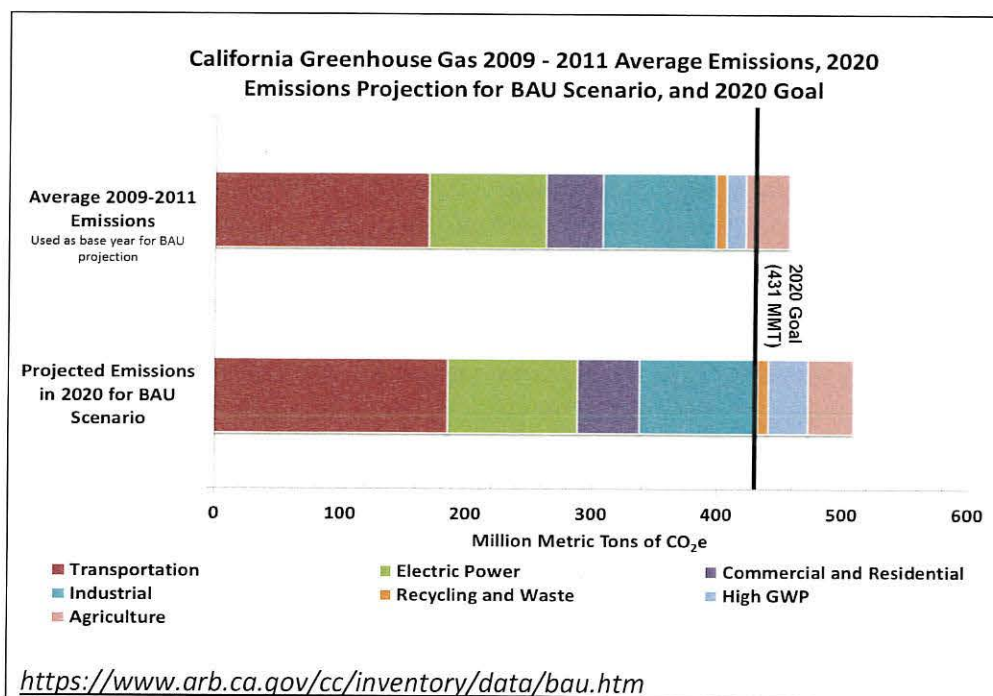
The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 MMTCO₂e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO₂e.

⁷ 2016 Edition of the GHG Emission Inventory Released (June 2016):

<https://www.arb.ca.gov/cc/inventory/data/data.htm>

⁸ The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4)

Figure 10. 2020 Business as Usual (BAU) Emissions Projection 2014 Edition



Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.⁹ 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. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed project.

Operational Emissions

The purpose of this project is to address the current structural and seismic deficiencies of the four Cosumnes River bridges, the non-standard horizontal and vertical clearances of the existing SB McConnell UP and NB McConnell OH structures, and the structural deficiencies of the Dillard Road Overcrossing. The project is also intended to improve freight mobility and

⁹ This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

safety along this segment of SB SR 99. These improvements would not increase the roadways' capacity, increase vehicle miles travelled, or reduce congestion. Therefore, there would be no increase in operational emissions.

Construction Emissions

Construction GHG emissions would result from material processing, onsite 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 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 average daily construction exhaust emissions were estimated using the Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model (V8.1.0). Inputs to the model included the construction year, total expected duration and project length. Other model inputs such as area of disturbance and material imported/exported on a daily basis were estimated based on conservative and reasonable assumptions provided by the project engineer. Table 8 shows the maximum construction emissions for the project over the 20 month construction period.

Table 8. Construction Emissions

Emissions from Construction

Construction Year 2021	CO ₂ (Metric Tons)	CH ₄ (US Tons)	N ₂ O (US Tons)	CO ₂ e (US Tons)
Total:	5445	0.10	<1	41

*CO₂e=carbon dioxide equivalent. CO₂e expresses emissions of multiple greenhouse gases in terms of their global warming potential (GWP) relative to CO₂, the most prevalent greenhouse gas, which is assigned a GWP of 1. The Road Construction Emissions Model includes only CO₂, CH₄, and N₂O in CO₂e.

Caltrans Standard Specifications, a required part of all construction contracts, should reduce and control emissions, including GHG emissions during construction under the provisions of Section 7-1.02C "Emissions Reduction" and Provision 14-9.02, "Air Pollution Control," Provision 1409.02 requires the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district. Regulations such as idling restrictions on construction vehicles may help reduce GHG emissions.

CEQA Conclusion

While the project will result in a slight increase in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. While it is Caltrans' determination that in the absence of further regulatory or scientific information

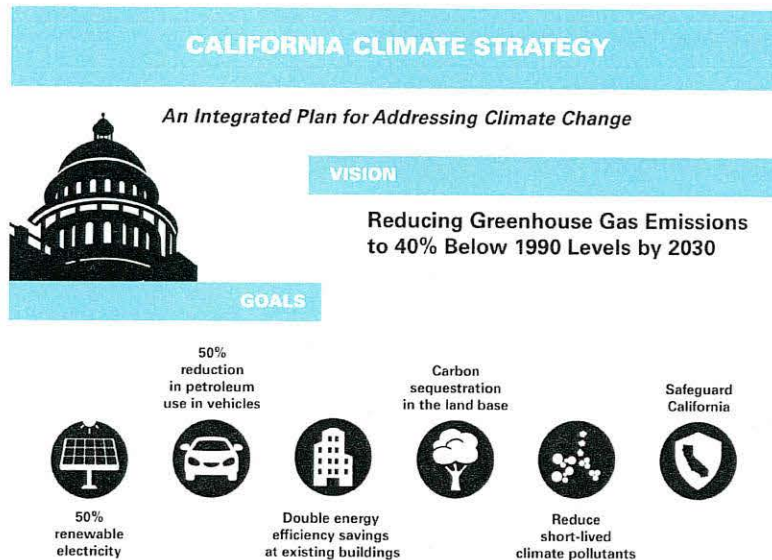
related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct impact and its contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

Statewide Efforts

To further the vision of California's GHG reduction targets outlined in AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are (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 farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*.

Figure 11. The Governor's Climate change pillars: 2030 Greenhouse gas reduction goals



The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of Governor Brown's key pillars sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester 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 a new 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. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

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 per capita
- 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 funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School,

Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in Caltrans Activities to Address Climate Change (2013).

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 activities undertaken by Caltrans statewide 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.

- Caltrans Standard Specifications, a required part of all construction contracts, should reduce and control emission impacts during construction under the provisions of Section 7-1.02C "Emission Reduction". Provision 14-9.02 "Air Pollution Control" requires the contractor to comply with all pertinent rules, regulations, ordinances, and statutes of the local air district.
- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by CA Code of Regulations Title 17, Section 93114.
- Construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak times.
- Trees removed as a result of construction activities will be replanted in order to replace lost tree canopy to enhance Carbon sequestration.

Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.

Federal Efforts

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011¹⁰, outlining the federal government's progress in expanding and strengthening the nation's

¹⁰ <https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience>

capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as fresh water, and providing accessible climate information and tools to help decision-makers manage climate risks.

The federal Department of Transportation issued *U.S. DOT Policy Statement on Climate Adaptation* in June 2011, committing 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.”¹¹

To further the DOT Policy Statement, on December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*).¹² This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation’s transportation systems.

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels.¹³

State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California’s vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (Sea-Level Rise Assessment Report)¹⁴ was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to state infrastructure (such as roads, public facilities, and beaches),

¹¹ https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm

¹² <https://www.fhwa.dot.gov/legregs/directives/orders/5520.cfm>

¹³ <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

¹⁴ *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at: http://www.nap.edu/catalog.php?record_id=13389.

natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed The California Climate Adaptation Strategy (Dec 2009),¹⁵ which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across state agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as Safeguarding California: Reducing Climate Risk (Safeguarding California Plan).

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring state agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how state agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the State of California Sea-Level Rise Interim Guidance Document (SLR Guidance), produced by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided "guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California," specifically, "information and recommendations to enhance consistency across agencies in their development of approaches to SLR."¹⁶

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in working towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

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.

The project area is within FEMA FIRM No. 0602620475E dated July 6, 1998. The proposed project is within Flood Zone A, AE and Zone X of the Cosumnes River 100-year floodplain. The replacements of bridge No. 24-0020R/L and Bridge No. 2424-0021/L, the section of SR 99 embankment to be elevated, and the improvements at Dillard Road OC (Bridge No. 24-0163) lay within critical floodplain (Zone A and AE). The replacement bridges will have a smaller footprint within the floodplain because the area of the new bridge supports would be smaller than the area of the existing bridge supports. New bridge decks will be placed at a higher elevation, creating additional freeboard. Ground surfaces that will be elevated are already

¹⁵ <http://www.climatechange.ca.gov/adaptation/strategy/index.html>

¹⁶ <http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document>

above the 100-year floodplain. Most work on improvements at the Dillard Road OC will take place above the 100-year floodplain elevations.

Chapter 5. List of Preparers

The following Caltrans North Region staff contributed to the preparation of this Initial Study:

Cara Lambirth - Associate Environmental Planner. Contribution: Document Writer and Programmatic Section Section 4(f) de Minimis

Mike Bartlett – Senior Environmental Planner. Contribution: Document Reviewer

Jason Lee – Transportation Engineer. Contribution: Air Quality Report

William Larson – Associate Environmental Planner (Archaeology). Contribution: Historic Property Survey Report and Archaeological Survey Report

Bradley Bowers – Environmental Planner. Contribution: Paleontological Identification Report

Kelli Angell - Associate Environmental Planer (Natural Sciences) Contribution: Biological Assessment for National Marine Fisheries Service (NMFS), Biological Assessment for United States Fish and Wildlife Service (USFWS), Natural Environment Study

Lazlo Nagy – Hydraulic Engineer Contribution: Floodplain Hydraulic Study

Alamgit Mangat – Transportation Engineer. Contribution: Hazardous Waste Study

Jeffery Juarez – Landscape Associate. Contribution: Visual Impact Analysis

Saeid Zandian – Transportation Engineer. Contribution: Noise Study

Sean Cross – Transportation Engineer. Contribution: Water Quality Study

Nasim Hasan – Design Engineer. Contribution: Project Engineer

Doug Lange – Transportation Engineer. Contribution: Project Manager

Appendix A – Section 4(f) Study

Appendix A – Section 4(f) Study

Introduction

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 237 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specified that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge or site) only if:

- there is no prudent and feasible alternative to using that land; and
- the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

This section of the document discusses *de minimis* impact determinations under Section 4(f). Section 6009(a) of SAFETEA-LU amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(F). This amendment provides that once the U.S. Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a *de minimis* impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. FHWA's final rule on Section 4(f) *de minimis* findings is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to the California Department of Transportation (Caltrans) pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

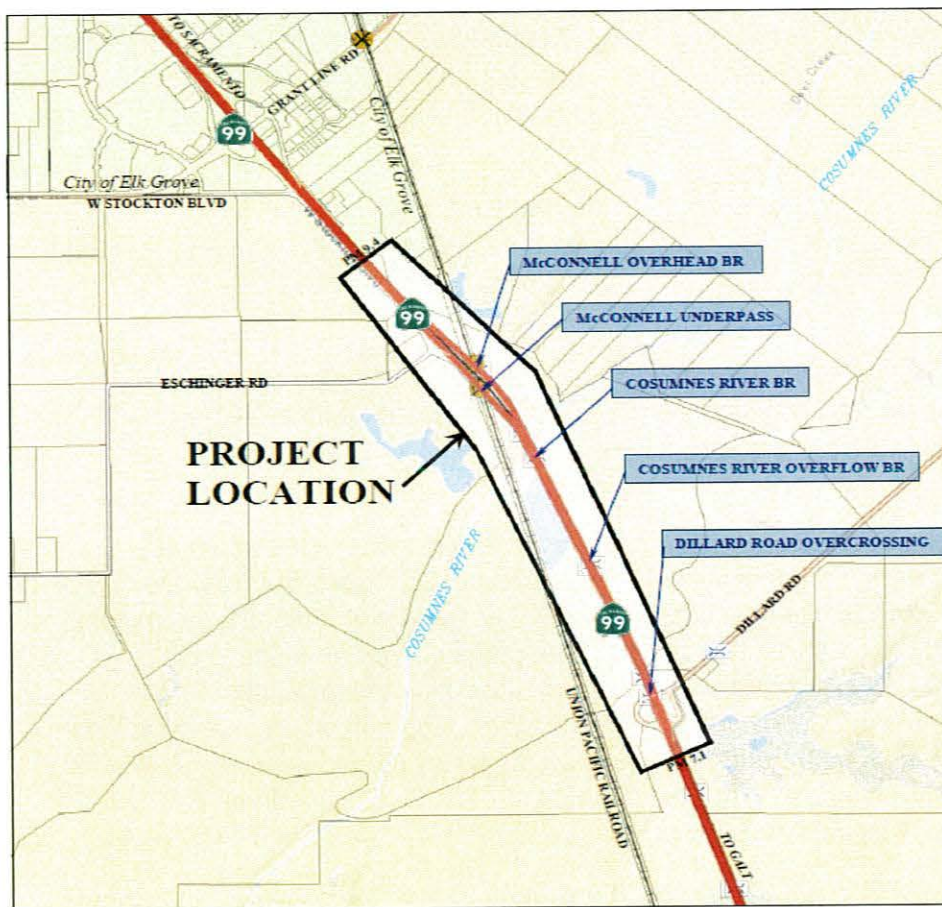
Project Description

The California Department of Transportation (Caltrans) proposes a bridge replacement project on SR 99 between post miles 7.1 to 9.4 near the City of Elk Grove in Sacramento County, from 0.3 miles south of Dillard Road overcrossing (OC) to 0.6 miles south of Grant Line Road. (See Figure 1 Project Location and Vicinity Map). The proposed project would replace four bridge structures, the Cosumnes River Bridges (Br Nos. 24-0020R and 24-0020L) and the Cosumnes River Overflow

Bridges (Br Nos. 2400021R and 24-0021L) with two new bridge structures. The new bridge structures will span the width of the roadway supporting all travel lanes and provide a median.

Additionally, the project would improve the Dillard Road Overcrossing, relinquish the SB McConnell Underpass (UP) (Br. No. 24-0048L) under the Union Pacific Railroad (UPRR) rail line, construct a new southbound (SB) McConnell Overhead (OH) structure adjacent to the existing McConnell OH northbound (NB) structure or replace the existing NB McConnell OH structure with a single McConnell OH for both NB and SB SR 99, and realign the Southbound (SB) lanes of SR 99 at to align with the northbound (NB) SR 99 lanes. Eschinger Road on and off ramps from SB SR 99 will be abandoned due the realignment of SB SR 99 lanes since the geometrics of the current on/off ramps will not allow for connection to the realigned SB SR 99.

Figure 1 Project Location and Vicinity Map

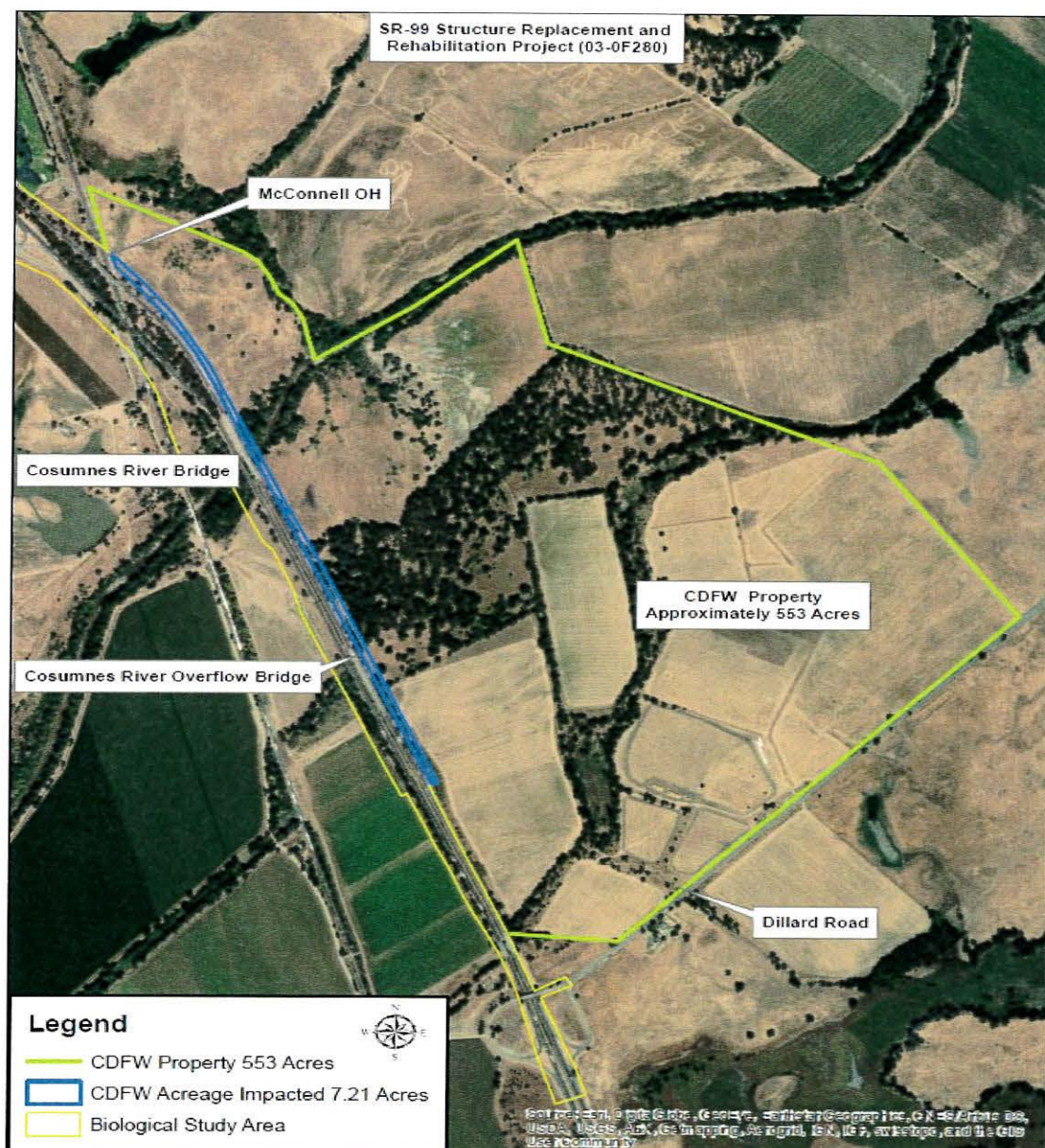


IN SACRAMENTO COUNTY
03-0F280, PM 7.1/9.4

PROJECT LOCATION & VICINITY MAP

Cosumnes River Preserve

Figure 2 – Dillard Unit of Cosumnes Preserve Boundary and CDFW Acreage Impacted



Description of Use

Temporary construction impacts to the Cosumnes Preserve will be due to use of temporary access roads, temporary staging areas, and temporary bridge structures adjacent to NB SR 99. The Project will utilize the temporary access roads and temporary staging areas for movement and overnight staging of earthmoving equipment (e.g., bulldozers, scrapers, forklifts, cranes, drill rigs, water trucks), construction materials, and Project personnel vehicles. Temporary impacts to the Cosumnes Preserve are anticipated to occur over the period of approximately 9 – 12 months, far less than the expected duration of the full project. Erosion and sediment controls will be installed per the Project's Storm Water Pollution Prevention Plan within the temporary impact areas. Temporary access roads, staging areas, and bridge structures will be removed, and the land will be restored according to conditions negotiated during coordination with the jurisdictional agency, CDFW, unless CDFW requests otherwise following project completion.

Section 4(f) De Minimis Finding/Why De Minimis Determination?

Although the project would temporarily use approximately 7.21 acres of Cosumnes Preserve property for construction activities and staging, the use of the Preserve, together with impact avoidance, minimization and mitigation/enhancement measures incorporated into the project, will not adversely affect its activities, features, or attributes.

The Cosumnes River Preserve currently consists of approximately 50,000 acres. The project has been designed to avoid permanent right of way take of Preserve property and minimize the amount of Preserve property temporarily occupied for project construction activities to approximately 7.21 acres. The impact area of 7.21 acres due to temporary construction and staging activities constitutes approximately 0.0001 overall Preserve acreage. Thus, the magnitude of the impact area is minimal. Even though removal of vegetation and native tree species will occur within the 7.21 acres impacted, the trees and vegetation removed will be replaced per requirements established in a restoration plan developed by Caltrans in coordination with the jurisdictional agency, CDFW.

There is opportunity for habitat enhancement through development of this restoration plan which may include habitat enhancement features through several means; species selection, planting locations and/or replanting ratios. Use of the Preserve for temporary construction activities will be of short duration; approximately 9 – 12 months. Additionally, a Section 4(f) *de minimis* determination is appropriate because the Project is designed so that no right of way acquisition of Preserve property will be required. Thus, with incorporation of the avoidance, minimization and mitigation/enhancement measures, the project will not adversely affect the activities, features or attributes of the Preserve.

Coordination/Public Notice Process

Initial contact with the California Department of Fish and Wildlife (CDFW) began in July 2018, with CDFW Environmental Scientist, Eric Kleinfelter. This contact was made to inform Mr. Kleinfelter that Caltrans would need to temporarily use CDFW property, which lies immediately adjacent to the eastern side of the project, for construction of the Cosumnes River Bridge Replacement project. Subsequently, mapping was provided to Mr. Kleinfelter and Suzanne Gilmore, Senior Environmental Scientist at CDFW, in December 2018 showing the area of impact along with exhibits indicating the locations and species of trees that will be removed for construction activities and project staging.

In compliance with the National Environmental Policy Act (NEPA), the public will have from March 18, 2019 through April 16, 2019 to comment on/review Caltrans intent to make a *de minimis* impact finding. All comments and responses will be considered and documented in the record for

the proposed project. Caltrans will request concurrence from CDFW on the *de minimis* finding under Section 4(f) after an opportunity for public review and comment concerning the effects of the project has occurred.

Avoidance, Minimization and/or Mitigation Measures

- Early coordination with the official with jurisdiction to consider their input and provide information about the project was completed with Eric Kleinfelter, Environmental Scientist and Suzanne Gilmore, Senior Environmental Scientist, at CDFW.
- The least amount of Cosumnes Preserve property will be temporarily used for the proposed Project.
- The Project is designed to avoid any permanent right of way acquisition of Cosumnes Preserve.
- The least amount of tree and vegetation removal will be used for the proposed Project.
- Vegetation and trees removed from Project activities will be replanted according to conditions negotiated with CDFW and documented in a restoration plan to restore/enhance the property to a condition at least as good as that which existed prior to the project. These enhancement features may include replanting ratios, planting locations and/or species selection.

Emerald Lakes Golf Course

The Emerald Lakes Golf Course is publicly owned and operated by the Cosumnes Community Service District (CSD) since July of 2006. The CSD is an independent special district agency given it governing authority under the Community Services District Law Enabling Act and is guided by an independently elected 5-member Board of Directors. The CSD is a public agency that serves an estimated 190,680 south Sacramento County residents in a 157-square mile area. Its parks and recreation services, including the operation of more than 90 parks, operate exclusively within the Elk Grove Community. The CSD also provides fire protection and emergency medical services for the cities of Elk Grove and Galt and unincorporated areas of south Sacramento County.

The Emerald Lakes Golf Course, which lies immediately adjacent to the project along NB SR 99, is a nine-hole golf course facility which also contains a driving range, food and beverage snack bar, outdoor patio for tournament groups or private parties, putting green and chipping green complete with bunker and fairway practice. Emerald Lakes Golf Course is considered a Section 4(f) property since it is open to the public and access is permitted to the entire public during normal hours of operation.

Description of Use

The Project will result in temporary impacts to land and fencing within the Emerald Lakes Golf Course due to construction and use of temporary access roads adjacent to NB SR 99. The Project will utilize the temporary access road for movement of earthmoving equipment (e.g., bulldozers, excavators, compactors, scrapers, water trucks), material delivery vehicles, and Project personnel vehicles. Temporary impacts to the Emerald Lakes Golf Course will occur over the period of approximately 12-15 months, far less than the expected duration of the full project. Erosion and sediment controls will be installed per the Project's Storm Water Pollution Prevention Plan within the temporary impact areas. Temporary access roads will be removed, and the land and fencing will be restored, unless requested otherwise by the jurisdictional agency, following project completion.

Section 4(f) Temporary Occupancy Exemption/Why Temporary Occupancy?

Although the project would temporarily use Emerald Lakes Golf Course property for construction activities and use of temporary access roads adjacent to NB SR 99, the impacts would be minor and would qualify for a Section 4(f) Temporary Occupancy Exemption. Temporary Occupancy Exemption conditions and project applicability descriptions are as follows:

Condition:

- Duration of occupancy must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land.

Applicability:

- Temporary use of Emerald Lakes Golf Course property is anticipated to occur over the period of approximately 9 – 12 months, far less than the expected duration of the full project. The full project is anticipated to take a minimum of three years.
- No permanent right of way acquisition of Emerald Lakes Golf Course will be required, thus, there will be no change in ownership of the land.

Condition:

- Scope of the work must be minor, i.e., both the nature and magnitude of the changes to the 4(f) resource must be minimal.

Applicability:

- Project activities will be limited to temporary impacts to land and fencing adjacent to NB SR 99 associated due to construction of temporary access roads for movement of earthmoving equipment (e.g., bulldozers, excavators, compactors, scrapers, water trucks), material delivery vehicles, and Project personnel vehicles. Erosion and sediment controls will be installed per the Project's Storm Water Pollution Prevention Plan within the temporary impact areas.

Condition:

- There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis.

Applicability:

- None of the minor, temporary changes to Emerald Lakes Golf Course property would affect the access to Emerald Lakes Golf Course, its recreational features or activities on either a temporary or permanent basis. Temporary impacts would be limited to

minor impacts to land and fencing adjacent to NB SR 99 associated with construction of temporary access roads for movement of earthmoving equipment (e.g., bulldozers, excavators, compactors, scrapers, water trucks), material delivery vehicles, and Project personnel vehicles.

Condition:

- The land being used must be fully restored, i.e., the resource must be returned to a condition which is at least as good as that which existed prior to the project.

Applicability:

- Vegetation removed from temporary Project activities will be replanted according to conditions negotiated with CSD staff to restore the property to a condition at least as good as that which existed prior to the project. Temporary access roads will be removed, and the land and fencing will be restored, unless requested otherwise by CSD staff, following project completion.

Condition:

- There must be documented agreement of the appropriate Federal, State, or local officials having jurisdiction over the resource regarding the above conditions.

Applicability:

- Caltrans will request concurrence from CSD on the Caltrans' temporary occupancy exemption determination under Section 4(f) prior to finalizing the NEPA Categorical Exclusion.

Coordination/Public Notice Process

Initial contact with Cosumnes Community Service District (CSD) staff occurred at an early coordination site visit on November 29, 2018. CSD staff included Gilbert Urbano, Emerald Lakes Golf Course Manager, and Justin Stebbins, Golf Course Maintenance Supervisor. This contact was made to inform Mr. Urbano and Mr. Stebbins that Caltrans would need to use Emerald Lakes Golf Course property on a temporary basis for construction of the Cosumnes River Bridge Replacement project, and that Caltrans intends to make a temporary occupancy exemption determination under Section 4(f).

In compliance with the National Environmental Policy Act (NEPA), Caltrans will request concurrence from CSD on Caltrans' Temporary Occupancy Exemption finding under Section 4(f) after an opportunity for public review and comment concerning the effects of the project has occurred.

