I-5 Permit Load Mobility Improvement

Sacramento County, California
DISTRICT 3 – SAC – 5 – (PM 22.460/22.460)
EA: 03-3H390 / EFIS: 03-1700-0340

Initial Study with Negative Declaration

Prepared by the
State of California Department of Transportation

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 327 and the Memorandum of Understanding dated December 23, 2016, and executed by FHWA and Caltrans.

January 2021

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SCH:2020070322
03-SAC-5-PM 22.460
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I-5 Permit Load Mobility Improvement Project
03-SAC-5-PM: 22.460
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INITIAL STUDY
with Negative Declaration

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

THE STATE OF CALIFORNIA
Department of Transportation

Mike Bartlett

Mike Bartlett
Office Chief
California Department of Transportation
North Region Environmental Services, South

02/10/2021
Date

NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: 2020070322

DIST-CO-RTE-PM: 03-SAC-5-PM: 22.460

EA: 03-3H390

Project Description

The California Department of Transportation (Caltrans) is proposing a project along Interstate-5 in Sacramento County at postmile 22.460. Structures, Maintenance, and Investigations has identified that the South Connector has load restrictions and requires upgrades to achieve design standards for load permit ratings. The purpose of this project is to improve freight mobility along I-5 by removing load restrictions for oversize/overweight vehicles resulting in the upgrade, retrofit, or replacement of the identified deficient structures to meet current design standards.

Determination

An Initial Study has been prepared by the California Department of Transportation (Caltrans), District 3.

On the basis of this study it is determined that the proposed action will not have a significant effect upon the environment for the following reasons:

This project would have no effect with regard to: agriculture and forest resources, biological resources, geology, greenhouse gas, land use, mineral resources, population and housing, public services, recreation, transportation, utilities, tribal resources, wildlife, hydrology and water quality.

In addition, the proposed project would have less-than-significant impacts with regard to: air quality, energy, hazardous waste, and noise.

Signature

Mike Bartlett

Mike Bartlett
Office Chief
NR Environmental Services, South

02/10/2021
Date

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Section 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) is the lead agency under the National Environmental Policy Act (NEPA), as delegated by the Federal Highway Administration (FHWA) and under the California Environmental Quality Act (CEQA). Caltrans proposes to achieve current design standards by upgrading the South Connector UC (24-0267) on Interstate- 5 in Sacramento County at postmile (PM) 22.46.

This project is programmed in the Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Implementation Plan (MTIP, 2017-2020) and is proposed for funding from State Highway Operation and Protection Program (SHOPP).

The state's highways are a critical component to the movement of goods in and through California, linking to the rest of the nation through key interstate routes that are part of the federally designated Primary Highway Freight System (PHFS). Interstate 5 (I-5) and I-80 provide a vital connection between California's regions, seaports, and to other states. These routes handle large truck volumes.

The South Connector UC (Bridge # 24-0267) structure has been identified as having load carrying restrictions for oversize/overweight vehicles. The structure in question does not meet current design standards for load carrying capacity or has structural deficiencies resulting in low permit ratings. This structure creates a portion of the interstate that is not useable by oversize/ overweight vehicles, necessitating lengthy detours for trucks carrying these loads to circumnavigate around the deficient structure. To address this problem, the Department of Transportation is pursuing an Accelerated Bridge Delivery-Freight Corridor Improvement program under SB1. The Department is moving in an expeditious manner to accelerate the repair or replacement of the identified bridges, in order to bring the entire corridor segments up to current vertical clearance and load carrying standards for all the structures located on I-5 and I-80 corridors.

1.2 Project Purpose and Need

The purpose of this project is to improve freight mobility along I-5 by removing load restrictions for oversize/overweight vehicles.

Caltrans Structures, Maintenance, and Investigation Department (SM&I) identified this structure as a priority bridge having a load restriction for oversize/overweight vehicles. Strengthening or replacing the structure to meet the current permit rating standard will improve the efficiency of goods movement in the region and throughout California.

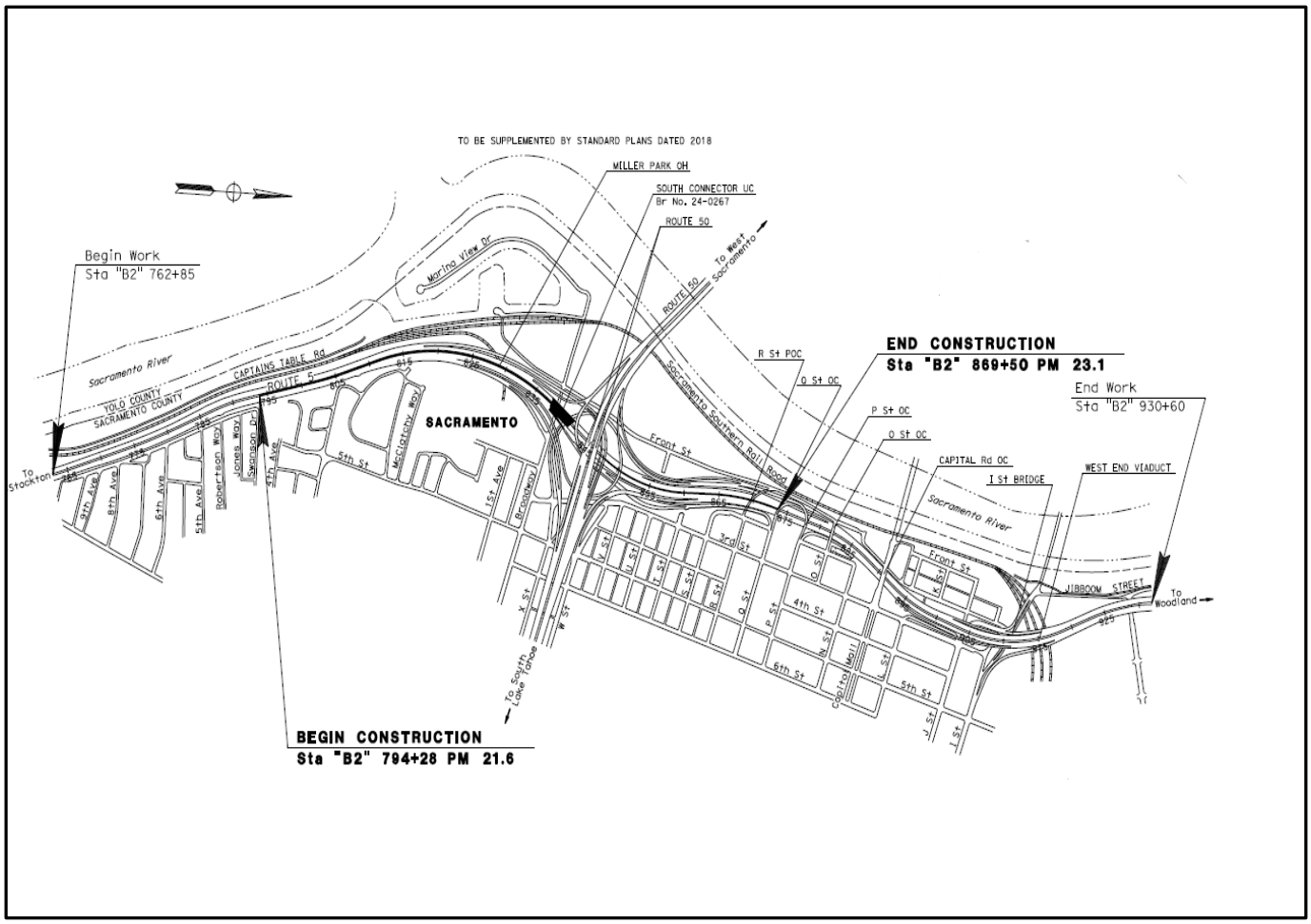

Figure 1. Project Vicinity Map

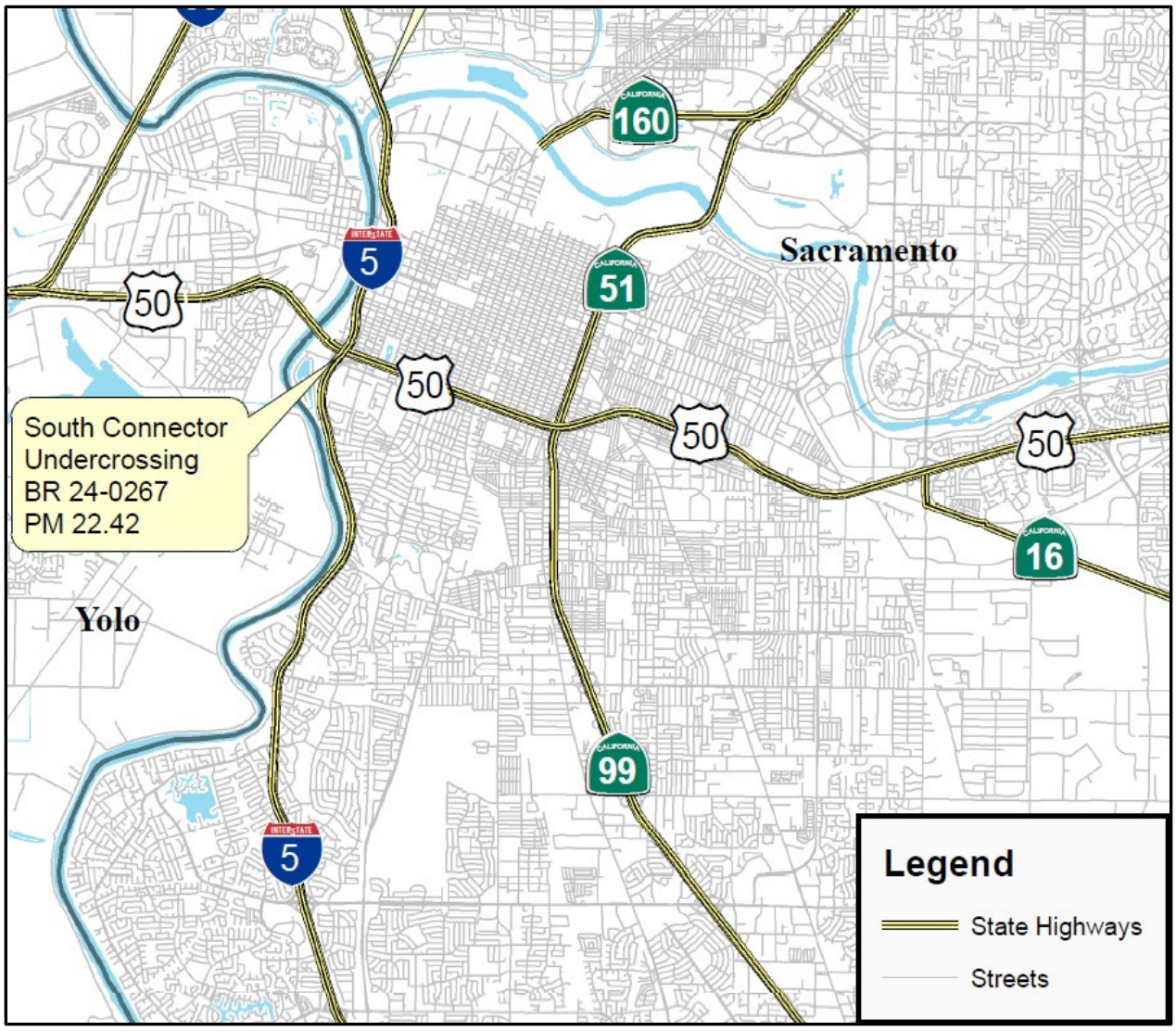

Figure 2. Project Location Map

1.3 Project Description

Under the Accelerated Bridge Delivery – Freight Corridor Improvement program, this project proposes to improve freight efficiency along the Interstate 5 (I-5) by removing load carrying restrictions for oversize/overweight vehicles and addressing any identified structural deficiencies that necessitate the repair or replacement of the South Connector Undercrossing (UC) structure (Bridge Number 24-0267). Three viable build alternatives have been proposed to meet the need of the project.

1.3.1 Build Alternatives

Alternative 1:

Alternative 1 is proposing to strengthen the existing South Connector UC (24-0267) to full permit capacity.

Alternative 3:

Alternative 3 is proposing to replace the existing South Connector UC (24-0267) with 3 concrete structures and a 4-stage bridge replacement strategy. The scope of work also includes replacing the existing structure with 3 separate bridges, constructing fill under the South Connector and upgrading removed median barrier and crash cushions to meet the MASH standard.

Alternative 4:

Alternative 4 is proposing to replace the existing South Connector UC (24-0267) with 1 concrete structure and a 4-stage bridge replacement strategy. The scope of work also includes adjusting the roadway profile to meet the minimum vertical clearance standard and upgrading the removed median barrier and crash cushion to meet the MASH standard.

Alternative 5 - No Build

This alternative would leave the existing South Connector UC (24-0267) in its current state and would not meet the purpose and need of the project to bring the deficient structure to current design standards.

1.3.2 Alternatives Considered but Eliminated from Further Consideration

Alternative 2:

Alternative 2 proposes to replace the existing South Connector UC (24-0267) with a steel structure and 3-stage bridge replacement strategy. The scope of work also includes widening the south-bound (SB) direction of the South Connector UC 14.5’ to the west side of the structure and widen the roadway for a 3-lane contraflow crossover, construct retaining walls on the SB bridge approach and depart, construct

retaining walls on the I-5 northbound (NB) Q Street bridge approach and depart, and upgrade the removed median barrier and crash cushions to meet MASH standard.

Alternative 2 was unanimously rejected by the PDT on 1/15/2020 due to cost, scope, and environmental impacts.

1.3.3 Value Analysis (VA) Study

A Value Analysis (VA) study was conducted for the I-5 Permit Load Mobility Project. The first part of the VA study (Part I) was conducted March 9-13, 2020 and the second part of the VA study (Part II) was conducted May 4-7, 2020. Part II of the VA effort was initiated to allow further analysis and exploration of ways to improve the performance and value of the two replacement design alternatives. The following alternatives were presented to the PDT:

Alternative 1.0 – Request design exception for vertical clearance on Broadway Blvd. This alternative can be implemented with design alternatives 1, 3 and 4.

Alternative 2.0 – Use a polyester overlay to extend the life of the bridge.
This alternative can be implemented with design alternative 1 only.

Alternative 3.0 – Reconfigure cover plates to eliminate vertical clearance conflict.
This alternative can be implemented with design alternative 1 only.

Alternative 4.0 – Eliminate two stages from staging plan.
This alternative can be implemented with design alternatives 3 and 4 only.

Alternative 5.0 – Use cast in place construction.
This alternative can be implemented with design alternatives 3 and 4 only.

1.3.4 Preferred Alternative

After receiving public input, comparing impacts by alternative, conducting a Value Analysis (VA) study, and maintaining and active discussion within the Project Development Team (PDT), Caltrans has determined Alternative 1 as the preferred alternative for the proposed project scope. Alternative 1 proposes to strengthen the existing structure. In order to strengthen the existing structure, the PDT unanimously decided to implement VA alternative 3 which would require reconfiguring the cover plates to eliminate the vertical clearance issue over Broadway.

1.3.5 Existing Roadways and Traffic Conditions

The South Connector UC was built in 1971 and has a 4-span composite cast in place/reinforced concrete deck with steel girders and 348-foot long structure. The ramp on the structure contains a 1’ bridge rail, 69.7’ roadway, and 0.7’ median. The mainline has 6 striped traffic lanes (3 in each direction) and the ramp has a single

striped traffic lane in southbound direction. The baseline year used for this analysis is 2017. Table 1 shows the existing traffic conditions on I-5 in Sacramento County from postmiles 21.6 to 23.1.

Table 1. Summary of Existing Traffic Conditions.

Scenario/Analysis Year	Location	AADT		% Truck	VMT (mile)	Volume During AM Peak Travel	Volumes During PM Peak Travel	Volumes During Off-Peak Travel
		Total	Truck					
Existing/Baseline 2017 Year	Sac-5-21.6/23.1-NB	80,750	7752	9.6	121,125	3971	2914	1413
	SAC-5-21.6/23.1-SB	80,750	7752	9.6	121,125	1245	2862	932

NB: northbound; SB: southbound; VMT: vehicle miles traveled; AADT: average annual daily traffic

The project would not increase capacity or change travel demands or traffic patterns when compared to the no-build alternative. Additionally, the proposed project will be constructed in stages allowing for uninterrupted traffic flow.

1.4 Permits and Approvals Needed

There are no permits, licenses, agreements, and certifications required for project construction.

Section 2 CEQA Environmental Checklist

2.1 CEQA Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant With Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A No Impact answer reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

1.3.1 Aesthetics

CEQA Significance Determinations for Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:

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

No Impact— Scenic vistas are often panoramic views that have high quality compositional and picturesque value. Within the project corridor, there are no scenic vistas or memorable views available and will have no adverse effect on scenic vistas.

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

No Impact— This segment of the project area is not listed as an Eligible or Designated State Scenic Highway. The structure improvements will require earthwork and minimal vegetation removal, but no significant quantities of unique landscape features will be removed. Therefore, the project will not substantially damage any scenic resources along the highways.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an

urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

No Impact— The most visually noticeable aspect of the project will be the minimal loss of mature vegetation within the limit of disturbance, which includes access roads, staging areas and in the immediate vicinity of the project area. However, these proposed elements would not constitute an adverse visual quality change in the environment.

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

No Impact—Based on the proposed project scope and technical studies, the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

1.3.1 Agriculture and Forest Resources

CEQA Significance Determinations for Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

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

No Impact—The proposed project would not convert prime farmland, unique farmland, or farmland of statewide importance.

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

No Impact—The proposed project is not located near agricultural land; therefore, it would not conflict with existing zoning for agriculture use or a Williamson Act contract.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public

Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact—The proposed project and scope of work would not conflict with existing zoning for, or cause rezoning of forest land or timberland.

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

No Impact—The proposed project is not located near forest land.

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

No Impact—The proposed project and scope of work would not result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

1.3.1 Air Quality

CEQA Significance Determinations for Air Quality

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

Would the project:

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

Less Than Significant Impact— The purpose of this project is to improve freight mobility along I-5 by removing load restrictions for oversize/overweight vehicles. The proposed modifications would not result in changes to the traffic volume, fleet mix, speed, location of existing facility or any other factor that would cause an increase in emissions relative to the no build alternative. Caltrans special provisions, standard specifications, and BMPs will be implemented when practical, during all phases of construction work that would be temporary and limited to the immediate area surrounding the construction site.

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

Less Than Significant Impact— The purpose of this project is to improve freight mobility along I-5 by removing load restrictions for oversize/overweight vehicles. The proposed modifications would not result in changes to the traffic volume, fleet mix, speed, location of existing facility or any other factor that would cause an increase in emissions relative to the no build alternative. Caltrans special provisions, standard specifications, and BMPs will be implemented when practical, during all phases of construction work.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact— The proposed project would not cause an increase in operational emissions; however, during construction, short-term degradation of air quality is expected from the release of particulate emissions generated by excavation, grading, hauling, and other activities Caltrans special provisions, standard specifications, and BMPs will be implemented when practical, during all phases of construction work to reduce impacts. The constructional impacts would be short-term and intermittent and would cease once construction is completed

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

No Impact—The proposed project scope would not cause an increase in operational emissions. During construction, short-term degradation of air quality is expected from the release of particulate emissions generated by excavation, grading, hauling, and other activities. Caltrans special provisions, standard specifications, and BMPs will be implemented when practical, during all phases of construction work that would be temporary and limited to the immediate area surrounding the construction site.

1.3.1 Biological Resources

CEQA Significance Determinations for Biological Resources

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact—Based on technical studies and project scope, the proposed project will not have a substantial adverse effect on any species identified as a candidate, sensitive, or special species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. There are no State or Federally listed special status species within the project limits. Although there is suitable habitat for migratory birds within the ESL, a species protection spec will be written to contact Caltrans Environmental Staff to perform migratory bird nesting surveys before trimming and removal of trees during the migratory bird nesting season.

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

No Impact—Based on technical studies and project scope, the proposed project will not have a substantial adverse effect on any riparian habitat or other sensitive community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact—Based on technical studies and project scope, the proposed project will not have a substantial adverse effect on state of federally protected wetlands through direct removal, filling, hydrological interruption, or other means. No wetlands were identified within the project study limits.

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

No Impact—The proposed project scope does not interfere with the movement of any native resident or migratory fish or wildlife species. There are no migratory fish or wildlife species indicated in the project ESL.

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

No Impact—The proposed scope of work does not conflict with any local policies or ordinances protecting biological resources.

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

No Impact—The proposed project and scope of work does not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

1.3.1 Cultural Resources

CEQA Significance Determinations for Cultural Resources

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No Impact— There are no historical resources located within the ESL.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

No Impact — There are no archeological resources located within the ESL

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

No Impact— No human remains have been identified in the project area and it is highly unlikely that they will identified in the project area during construction.

1.3.1 Energy

CEQA Significance Determinations for Energy

Would the project:

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

Less Than Significant Impact—The proposed project would not increase capacity or provide congestion relief when compared to the no-build alternative. While construction would result in a short-term increase in energy use, energy-saving measures would help conserve energy.

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

No Impact—The proposed project does not conflict or obstruct a state or local plan for renewable energy or energy efficiency. The proposed project would not increase capacity or provide congestion relief when compared to the no-build alternative.

1.3.1 Geology and Soils

CEQA Significance Determinations for Geology and Soils

Would the project:

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

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

No Impact—The proposed project scope would not rupture a known earthquake fault.

ii) Strong seismic ground shaking?

No Impact—The proposed project scope would not cause strong seismic ground shaking

iii) Seismic-related ground failure, including liquefaction?

No Impact—The proposed project scope would not cause seismic-related ground failure or liquefaction.

iv) Landslides?

No Impact—The proposed project scope would not cause landslides.

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

No Impact—The proposed project would not result in substantial soil erosion or loss of topsoil. The proposed project scope is to upgrade, retrofit, or replace an existing structure to meet current design standards.

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

No Impact—The proposed project is not located on a geologic unit or unstable soil.

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

No Impact—The proposed project is not located on expansive soil.

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

No Impact—The proposed project location does not have soils incapable of supporting the use of septic tanks or alternative waste water disposal systems. The project scope does not include septic tanks or waste water disposal systems.

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

No Impact—The proposed project scope is not anticipated to directly or indirectly destroy a unique paleontological resource, site, or unique geographic feature. The purpose of this project is to upgrade, retrofit, or replace an existing structure to meet current design standards.

1.3.1 Greenhouse Gas Emissions

CEQA Significance Determinations for Greenhouse Gas Emissions

Would the project:

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

No Impact—The proposed project would not generate significant greenhouse gas emissions that would in turn have a significant impact on the environment. Please see section 3.4 – Climate Change for further information.

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

No Impact— The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases. Please see section 3.4 – Climate Change for further information.

1.3.1 Hazards and Hazardous Materials

CEQA Significance Determinations for Hazards and Hazardous Materials

Would the project:

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

Less Than Significant Impact—Through the implementations of BMPs and Caltrans Standard Specifications, the proposed project will not create a significant hazard to the public of the environment through the routine transport, use, or disposal of hazardous materials.

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

Less Than Significant Impact—Through the implementations of BMPs and Caltrans Standard Specifications, the proposed project will not create a significant hazard to the public or environment through accident conditions involving the release of hazardous materials.

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

Less Than Significant Impact—Caltrans will use BMPs and Standard Specifications to ensure that sensitive receptors, such as schools, are not affected by hazardous or acutely hazardous materials, substances, or waste.

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

No Impact—The proposed project is not considered to be on the Cortese List.

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 or excessive noise for people residing or working in the project area?

No Impact—The proposed project is not located within an airport land use plan and would not result in a safety hazard or excessive noise for people residing or working in the project area.

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

No Impact—The proposed project scope and location would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed project will be built in stages to ensure uninterrupted traffic flow.

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

No Impact—The proposed project scope and location would not expose people or structures to a significant risk of loss, injury or death involving wildland fires.

1.3.1 Hydrology and Water Quality

CEQA Significance Determinations for Hydrology and Water Quality

Would the project:

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

Less Than Significant Impact— It is not anticipated that the proposed project will violate water quality standards or waste discharge requirements. All project work within the State's right-of-way is required to follow the conditions set forth in Caltrans' Statewide Storm Water Permit (Order 2012-0011-DWQ), which regulates storm water and non-storm water discharges from the Department's properties and facilities, and discharges associated with operation and maintenance of the State highway system. If the project incorporates 1 acre or more of land disturbance, it will

be regulated under the State Water Resources Control Board's Construction General Permit (CGP) (Order 2009-0009-DWQ). The CGP requires that the construction contractor prepare a project specific Storm Water Pollution Prevention Plan, which identifies temporary construction site best management practices (BMPs) to reduce construction impacts on receiving water quality based on potential pollutants and pollutant sources.

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

No Impact— It is not anticipated that project related construction operations will interfere with, or adversely impact, groundwater resources within the project limits. Moreover, it is likely that standard BMPs will be deployed with the purpose of enhancing or maintaining existing site infiltration.

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

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

Less Than Significant Impact— Impacts during construction are expected to be avoided or reduced, to negligible levels, with the implementation of standard erosion control practices and BMPs meant to reduce or eliminate potential pollutants from entering receiving waters.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

No Impact— It is not anticipated, at this time, that the project will increase new impervious areas (substantively) or change the existing hydraulic functionality of the facility. In addition, all project work will follow thresholds and applicable conditions of Caltrans' MS4 Permit to address potential increases in stormwater runoff and any anticipated drainage changes that may impact receiving waters.

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

No Impact— It is anticipated that the drainage strategy, for all alternatives considered, will be perpetuated close to the existing conditions. If new impervious areas are added to the project or if the existing hydraulic conditions change, an analysis will be performed, and design features will be implemented according to current design standards. It is anticipated that BMPs will be included with the project, where applicable, and to the maximum extent practicable.

iv) Impede or redirect flood flows?

No Impact—The proposed project scope will not impede or redirect flood flows.

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

No Impact—The proposed project scope and location would not cause inundation by seiche, tsunami, or flood.

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

No Impact—The proposed project scope is not expected to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Potential temporary impacts due to construction would be minimized with regulatory and Caltrans requirements.

1.3.1 Land Use and Planning

CEQA Significance Determinations for Land Use and Planning

Would the project:

a) Physically divide an established community?

No Impact—The proposed project would not physically divide an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact—The proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigation an environmental impact.

1.3.1 Mineral Resources

CEQA Significance Determinations for Mineral Resources

Would the project:

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

No Impact—The proposed project and scope of work will not result in the loss availability of a known mineral resource.

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

No Impact—The proposed project and scope of work will not result in the loss of availability of a locally important mineral resource recovery site. All work is within the State right of way.

1.3.1 Noise

CEQA Significance Determinations for Noise

Would the project result in:

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

Less Than Significant Impact—Based on the scope of work and technical studies, the project is not anticipated to create a substantial temporary or permanent increase in ambient noise levels in excess of standards established in the local general plan, noise ordinance, or any other applicable standards of other agencies. During construction of the project, noise from construction activities may intermittently dominate the noise environment of the immediate area of construction. Noise associated with construction will be controlled by Caltrans Standard Specifications and minimization measures, such as:

Measure 1: Notify the residents within 100 feet of the project area in advance of nighttime construction activities.

Measure 2: Limit operation of jackhammer, concrete saw, pneumatic tools and demolition equipment operations to the daytime hours (8AM to 7PM) to the maximum extent feasible. Nighttime construction work should be limited to the portion of the project site furthest from the residences, to the maximum extent feasible.

Measure 3: All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. No equipment may have an unmuffled exhaust.

Measure 4: Utilize "quiet" air compressors and other "quiet" equipment where such technology exists.

Measure 5: Minimize noise from the use of backup alarms using measures that meet OSHA regulations. This includes use of self-adjusting back-up alarms, manual alarms on lowest setting required to be audible above surrounding noise, use of observers and scheduling of activities so that alarm noise is minimized.

Measure 6: As directed by Caltrans, implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, and installing acoustic barriers around stationary construction noise sources.

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

Less Than Significant Impact— Please refer to response (a) above.

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

No Impact—This project is not located in the vicinity of a private airstrip or public use airport.

1.3.1 Population and Housing

CEQA Significance Determinations for Population and Housing

Would the project:

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

No Impact—The proposed project scope would not induce a substantial unplanned population growth in an area.

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

No Impact—The proposed project scope will not displace substantial numbers of existing people or housing. The scope of work does not require additional right of way.

1.3.1 Public Services

CEQA Significance Determinations for 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?

No Impact—The proposed project and scope of work would not result in substantial adverse impacts related to fire protection.

Police protection?

No Impact— The proposed project and scope of work would not result in substantial adverse impacts related to police protection.

Schools?

No Impact— The proposed project and scope of work would not result in substantial adverse impacts related to schools in the vicinity.

Parks?

No Impact— The proposed project and scope of work would not result in substantial adverse impacts related to parks in the vicinity. There are approximately 4 parks located within 0.5 miles of the proposed project, but the project's scope of work will not impact it directly, or indirectly.

Other public facilities?

No Impact— The proposed project and scope of work would not result in substantial adverse impacts related to any other public facilities.

1.3.1 Recreation

CEQA Significance Determinations for Recreation

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

No Impact—The proposed project scope does not increase the use of an existing neighborhood and regional park or other recreational facilities. Although there is a park located within 0.5 miles of the project location, the proposed project scope would not increase or decrease use of the facility, therefore there would be no impact.

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

No Impact—The proposed project scope does not include recreational facilities or require the construction or expansion of recreational facilities.

1.3.1 Transportation

CEQA Significance Determinations for Transportation

Would the project:

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

No Impact—The proposed project scope does not intend to conflict with a program plan, ordinance or policy addressing the circulation system including transit, roadway, bicycle and pedestrian facilities.

b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

No Impact—The project will not conflict with CEQA Guidelines section 15064.3, subdivision (b). Although the department will adhere to all applicable CEQA guidelines throughout the project's timeline, the proposed project is not defined as a capacity increasing project, therefore it does not have the potential to increase VMT.

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

No Impact—The proposed project scope will not increase hazards due to geometric design features or incompatible uses.

d) Result in inadequate emergency access?

No Impact—The proposed project scope will not result in inadequate emergency access.

1.3.1 Tribal Cultural Resources

CEQA Significance Determinations for Tribal Cultural Resources

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

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

No Impact— No TCRs have been identified in the project area.

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

No Impact— No TCRs have been identified in the project area.

1.3.1 Utilities and Service Systems

CEQA Significance Determinations for Utilities and Service Systems

Would the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less Than Significant Impact— Although existing utilities may be relocated, the proposed project scope would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities that would cause significant environmental effects.

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

No Impact—The proposed project and scope would not affect water supplies.

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

No Impact—The proposed project would not interfere with wastewater.

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

No Impact— Based on project scope and field reviews, the proposed project would not generate solid waste in excess of state or local standards.

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

No Impact—The department will use Best Management Practices (BMPs) and comply and adhere to all applicable federal, state, and local management and reduction statutes and regulations related to solid waste.

1.3.1 Wildfire

CEQA Significance Determinations for Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

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

No Impact—The proposed project scope would not substantially impair an adopted emergency response or evacuation plan. The project location is not located in a high fire hazard severity zone.

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

No Impact—The proposed project scope would not expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of a wildfire. The project location is not located on a slope or fire hazard zone.

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

No Impact—The proposed project is not located in land classified as a high fire hazard severity zone, therefore the installation or maintenance of associated infrastructure would not exacerbate fire risk.

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

No Impact—The proposed project scope and location does not expose people or structure to significant risks such as downstream flooding or landslides as a result of post-fire slope instability or drainage changes.

1.3.1 Mandatory Findings of Significance

CEQA Significance Determinations for Mandatory Findings of Significance

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

No Impact—Based on all appropriate technical studies prepared for this project, the project does not have the potential to substantially degrade the quality of environment, reduce habitat of a fish or wildlife species, cause fish or wildlife population to drop below self-sustaining levels, threaten or climate a plant or animal community, substantially reduce the number or restrict the range of a rate 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.)

No Impact—The project does not have impacts that are cumulatively considerable. There are not any incremental effects from this project that when viewed in connection with the effects or past, current, and probable future projects would indicate any cumulatively considerable impacts.

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

No Impact—The proposed project and scope of work will not cause direct or indirect substantial adverse effects on human beings. The purpose of this project is to strengthen or replace identified deficient structures to meet current design standards.

Section 3 Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures

3.1 Cultural Resources

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the ACHP’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

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

Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires the Department to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU)[1] between the Department and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

Affected Environment

A Historic Property Survey Report (HPSR), with attached Archaeological Survey Report (ASR) and Historical Resources Evaluation Report (HRER), was prepared to document identification and evaluation efforts of cultural resources within the Area of Potential Effects (APE). The HPSR was signed on January 31, 2020. The APE was established through consultation between the Caltrans Project Manager and Caltrans Professionally Qualified Staff. The APE is defined as the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE was delineated in accordance with Attachment 3 of the Section 106 PA (APE Delineation) and encompasses the maximum limits of potential ground disturbing activities that would reasonably be expected from the proposed project including the maximum limits of all proposed construction work and access for all proposed build alternatives. The APE is located within Caltrans right-of-way.

In addition to the completion of field surveys, a number of institutions, organizations, and references were contacted for information on existing archaeological and historical sites in or around the project area. A records search and literature review was conducted at the North Central Information Center (NCIC) of the California Historical Resources Information System at Sacramento State University. Maps were examined for locational and informational data on known archaeological and historical resources. The National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), California Points of Historical Interest, and California State Historical Landmarks were consulted to determine if resources were present in the project area. Historical maps, photographs, ethnographic information,

[1] The MOU is located on the SER at https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/5024mou-15-a11y.pdf

and other background historical information was collected from the NCIC and the Caltrans District 3 project files and cultural library.

The California Native American Heritage Commission (NAHC) was contacted to request a search of the sacred lands file and an updated list of Native American contacts for the project area. Consultation letters were mailed to representatives of the Buena Vista Rancheria of Me-Wuk Indians, the Colfax-Todds Valley Consolidated Tribe, the Ione Band of Miwok Indians, the Nashville Enterprise Miwok-Maidu-Nishinam Tribe, the Shingle Springs Band of Miwok Indians, the Tsi Akim Maidu, the Wilton Rancheria, and the United Auburn Indian Community of the Auburn Rancheria (UAIC). Extensive consultation proceeded with the Shingle Springs Band of Miwok Indians and the UAIC.

In an effort to seek input from the public regarding cultural resources within the project area, letters were also mailed to the Center for Sacramento History, the Sacramento History Museum, and the Sacramento Historical Society. Other organizations contacted for information about the project area included the Japanese Americans Citizens League, the San Pedro Bay Historical Society, and the Konko Church of Sacramento, among others.

The cultural resource studies for this project had identified two cultural resources in the APE. The South Connector Undercrossing (Bridge 24-0267) is Category 5 according to the Caltrans Historic Bridge Inventory and is therefore ineligible for the NRHP. One historic-era archaeological resource was also identified in the APE as a result of the current inventory: the Sacramento City Garbage Crematory (CA-SAC-1252H). Caltrans and SHPO have determined that the Sacramento City Garbage Crematory (CA-SAC-1252H) is not individually eligible for listing in the NRHP under any Criterion.

Environmental Consequences

There are no historic properties within the APE that would be significantly impacted. Additionally, this project would not cause a substantial adverse change to any historical resources.

Avoidance, Minimization, and/or Mitigation Measures

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

3.2 Construction Impacts

Temporary Air Quality and Noise Impacts During Construction

The construction of roadway improvements could generate temporary air quality and noise impacts from equipment operations.

Air Quality

During construction, short-term degradation of air quality is expected from the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment powered by gasoline and diesel engines are also anticipated and would include CO, NO_X, ROGs, directly emitted PM10 and PM2.5, and toxic air contaminants (TACs) such as diesel exhaust particulate matter. Construction activities are expected to increase traffic congestion in the area, resulting in increases in emissions from traffic during the delays. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Caltrans special provisions and standard specifications include the requirement to minimize or eliminate dust through application of water or dust palliatives. The following construction dust and equipment exhaust emissions measures shall be implemented when practical, during all phases of construction work:

- Control measures will be implemented as specified in Caltrans 2018 Standard Specifications Section 10-5 “Dust Control”, Section 14-9 “Air Quality” and Section 18 “Dust Palliatives”.

- Adhere to SMAQMD Rule 403 (Fugitive Dust)

- Implement all feasible PM control measures recommended by the SMAQMD Rule 404

- Implement Fugitive Dust Control Plan

Noise

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Noise generated would be a function of the noise levels generated by individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of construction activities. Construction noise

levels will vary on a day-to-day basis during each phase of construction depending on the specific task being completed.

Noise associated with construction is controlled by Caltrans Standard Specification Section 14-8.02, “Noise Control,” which states the following:

- Do not exceed 86 dBA Lmax at 50 feet from the job site from 9 p.m. to 6 a.m.
- Control and monitor noise resulting from work activities.

In addition to the Standard Specifications, construction noise impacts can be minimized through the following measures:

- Notify the residents within 100 feet of the project area in advance of nighttime construction activities.
- Limit operation of jackhammer, concrete saw, pneumatic tools and demolition equipment operations to the daytime hours (8AM to 7PM) to the maximum extent feasible. Nighttime construction work should be limited to the portion of the project site furthest from the residences, to the maximum extent feasible.
- All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. No equipment may have an unmuffled exhaust.
- Utilize "quiet" air compressors and other "quiet" equipment where such technology exists.
- Minimize noise from the use of backup alarms using measures that meet OSHA regulations. This includes use of self-adjusting back-up alarms, manual alarms on lowest setting required to be audible above surrounding noise, use of observers and scheduling of activities so that alarm noise is minimized

As directed by Caltrans, implement appropriate additional noise mitigation measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, and installing acoustic barriers around stationary construction noise sources.

3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2.

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

REGULATORY SETTING

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

Federal

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

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

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and

incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability" (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

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

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

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

State

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

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

Assembly Bill (AB) 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (ARB) create a scoping plan and implement rules to achieve "real,

quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

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

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

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

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

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$).[2] Finally, it requires the Natural Resources Agency to update the state's climate adaptation

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

strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

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

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

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

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

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

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

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

ENVIRONMENTAL SETTING

The proposed project is in an urban area of Sacramento County with a well-developed road and street network. The project area is mainly residential, with some light industrial and commercial buildings. Traffic congestion during peak hours is not

uncommon in the project area. An RTP/SCS by SACOG guides transportation and housing development in the project area. The Sacramento County General Plan Sustainability element addresses GHGs in the project area.

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

National GHG Inventory

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

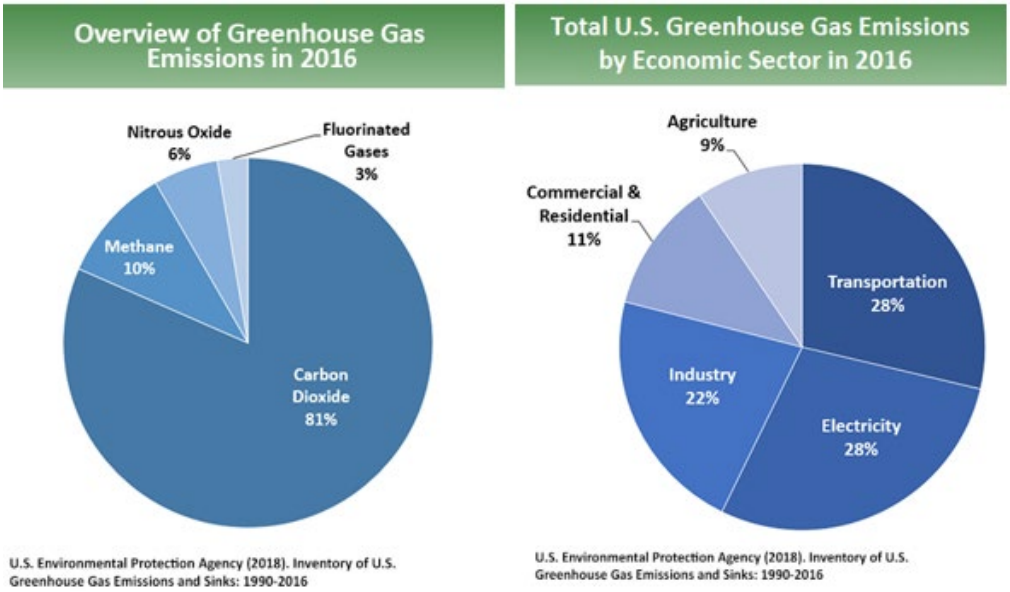

Figure 3. U.S. 2016 Greenhouse Gas Emissions

State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2019 edition of the GHG emissions inventory found total California emissions of 424.1 $MMTCO_2e$ for 2017, with the transportation sector responsible for 41% of total GHGs. It also found that overall statewide GHG emissions declined from 2000 to 2017 despite growth in population and state economic output (ARB 2019a).

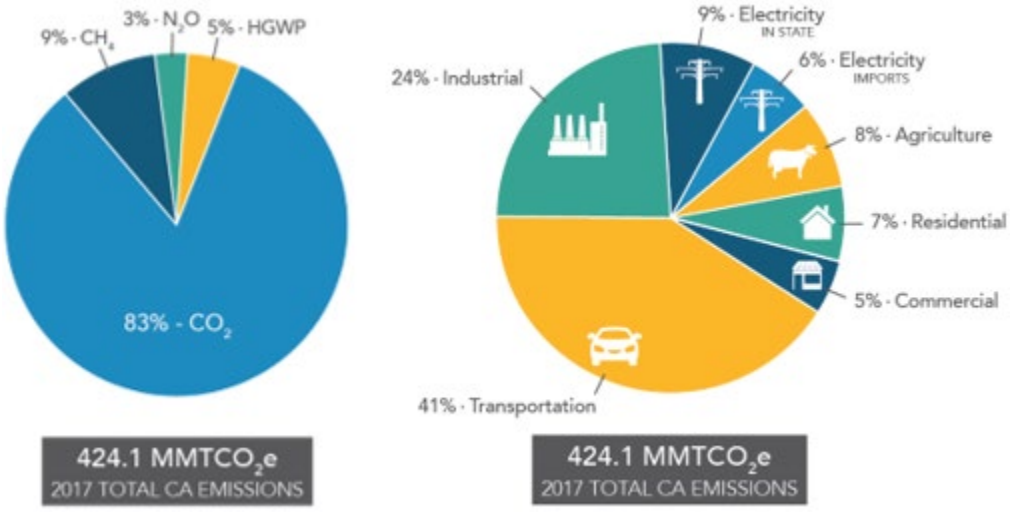

Figure 4. California 2017 Greenhouse Gas Emissions

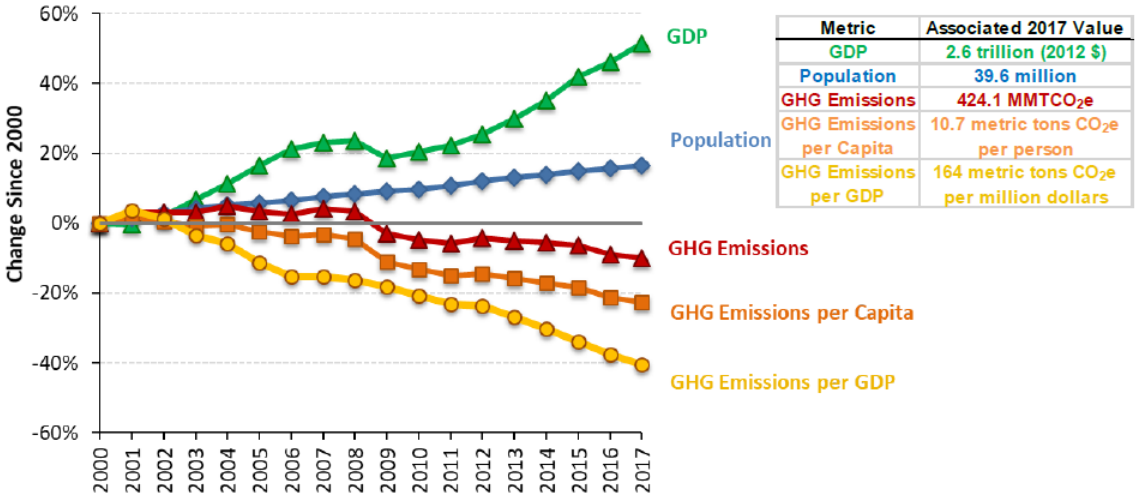

Figure 5. Change in California GDP, Population, and GHG Emissions since 2000 (*Source*: ARB 2019b)

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

Regional Plans

ARB sets regional targets for California's 18 MPOs to use in their RTP/SCSs to plan future projects that will cumulatively achieve GHG reduction goals. Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed project is included in the SACOG Regional Transportation Plan/Sustainable Communities Strategy. The regional reduction target for SACOG is 7 percent for 2020 and 16 percent for 2035.

PROJECT ANALYSIS

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

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation *v.* San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to upgrade, retrofit, or replace the identified deficient structure to meet current design standards and improve freight mobility

along I-5). Therefore, the proposed project will not increase the capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on (route or location), no increase in vehicle miles traveled (VMT) would occur as result of project implementation. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected.

Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

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

CAL-CET2018 version 1.2 was used to estimate average carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), Hydrofluorocarbons (HFCs) emissions from construction activities. Construction is expected to begin in 2024 and last approximately 435 working days. Table 2 summarizes estimated GHG emissions generated by on-site equipment for the project.

Table 2. Estimates (US tons) of GHG Emissions during Construction

Alternative 1

Alternative 1

Construction Year	CO_2	CH_4	N_2O	HFCs	CO_2e*
2024	26	0.001	0.002	0.001	41
2025	89	0.003	0.005	0.004	150
Total	114	0.004	0.01	0.01	265

* A quantity of GHG is expressed as carbon dioxide equivalent (CO_2e) that can be estimated by the sum after multiplying each amount of CO_2, CH_4, N_2O, and HFCs by its global warming potential (GWP). Each GWP of CO_2, CH_4, N_2O, and HFCs is 1, 25, 298, and 14,800, respectively.

Alternate 3

Construction Year	CO_2	CH_4	N_2O	HFCs	CO_2e*
2024	73	0.002	0.004	0.002	104
2025	345	0.011	0.018	0.015	573
2026	25	0.001	0.002	0.002	55
Total	443	0.01	0.02	0.02	745

* A quantity of GHG is expressed as carbon dioxide equivalent (CO_2e) that can be estimated by the sum after multiplying each amount of CO_2, CH_4, N_2O, and HFCs by its global warming potential (GWP). Each GWP of CO_2, CH_4, N_2O, and HFCs is 1, 25, 298, and 14,800, respectively.

Alternative 4

Construction Year	CO_2	CH_4	N_2O	HFCs	CO_2e*
2024	51	0.002	0.003	0.001	67
2025	252	0.008	0.013	0.010	404
2026	109	0.003	0.007	0.007	215
Total	412	0.01	0.02	0.02	714

* A quantity of GHG is expressed as carbon dioxide equivalent (CO_2e) that can be estimated by the sum after multiplying each amount of CO_2, CH_4, N_2O, and HFCs by its global warming potential (GWP). Each GWP of CO_2, CH_4, N_2O, and HFCs is 1, 25, 298, and 14,800, respectively.

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

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CEQA Conclusion

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

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

GREENHOUSE GAS REDUCTION STRATEGIES

Statewide Efforts

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

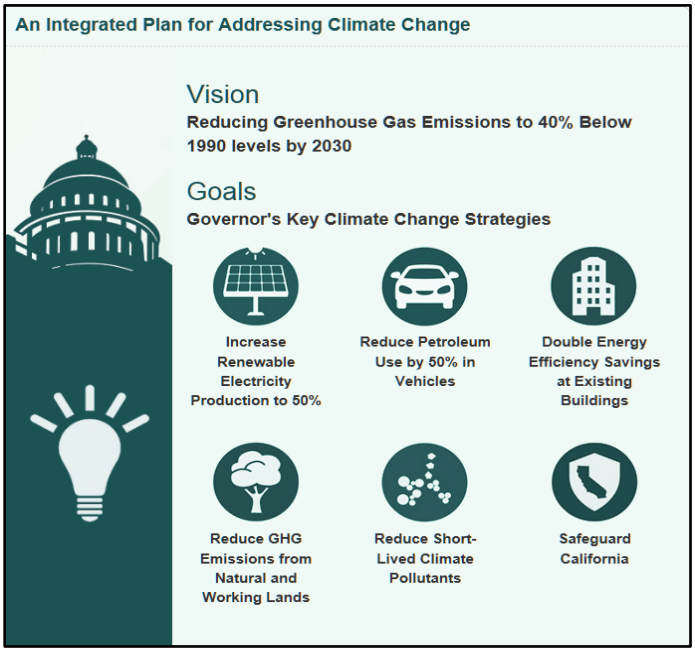

Figure 6. California Climate Strategy

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

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

Caltrans Activities

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

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. In 2016, Caltrans completed the *California Transportation Plan 2040*, which establishes a new model for developing ground transportation systems, consistent with CO_2 reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

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

CALTRANS STRATEGIC MANAGEMENT PLAN

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

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

FUNDING AND TECHNICAL ASSISTANCE PROGRAMS

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

CALTRANS POLICY DIRECTIVES AND OTHER INITIATIVES

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

Project-Level GHG Reduction Strategies

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

- Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of construction vehicles and equipment to no more than 5 minutes
- Caltrans Standard Specification 7-1.02C "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board
- The construction contractor must comply with the Caltrans Standard Specifications Section 14-9. Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, Certain common regulations, such as equipment idling restrictions, that reduce vehicle emissions also help reduce GHG emissions.

- Construction will take place in stages to allow for uninterrupted traffic flow.
- The proposed scope of the project would not result in changes to the traffic volume, fleet mix, speed, location of existing or any other factor that would cause an increase in emissions relative to the no build alternative

ADAPTATION

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

Federal Efforts

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

The U.S. Global Change Research Program (USGCRP) delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S.C. ch. 56A § 2921 et seq). The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways." Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime" (USGCRP 2018).

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

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

State Efforts

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

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the "capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience". Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

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

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

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

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

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

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

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

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

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

Project Adaptation Analysis

CALTRANS VULNERABILITY ASSESSMENTS

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SEA-LEVEL RISE

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

FLOODPLAINS

The proposed project limits are not within a (100yr) base floodplain. Accordingly, direct impacts to transportation facilities due to flooding are not expected.

WILDFIRE

The proposed project is not in a location vulnerable to wildfire. Accordingly, direct impacts to transportation facilities due to wildfire are not expected.

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U.S. Global Change Research Program (USGCRP). 2018. *Fourth National Climate Assessment*. https://nca2018.globalchange.gov/. Accessed: August 21, 2019

Section 4 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation, the level of analysis required, and to identify potential impacts and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings and interagency coordination meetings. This chapter summarizes the results of Caltrans efforts to fully identify, address and resolve project-related issues through early and continuing coordination.

The Initial Study (IS) / Negative Declaration (ND) was be made available for public and agency review and comment for 30 days from July 17, 2020 – August 17, 2020. Caltrans has ensured that the document was be made available to all appropriate parties and agencies, including the following: 1) Responsible agencies, 2) Trustee agencies that have resources affected by the project, 3) other state, federal and local agencies which have regulatory jurisdiction, or that exercise authority over resources which may be affected by the project, 4) public. The document was be made available online at https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-environmental-planning/d3-environmental-docs. Additional copies of the document were available at the Sacramento County Government Center, Sacramento City Council, and the Caltrans District 3 Office.

Caltrans thanks all commenters for participating and providing input during the environmental process. Comment letters listed below are being included in the Final IS/ND and will be considered during completion of the Project Approval and Environmental Document phase of the project.

1. Rob Ferrera, Environmental Services Specialist for SMUD

Powering forward. Together.

SMUD®

Sent Via E-Mail

August 6,2020

Rajpreet Bihala
City of Sacramento
703 B Street
Marysville, CA 95901
rajpreet.bihala@dot.ca.gov

Subject: **I-5 Permit Load Mobility Project / NEG / 2020070322**

Dear Mr. Bihala:

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the Negative Declaration (NEG) for the I-5 Permit Load Mobility Project (Project, SCH 2020070322). SMUD is the primary energy provider for Sacramento County and the proposed Project area. SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region. As a Responsible Agency, SMUD aims to ensure that the proposed Project limits the potential for significant environmental effects on SMUD facilities, employees, and customers.

It is our desire that the Project will acknowledge any impacts related to the following:

- Overhead and or underground transmission and distribution line easements. Please view the following links on smud.org for more information regarding transmission encroachment:
  - https://www.smud.org/en/Business-Solutions-and-Rebates/Design-and-Construction-Services
  - https://www.smud.org/en/Corporate/Do-Business-with-SMUD/Land-Use/Transmission-Right-of-Way
- Utility line routing
- Electrical load needs/requirements
- Energy Efficiency
- Climate Change
- Cumulative impacts related to the need for increased electrical delivery

SMUD HQ | 6201 S Street | P.O. Box 15830 | Sacramento, CA 95852-1830 | 1.888.742.7683 | smud.org

More specifically, SMUD would like to have the following details related to the electrical infrastructure incorporated into the project description:

- The potential need to relocate and or remove any SMUD infrastructure that may be affected in or around the project area

SMUD would like to be involved with discussing the above areas of interest as well as discussing any other potential issues. We aim to be partners in the efficient and sustainable delivery of the proposed Project. Please ensure that the information included in this response is conveyed to the Project planners and the appropriate Project proponents.

Environmental leadership is a core value of SMUD and we look forward to collaborating with you on this Project. Again, we appreciate the opportunity to provide input on this NEG. If you have any questions regarding this letter, please do not hesitate to contact me at 916.732.6676, or by email at rob.ferrera@smud.org.

Sincerely,

Rob Ferrera
Environmental Services Specialist
Sacramento Municipal Utility District
6201 S Street
Sacramento, CA 95817

cc: Entitlements

Response to comment 1:

Thank you for your comment Mr. Ferrera. Since circulating the environmental document, the project has undergone a value analysis study and it was determined that the project's purpose and need could be achieved by strengthening the existing bridge by reconfiguring cover plates to eliminate the vertical clearance issues on Broadway. This alternative does not impact the roadway, sensitive resources, or utilities, including SMUD's electrical infrastructure. If the project scope is altered prior to construction due to unforeseen circumstances, Caltrans will acknowledge any impacts to utilities and include SMUD on utility related correspondence for the project.

2. Harvey Tran, Environmental Scientist for CDFW

From: Tran, Harvey@Wildlife
To: Bihala, Rajpreet@DOT
Cc: Wildlife R2 CEQA
Subject: Caltrans 03-3H390 I-5 Permit Load Mobility Improvement - CEQA CDFW comments 2020-0366-0000-R2
Date: Wednesday, August 12, 2020 5:22:16 PM

EXTERNAL EMAIL. Links/attachments may not be safe.

Good afternoon Rajpreet,

Here are the CEQA comments for the Caltrans 03-3H390 I-5 Permit Load Mobility Improvement Project.

The California Department of Fish and Wildlife (CDFW) appreciates the opportunity to comment on the proposed draft Negative Declaration (ND) for the I-5 Permit Load Mobility Improvement Project (Project). CDFW is responding to the draft ND as a Trustee Agency for fish and wildlife resources (Fish & G. Code, §§ 711.7 & 1802, and CEQA Guidelines, §§ 15386), and as a Responsible Agency regarding any discretionary actions (CEQA Guidelines Section 15381), such as the issuance of a Lake or Streambed Alteration Agreement (California Fish and Game Code Sections 1600 et seq.) and/or a California Endangered Species Act (CESA) Permit for incidental take of Endangered, Threatened, and/or Candidate species (California Fish and Game Code Sections 2080 and 2080.1).

This Project will improve freight efficiency along the Interstate 5 (I-5) by removing load carrying restrictions for oversize/overweight vehicles and addressing any identified structural deficiencies that necessitate the repair or replacement of the South Connector Undercrossing (UC) structure (Bridge Number 24-0267). Three viable build alternatives have been proposed to meet the need of the Project.

CDFW recommends the following items be addressed in the CEQA document:

1. Page 7 1.3.1 Build Alternatives
Due to the lack of habitat impact acreage provided in the ND, CDFW can only recommend that Caltrans select the build alternative that results in the least amount of impacts to biological resources.

2. Page 5 Biological Resources – Nesting birds
Migratory birds may utilize the undercrossing and nearby trees as nesting habitat. CDFW recommends
that Caltrans formulate an adaptive management plan to handle an active nest if the situation arises.

3. Page 5 Biological Resources – Swainson's Hawk (SWHA)
There are several CNDDB occurrences of SHWA within five miles of the Project area. The nearest occurrence is to the east about 1.1 mile away. There is also potential suitable nesting and foraging habitat for the SWHA in the vicinity of Project area. CDFW believes that there is potential for the SWHA to be present within ¼-mile of the Project area. CDFW recommends that if Project construction work is scheduled during the SWHA nesting season (March 1 to September 30), Caltrans should conduct a focused survey for active SWHA nests prior to beginning construction.

Caltrans should follow the May 2000 "Swainson's hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley" with the following changes: Nesting season surveys should include one survey in period II, one in period III, and one survey three (3) days before construction activities commence. The first survey during period II (March 20 to April 5) would allow for identification of stick nests before trees have produced dense foliage and sightings of Swainson's pairs in territories. The second survey would occur in Period III (April 5 to April 20) when SWHA are most easily observed in breeding behavior and nest building and when determination of an active nest site is most feasible. The final survey would be completed three (3) days prior to vegetation removal and construction activities. Surveys should be conducted in all suitable SWHA nesting habitat within 1/4-mile of the Project area. If SWHA breeding activity is identified during any of the surveys or during construction activities, Caltrans should consult with CDFW and demonstrate compliance with CESA.

4. Bats

Bats may be utilizing the undercrossing for roosting habitat. CDFW recommends adding additional measures to avoid impacts. CDFW recommends utilizing the following measures as appropriate, to reduce potentially significant impacts to bat roosts if observed within the Project area:

Qualified Bat Biologist. Retain a biologist with expertise and experience with bats and their habitat. The minimum qualifications for the biologist should include at least 3 years of experience in conducting bat habitat assessments, night-time emergence surveys, and acoustic monitoring. The bat biologist should have adequate experience identifying local bat species (visual and acoustic identification), type of habitat, and differences in roosting behavior and types (i.e. day, night, maternity). The Qualified Bat Biologist should ensure that no Project Activities occur within 200 ft of a bat roost during the maternity (April 15 to August 31) or hibernation (October 15 to March 1) seasons.

Temporary Bat Exclusion. To exclude bats from roosting in the Project Area, the Project proponent should develop a plan for preventing entry/reentry of bats into structures within the Project Area. The exclusion structures (e.g. one-way doors, lights and fans, foam or steel wool) should be installed immediately after pre-construction surveys have determined that there are no bats present in the structure. The temporary exclusion structures should be installed before commencement of Project activities.

Bat Avoidance Plan. The Qualified Bat Biologist should prepare a Bat Avoidance Plan if maternity or hibernation roosts are identified during pre-construction surveys. The Bat Avoidance Plan should include detailed measures to avoid and minimize impacts to roosting bats in and near the construction areas. Bats should not be disturbed without an experienced biologist overseeing avoidance and minimizations measures designed to protect nesting/roosting bats. All appropriate exclusionary measures should be implemented prior to the bridge construction during the period of March 1 to April 15 or August 31 to October 15. Potential avoidance efforts may include exclusionary blocking or filling potential roosting cavities with foam or steel wool, visual monitoring, and staging Project work to avoid bats. If bats are known to use the bridge structure, exclusion netting should not be used.

Bat Mitigation on Bridge Replacement. In-kind replacement habitat (e.g. crevice, panel, collar, capped-edge drain habitat) consistent with the amount of habitat with evidence of use by bat colonies should be provided on the new bridge in consultation with a qualified bat biologist with experience in designing bat habitat. On-site temporary roosting habitat (e.g. bat houses, wooden

backed signs) should be installed prior to bridge removal and maintained until construction of the new bridge is complete.

Please note that when acting as a responsible agency, CEQA guidelines section 15096, subdivision (f) requires CDFW to consider the CEQA environmental document prepared by the lead agency prior to reaching a decision on the Project. Addressing CDFW's comments and disclosing potential Project impacts on CESA-listed species and any river, lake, or stream, and provide adequate avoidance, minimization, mitigation, monitoring and reporting measures; will assist CDFW with the consideration of the ND.

Thanks.

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Response to comment 2:

Thank you for your comment Mr. Tran.
1. Since circulating the environmental document, the project has undergone a value analysis study and it was determined that the project's purpose and need could be achieved by strengthening the existing bridge by reconfiguring cover plates to eliminate the vertical clearance issues on Broadway. Caltrans has decided to move forward with this alternative and it causes the least amount of environmental impacts.
2. The project biologist has developed a species protection spec and has requested that Caltrans environmental staff be notified 7 days prior to any trimming or removal of trees so the biologist can conduct migratory bird nesting surveys.
3. Due to the limited scope of work, the project is not expected to result in direct or indirect impacts to biological resources, including Swainson's Hawk. However, Caltrans will take note of this recommendation and implement focused surveys for Swainson's Hawk, if necessary.
4. Due to the limited scope of work, the project is not expected to result in direct or indirect impacts to biological resources, including bats. However, Caltrans will take note of these recommendations and implement them as appropriate if the project scope changes.

Section 5 List of Preparers

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

Kelly McNally, Senior Environmental Planner, Contribution: Branch Chief

Rajpreet Bihala, Associate Environmental Planner (Generalist). Contribution: Project Coordinator and Document Preparer

Connor Buitenhuys, Associate Environmental Planner (Archeologist). Contribution: Archeological Survey Report

Jonathan Edwards, Associate Environmental Planner (Biologist). Contribution: Biological Resources Evaluation Memo

Saeid Zandian-Jazi, Transportation Engineer (Noise Coordinator). Contribution: Noise Study Report

Youngil Cho, Transportation Engineer (Air Quality Coordinator). Contribution: Air Quality Report

Sean Cross, Transportation Engineer (NPDES Coordinator). Contribution: Water Quality Assessment Report

Arron Rambach, Transportation Engineer (Hazardous Waste Coordinator). Contribution: Initial Site Assessment

Kathyryn Lugo, Associate Landscape Architect. Contribution: Visual Impact Assessment